(1-page) Curriculum Vitae: Professor Dr. Zainuriah Hassan, FASc

PERSONAL DETAILS

Present Position:	Professor (Special Grade A, VK5) Institute of Nano Optoelectronics Research and Technology (INOR) Universiti Sains Malaysia (USM)
Scopus Author ID:	35581518800
ResearcherID - Publons:	F-9100-2010
ORCID ID:	0000-0003-0043-8391
h-Index:	37 (Scopus) 37 (Publons/ResearcherID)
Nationality:	Malaysia
Area of Specialization:	Condensed Matter Physics (Materials Science and Device Physics)

- Wide Band Gap Semiconductor Materials and Devices

ACADEMIC QUALIFICATION

Ohio University, U.S.A	Doctor of Philosophy, August 1998 **(**Experimental Condensed Matter Physics)
Western Michigan University, U.S.A	Master of Arts, August 1985 (Physics) Bachelor of Science (Magna Cum Laude), April 1983 (Major: Physics, Minor: Mathematics)

AWARDS/RECOGNITIONS

1. Dean's List and Outstanding Scholarship Award (Western Michigan University, U.S.A)
2. Graduate Scholarship (Ohio University, U.S.A)
3. Excellent Service Award, Sanggar Sanjung (Hall of Fame) Award and Merit Reward (USM)
4. Fulbright Research Scholar Award (CIES, U.S.A)
5. Top Research Scientists Malaysia (TRSM)
6. Fellow of Academy of Sciences Malaysia
7. Ohio University Notable Alumni Award
8. Top 2% in the World in the Category of Citation Impact in Single Year 2020

SUPERVISION

Main supervisor:	7	Post-docs/Visiting Researchers
	37	PhD students
	12	MSc students by research
	16	MSc students by coursework
Co-supervisor:	26	PhD students
	14	MSc students by research
	1	MSc student by coursework

Total PhD students: 63 (51 graduated),
Total MSc students**:** 43 (42 graduated)

RESEARCH GRANTS

Project Leader - 20 Research Grants
Co-researcher - 68 Research Grants

RESEARCH PUBLICATIONS

- 716 Papers in International Journals/Proceedings
- 114 Papers in National Journals/Proceedings
- 25 Research Books/Chapters in Research Books/Special Issue
- 143 International/National Conference Presentations
- 12 Patents/IP filed/granted

(Full) Curriculum Vitae: Professor Dr. Zainuriah Hassan, FASc

Personal Details

Name:	Professor Dr. Zainuriah Hassan, FASc
Scopus Author ID:	35581518800
ResearcherID - Publons:	F-9100-2010
ORCID ID:	0000-0003-0043-8391
h-Index:	37 (Scopus) 37 (Publons/ResearcherID)
Date and Place of Birth:	20 April 1962 Sungai Petani, Kedah, Malaysia
Sex:	Female
Nationality:	Malaysia
Present Position:	Professor (Special Grade A, VK5) Institute of Nano Optoelectronics Research and Technology (INOR) Universiti Sains Malaysia
Area of Specialization:	Condensed Matter Physics (Materials Science and Device Physics)

Correspondence Address

Institute of Nano Optoelectronics Research and Technology (INOR)
Universiti Sains Malaysia
11800 Penang
MALAYSIA

Tel: +604 653 5638
Fax: +604 653 5639
E-mail: zai@usm.my

Office address:
SAINS@USM
Ground Floor, Blok A, No 10, Persiaran Bukit Jambul,
11900 Bayan Lepas, Penang, Malaysia

Academic Qualification

Ohio University, U.S.A

Doctor of Philosophy, August 1998
(Experimental Condensed Matter Physics)

Western Michigan University, U.S.A

Master of Arts, August 1985
(Physics)

Bachelor of Science (Magna Cum Laude), April 1983
(Major: Physics, Minor: Mathematics)

Professional Qualification

Post Grad. Teaching Certificate, Feb. 1987 (Malaysia)
(Physics, Mathematics)

Professional Membership

Optical Society of America/OPTICA
(2006 - 2023)

The International Society for Optics and Photonics (SPIE)
(2019 - 2022)

Materials Research Society (USA)
(2006 - 2021)
(1997-1998)

IEEE (Institute of Electrical & Electronics Engineers)
(2005 - 2021)

Fulbright Association
(Life member)

Malaysian Solid State Science and Technology Society
(Life member)

Malaysian Institute of Physics
(Life member)

Materials Research Society (Singapore)
(2003 – 2005)

National Council of Professor
(2010 – 2022)

The American Vacuum Society (AVS)
(2019 - 2020)

Western Michigan University Alumni Association

Ohio University Alumni

Working Experience

2020 - Present : Professor VK5 (Special Grade A)
Institute of Nano Optoelectronics Research and Technology (INOR)

2018 – 2021 : Director, INOR
2016

2015 - 2020	: Professor VK6 (Special Grade B)	
2009 – 2015	: Professor VK7 (Special Grade C)	
2013 - 2015	: Director, Centre for Research Initiatives (CRI) - Natural Sciences	
2010 - 2012	: Dean, School of Physics	
2009 - 2010	: Deputy Dean (Academic and Student Development)	
2007 - 2009	: Associate Professor : Chair of Engineering Physics Program	
2004 - 2007	: Senior Lecturer	School of Physics Universiti Sains Malaysia 11800 Penang MALAYSIA
2004-2005	: Fulbright Visiting Research Scholar	Department of Electrical and Computer Engineering University of Minnesota Minneapolis Minnesota 55455 U.S.A
1998- 2004	: Lecturer	School of Physics Universiti Sains Malaysia 11800 Penang MALAYSIA
1997-1998	: Research Associate	Dept. of Physics and Astronomy Ohio University Athens Ohio 45701 U.S.A

Teaching

Courses taught/tutored at Universiti Sains Malaysia 1998-to date:

1. Statistical mechanics
2. Optics
3. Mechanics
4. Modern Physics
5. Vector Analysis
6. Electricity and Magnetism
7. Vibrations, Waves and Optics
8. Semiconductor Fabrication Processes
9. Electronic and Photonic Materials
10. Growth and Fabrication of Optoelectronic Devices

Research Interests

1. Growth/deposition and characterization of wide band gap semiconductor materials, in particular III-Nitrides (GaN and related alloys), ZnO, CdS, TiO_2, CdO, and other metal oxides

2. Fabrication, characterization, and simulation/design of optoelectronic and electronic devices such as LEDs, solar cells and sensors based on III-nitrides and other semiconductor materials

3. Nanostructures and hybrid heterostructures for device applications

Thesis

1. Zainuriah Hassan. Ph.D Dissertation, Ohio University, U.S.A.
Title: Growth, Characterization and Fabrication of GaN-based Device Structures: 1998.

2. Zainuriah Hassan. Master's Thesis, Western Michigan University, U.S.A.
Title: A Study of Integral Equations for Computing Radial Distribution Functions: 1985.

Professional Activities/ Consultancy

1. Committee member for the 16th Regional Conference on Solid State Science and Technology (1999)

2. Guest Editor for Solid State Science and Technology and Journal of Solid State Science and Technology Letters (2000)

3. Examiner for the Matriculation Program of the Ministry of Education of Malaysia (2000 - 2003)

4. Course Presenter for Laboratory Management and Maintenance Course (14 – 18 May, 2001)

5. Course Presenter and Committee Member for Tropical College for Photonics and Optical Communications (23 – 25 October, 2001)

6. Committee Member for the Nobel Prize Subcommittee (Physics): The Establishment of the National Physics Laboratory (2002).

7. External examiner for University of New South Wales, Australia for Master of Science and Technology in Optoelectronics and Photonics Program (2002 - 2004)

8. Reviewer for manuscript submitted for publication in Applied Surface Science: Elsevier Publication (2003)

9. Industrial Advisory Panel for INTI International College (2004 – 2010)

10. Reviewer for manuscript submitted for publication in Jurnal Teknologi D (2005)

11. Reviewer for manuscript submitted for publication in Materials Science and Engineering (B): Solid State Materials for Advanced Technology (2005)

12. Reviewer for manuscript submitted for publication in Journal of Vacuum Science and Technology (2005)

13. Reviewer for manuscripts submitted for publication in Journal of Physical Science (2005 - 2006)

14. Reviewer for manuscripts submitted for publication in Photonics Technology Letters IEEE/LEOS (2006)

15. Moderator of Examination Papers for INTI International College (2006 - 2009)

16. Reviewer for manuscripts submitted for publication in Applied Surface Science: Elsevier Publication (April 2007 & October 2007)

17. Advisory Panel for Nano Engineering Institute Universiti Malaysia Perlis (2007)

18. Reviewer for manuscripts submitted for publication in "ELEKTRIKA" – a journal of Faculty of Electrical Engineering, Universiti Teknologi Malaysia (2008)

19. Reviewer for manuscript submitted for publication in Journal of Applied Physics (2008)

20. Reviewer for manuscript submitted for publication in Applied Energy (2008)

21. Course Presenter for MBE Theory and Practical Course (14 October, 2008)

22. Editor for Journal of Physical Science (2008 - 2015)

23. Reviewer for manuscript submitted for publication in Nanoscale Research Letters (2009)

24. Invited speaker for Excellence Award Day (12 May, 2009)

25. Reviewer for manuscript submitted for publication in Japanese Journal of Applied Physics (2009)

26. Reviewer for USM Research University (RU) grant applications (2009, 2010)

27. Speaker for Postgraduate Seminar (6 November, 2009)

28. Invited speaker for Nanomaterials Characterisation Workshop – AMREC/SIRIM (23 – 24 November, 2009)

29. Invited speaker for 25th Regional Conference on Solid State Science and Technology – RCSSST 2009 (21 – 23 December, 2009)

30. Alternate member for Working Group on Material Specifications of Nanotechnologies (2009 – 2014)

31. Reviewer for manuscript submitted for publication in Physica Status Solidi (a) (2010)

32. Invited plenary speaker for World Academy of Science, Engineering and Technology Conference 2010 (24 – 26 February 2010)

33. Chairman for Workshop on Advanced Characterization Methods for Nanomaterials (1 – 3 June, 2010)

34. Invited speaker for the 5th International Conference on X-rays and Related Techniques in Research and Industry - ICXRI 2010 (9 – 10 June, 2010)

35. Reviewer for USM Short Term grant applications (2010, 2013)

36. Reviewer for manuscript submitted for publication in Journal of Alloys and Compounds (2010)

37. Reviewer for manuscript submitted for publication in Applied Surface Science (2010)

38. Reviewer for manuscript submitted for publication in Sains Malaysiana (2010)

39. Reviewer for manuscript submitted for publication in Modern Physics Letters B (2010)

40. Reviewer for manuscript submitted for publication in Crystal Growth & Design (2010)

41. Reviewer for Science Fund (MOSTI) research grant application (2010)

42. Invited plenary speaker for World Academy of Science, Engineering and Technology Conference 2011 (22 – 24 February 2011)

43. Reviewer for manuscript submitted for publication in Journal of Luminescence (2011)

44. Reviewer for manuscript submitted for publication in Advanced Materials (2011)

45. Reviewer for manuscript submitted to 2nd International Conference on Photonics 2011 – Technical Program Committee – ICP2011 (2011)

46. Invited speaker for Asia-Pacific Workshop on Materials Characterization 2011 (22 – 24 September 2011)

47. Reviewer for manuscript submitted for publication in Crystal Growth and Design (2011)

48. Plenary speaker for 26th Regional Conference of Solid State Science and Technology – RCSSST2011 (22 – 24 November 2011)

49. Leader for Sub Team on Human Capital Development, Linkage between Academia and Industry under the Solid State Lighting Cluster NCIA (2010-2012)

50. Reviewer for manuscript submitted for MAPIM Award (2012)

51. Reviewer for manuscript submitted for publication in Solid State Electronics special ISDRS issue (2012)

52. Reviewer for manuscript submitted for publication in Applied Optics (2012)

53. Reviewer for manuscript submitted for publication in Physica Status Solidi (a) (2012)

54. Reviewer for manuscript submitted for publication in Materials Science in Semiconductor Processing (2012)

55. Program Committee Member for 2012 International Joint Conference on Physics, New Materials and Information Engineering (PNI 2012)

56. Advisor for 8th Asean Meeting on Electroceramics - AMEC8 (2012)

57. Advisor for National Conference on Physics (PERFIK 2012)

58. International Advisory Committee for 4th International Conference on Solid State Science and Technology – ICSSST2012 (2012)

59. Reviewer for manuscript submitted for publication in Indian Journal of Engineering & Materials Sciences (2012)

60. Reviewer for manuscript submitted for publication in Journal of Luminescence (2012)

61. Reviewer for manuscript submitted for publication in Sains Malaysiana (2012)

62. Reviewer for manuscript submitted for publication in Thin Solid Films (2012)

63. Reviewer for manuscript submitted for publication in Journal of Physics and Chemistry of Solids (2012)

64. Reviewer for manuscript submitted to 2013 International Conference on Science and Engineering in Mathematics, Chemistry and Physics (ScieTech 2013) (2012)

65. Reviewer for manuscript submitted for publication in Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy (2012)

66. Reviewer for a postdoctoral research project proposal under the Czech Science Foundation (2012)

67. Evaluator for promotion to the academic rank of full professor for University of Baghdad, Iraq (2012 and 2013)

68. Technical Program Committee for 2013 International Conference on Science and Engineering in Mathematics, Chemistry and Physics (ScieTech 2013) – January 2013

69. Conference Committee Member for 2013 Asia-Pacific International Congress on Engineering and Natural Sciences (APICENS) – April 2013 - Thailand

70. Conference Committee Member for 2013 Asia-Pacific International Congress on Engineering and Natural Sciences (APICENS) – December 2013 – Taiwan

71. Technical Program Committee for 2014 International Conference on Science and Engineering in Mathematics, Chemistry and Physics (ScieTech 2014) – January 2014

72. Local Organising Committee for 4th International Meeting on Frontiers of Physics - IMFP2013 (2013)

73. Editorial board of the Journal of Materials Science and Engineering with Advanced Technology (2013)

74. Jury President for Loreal Malaysia For Women in Science National Fellowships 2013 (2013)

75. Reviewer for a research project proposal under the Czech Science Foundation (2013)

76. Reviewer for manuscript submitted for publication in Materials Express (2013)

77. IPT Evaluation Panel for Fundamental Research Grant Scheme (FRGS) Applications (2013)

78. Reviewer for manuscript submitted for publication in Materials Chemistry and Physics (2013, 2014)

79. Evaluation Panel for Research Acculturation Collaborative Effort (RACE) Grant Applications (2013)

80. Evaluator for promotion to the academic rank of full professor for Basrah University, Iraq (2013)

81. Chairman of Workshop on Advanced Semiconductor Technology: Fabrication, Charaterization and Applications – WASTECH2013 (2013)

82. International Scientific Committee Chair for Annual International Conference on Intelligent Materials, Power and Energy AIMPE14

83. Editorial Board Member of Journal of Materials (2014 - 2017)

84. IPT Evaluation Panel for Long Term Research Grant Scheme (LRGS) Applications (2014)

85. Chairman of 1st meeting of Malaysia Nitrides Research Group (MNRG 2014)

86. Chairman of the Interview Panel for Malaysian International Scholarship (MIS) 2014

87. Reviewer for manuscript submitted for publication in Walailak Journal of Science and Technology (2014)

88. IPT Evaluation Panel for Transdiciplinary Research Grant Scheme (TRGS) Applications (2014)

89. Conference Committee Member for 2014 Asia-Pacific International Congress on Engineering and Natural Sciences (APICENS) – August 2014 – Singapore

90. Editorial Board Member of Journal of Kufa Physics (2014 - 2017)

91. Reviewer for manuscript submitted for publication in Journal of Luminescence (2014)

92. IPT Evaluation Panel for Prototype Development Research Grant Scheme (PRGS) Applications (2014, 2015)

93. Member of the International Working Group “Ibn Al Haytham” for International Year of Light - IYL 2015 (under UNESCO)

94. Member of GaN-on-GaN Epitaxy Program Oversight Committeee (2015 - 2021)

95. International Organizing Committee for EMN Istanbul Meeting – Energy Materials Nanotechnology (2015)

96. Conference Committee Member for 2015 Asia-Pacific International Congress on Engineering and Natural Sciences (APICENS) – July 2015 – Japan

97. Chairman of 2nd meeting of Malaysia Nitrides Research Group (MNRG 2015)

98. Certified Member of Steinbeis Transfer Centre Network (2015 - present)

99. Reviewer for manuscript submitted for publication in Ceramics International (2015)

100. External assessor for promotion to the academic rank of Professor for Universiti Teknologi Malaysia (2015)

101. Program Committee Member for AeroEarth 2015 Conference (2015)

102. Reviewer for a research project proposal under the Czech Science Foundation (2015)

103. Evaluator for USM Innovation Seed Fund (2015)

104. Chairman of International Symposium on LED and OLED Technology in Conjunction with the International Year of Light 2015 (ISOLED 2015)

105. Reviewer for manuscript submitted for publication in Diamond and Related Materials (2015)

106. External examiner for Universiti Tun Hussein Onn Malaysia (UTHM) (2015-2017)

107. Program Chair and Editor for 5th International Conference on Nanostructures, Nanomaterials and Nanoengineering 2016 (ICNNN 2016)

108. Interview panel for USM Fellowship (2015, 2016)

109. Editor-in-Chief for Thin Film Luminescence - new journal (2016)

110. Advisory Committee Member for 3rd Meeting of Malaysia Nitrides Research Group (MNRG 2016)

111. Editor for Proceedings of 3rd Meeting of Malaysia Nitrides Research Group (MNRG 2016)

112. Reviewer for manuscript submitted for publication in Materials and Design (2016)

113. International Organizing Committee for EMN Americas Meetings – Energy Materials Nanotechnology (2016)

114. Ibn al Haytham LHiSA International Society - listed as LHiSA Founders (2016 - present)

115. Committee Member for Ministry of Higher Education Fundamental Research Grant (FRGS) Evaluation (2016-2018)

116. IPT Evaluation Panel for Fundamental Research Grant Scheme (FRGS) Applications (2017-2018)

117. Evaluation Panel for Research University Grant (Individual) Applications (2017)

118. Technical Program Committee for 5th International Conference on Science and Engineering in Mathematics, Chemistry and Physics 2017 (ScieTech 2017)

119. Program Chair for AeroEarth 2017 Conference

120. Evaluation panel of tender specifications/technical for Academy of Sciences Malaysia (2017)

121. Reviewer for manuscript submitted for publication in ACS Applied Materials & Interfaces (2017)

122. Senate member of the Universiti Sains Malaysia (2017-2021)

123. Member of University Research Council (2017-2020)

124. Technical Committee for The 6th International Conference on Nanostructures, Nanomaterials and Nanoengineering 2017 (ICNNN 2017)

125. Technical Program Committee for The 5th International Conference on Advances in Intelligent Systems in Bioinformatics, Chem-Informatics, Business Intelligence, Social Media and Cybernatics 2017 (Intelisys 2017)

126. Technical Program Committee for The 2nd International Conference on Theoretical and Applied Mathematics, Physics and Chemistry 2017 (The Science 2017)

127. Technical Committee for The International Conference on Materials Technology and Applications 2017 (ICMTA 2017)

128. Reviewer for a research proposal under the Swiss National Science Foundation (2017)

129. Advisory Board Member for Journal of Science and Technology (2017 - 2020)

130. Committee member for EMN Americas Meetings – Energy Materials Nanotechnology (2017)

131. Advisory Committee Member for Workshop on Advanced Materials Technology: Growth and Characterization (AMT:GC) 2017

132. Keynote speaker for 3rd International Conference on the Applications of Science and Mathematics (SCIEMATHIC 2017) October 24-25, 2017

133. Plenary speaker for 6th International Conference on Solid State Science and Technology (ICSSST 2017) – November 13-16, 2017

134. Invited speaker (Pocket Talk) at Astana Expo 2017, Kazakhstan

135. Technical Program Committee for 6th International Conference on Science and Engineering in Mathematics, Chemistry and Physics 2018 (ScieTech 2018)

136. Evaluator for promotion to the academic rank of full professor for Basrah University, Iraq (2018)

137. Advisory Committee Member for Symposium on Advanced Materials and Nanotechnology 2018 (SAMN 2018)

138. Program Chair and Technical Program Committee for AeroEarth 2018 Conference

139. Member of Board of Studies for MSc Mixed Mode Program (2018)

140. Section Editors for Journal of Kufa Physics (2018 - 2021)

141. Evaluation Panel for Newton-Ungku Omar Fund for Mobility Grants (Natural Sciences) (2018)

142. Reviewer for manuscript submitted for publication in Thin Solid Films (2018)

143. Reviewer for manuscript submitted for publication in Journal of Alloys and Compounds (2018)

144. Chairman for International Conference on Semiconductor Materials and Technology (ICoSeMT 2019)

145. Editorial Board Member for International Conference on Semiconductor Materials and Technology (ICoSeMT 2019)

146. Committee Member for Ministry of Higher Education Fundamental Research Grant (FRGS) Evaluation (2019)

147. Evaluator for promotion to the academic rank of Full Professor for Basrah University, Iraq (2019)

148. IPT Evaluation Panel for Fundamental Research Grant Scheme (FRGS) Applications (2019)

149. Department of Higher Education (Ministry of Education) Evaluation Panel for Fundamental Research Grant Scheme (FRGS) Applications (2019)

150. Department of Higher Education (Ministry of Education) Evaluation Panel for Prototype Development Research Grant Scheme (PRGS) Applications (2019)

151. External Examiner for Postgraduate Degree Programs for Universiti Malaysia Perlis (2019/2020)

152. Technical Committee Member for 5th Global Nanotek Summit (2019)

153. Moderator at National Nanotechnology Colloquium on GaN, TeraHertz and Flexible Electronics (2019)

154. Task Force for Committee on Policy Study and Embargo System for Patenting Thesis Findings (2019)

155. Sharing Session with Ohio University Women in Physics and Astronomy group (2019)

156. Referee for promotion to the academic rank of Associate Professor for Universiti Kebangsaan Malaysia (2019)

157. Public Speaker for Honorary Doctorate at USM 50th Anniversary Commemorative Convocation Ceremony (2019)

158. Department of Higher Education (Ministry of Education) Evaluation Panel for Prototype Development Research Grant Scheme (PRGS) Applications (2020)

159. IPT Evaluation Panel for Fundamental Research Grant Scheme (FRGS) Applications (2020-2021)

160. Evaluator for promotion to the academic rank of Associate Professor for University of the Punjab, Lahore, Pakistan (2020)

161. Evaluator for promotion to the academic rank of Associate Professor for Universiti Tun Husseion Onn Malaysia (2020)

162. Department of Higher Education (Ministry of Education) Evaluation Panel for Fundamental Research Grant Scheme (FRGS) Applications (2020)

163. Member of USM Academic Strategic Committee (2020-2021)

164. International Scientific Committee (Physics Section) for the 2nd Annual International Conference on Information and Sciences – AiCIS 2020 (2020)

165. Committee Member for Ministry of Higher Education Research Fund (DP KPT) (2020)

166. Reviewer for manuscript submitted for publication in Journal of Electronic Materials (2020)

167. Evaluator for promotion to the academic rank of Professor for Universiti Kebangsaan Malaysia (2020)

168. Member of University Research Council (2020-2023)

169. Advisor for 5th Meeting of Malaysia Nitrides Research Group (MNRG 2020) Virtual Conference (2020)

170. Department of Higher Education (Ministry of Education) Evaluation Panel for Prototype Development Research Grant Scheme (PRGS) Applications (2021)

171. Panel member of vetting committee for 2 disciplines for election of Fellows for Academy of Sciences Malaysia (2021)

172. Advisor for 2nd International Conference on Semiconductor Materials and Technology (ICoSeMT 2021) and International Invention, Innovation & Design Expo (INoDEx 2021)

173. Evaluator for promotion to the academic rank of Professor for Universiti Malaysia Perlis (2021)

174. Advisory Editorial Board of Journal of Science and Technology (2021 - 2022)

175. Editorial Board of Emergent Materials - Women in Nanotechnology Special Issue (2021-2022)

176. Evaluation committee panel for Ministry of Higher Education Research Fund (DP KPT) (2021-2022)

177. Reviewer for manuscript submitted for publication in Sensors and Actuators: A. Physical (2021)

178. Reviewer for manuscript submitted for publication in Bulletin of Electrical Engineering and Informatics (2021)

179. Validator for updating process of the Malaysian Research and Development Classification System (MRDCS) 7th Edition (2021)

180. Guest editorial for special issue in Microelectronics International (2021)

181. Reviewer for USM Special Short Term Grant application (2021)

182. Editorial Board of 2nd International Conference on Semiconductor Materials and Technology (ICoSeMT 2021) and International Invention, Innovation & Design Expo (INoDEx 2021)

183. Technical Review Panel for promotion to the academic rank of Associate Professor for COMSATS University Islamabad, Pakistan (2021)

184. Public Speaker for Honorary Doctorate at USM 58th Convocation Ceremony (2021)

185. Editor for Journal of Kufa - physics (2022)

186. Panel member of the vetting committee for election of Fellows for Academy of Sciences Malaysia (2022)

187. External Examiner for Postgraduate Programs for Universiti Malaysia Perlis (2021/2022)

188. Department of Higher Education (Ministry of Education) Evaluation Panel for Prototype Development Research Grant Scheme (PRGS) Applications (2022)

189. IPT Evaluation Panel for Fundamental Research Grant Scheme (FRGS) Applications (2022)

190. Reviewer for manuscript submitted for publication in Physica Status Solidi B: Basic Solid State Physics (2022)

Scholarships/ Academic Awards/Recognitions

1.	Gold Medal Award (DYMM Sultan Kedah, Malaysia)	1978
2.	Ministry of Education of Malaysia Scholarship	1979-1985
3.	Dean's List (Western Michigan University, U.S.A)	Winter 1980 Fall 1980
4.	Outstanding Scholarship Award (Western Michigan University)	1984/1985
5.	Academic Staff Training Scheme Fellowship (USM)	1994-1997
6.	Graduate Scholarship (Ohio University)	1997-1998
7.	Condensed Matter and Surface Science (CMSS) Poster Award	1998
8.	Excellent Service Award (USM)	2003
9.	Fulbright Research Scholar Award (CIES, U.S.A)	2004
10.	Graduate Research Exposition (USM)	2004
11.	Sanggar Sanjung (Hall of Fame) Award (USM) - Journal Publication Category	2004
12.	Sanggar Sanjung (Hall of Fame) Award (USM) - Journal Publication Category	2005
13.	Excellent Service Award (USM)	2005
14.	A biographee in the 2006-2007 (9th) Edition of Marquis Who's Who in Science and Engineering	2006/2007
15.	Sanggar Sanjung (Hall of Fame) Award and Merit Reward (USM) - Journal Publication Category	2006
16.	Sanggar Sanjung (Hall of Fame) Award and Merit Reward (USM) - Journal Publication Category	2007
17.	A biographee in the 25th Silver Anniversary Edition (2008) of Marquis Who's Who in the World	2008

18. A biographee in the 10th Anniversary Edition (2008-2009) of Marquis Who's Who in Science and Engineering	2008/2009
19. Merit Reward (USM)	2008
20. Excellent Service Award (USM)	2008
21. Sanggar Sanjung (Hall of Fame) Award and Merit Reward (USM) - Journal Publication Category	2009
22. A biographee in the edition of Marquis Who's Who in the World	2009/2010/ 2014/2015/ 2016
23. International Outstanding Science, Engineering and Technology Excellence Award	2010
24. ITEX Bronze Medal at the 21st International Invention, Innovation, and Technology Exhibition ITEX 2010	2010
25. Merit Reward (USM)	2010
26. Accomplished USM Researchers on ResearcherID (Thomson Reuters)	2010
27. MTE Bronze Medal at the Malaysia Technology Expo MTE 2011	2011
28. Award for best poster presentation at The International Conference For Nanomaterials Synthesis and Characterization (INSC2011)	2011
29. IID Gold Medals at the Invention, Innovation & Design IID Penang 2011 – 2 gold medals	2011
30. IID Bronze Medal at the Invention, Innovation & Design IID Kedah 2011	2011
31. Sanggar Sanjung (Hall of Fame) Award and Merit Reward (USM) - Journal Publication Category	2011
32. A biographee in the edition of Marquis Who's Who in Asia and the 30th Pearl Anniversary Edition of Marquis Who's Who in the World	2012
33. IID Gold Medal at the Invention, Innovation & Design IID Perak 2012	2012
34. Sanggar Sanjung (Hall of Fame) Award (USM) - Journal Publication Category	2012
35. MIMOS Prestigious Award 2013 Certificate of Merit	2013
36. Top Research Scientists Malaysia (TRSM)	2013
37. Silver Medal at the Innovation Platform 2013	2013
38. Bronze Medal at the Innovation Platform 2013	2013
39. Sanggar Sanjung (Hall of Fame) Award (USM) - Journal Publication Category	2013

40. Penang Invention, Innovation and Research Design 2014
PIID 2014 – – 2 Gold Medals 2014

41. Bronze Medal at 5th Exposition on Islamic Innovation 2014 2014

42. Sanggar Sanjung (Hall of Fame) Award (USM) 2014
- Journal Publication Category
- Patent Category

43. A biographee in the edition of MALAYSIA: Who's Who In The Civil Service: The Steel Backbone Of The Government - Creme De La Creme 2015

43. Penang Invention, Innovation and Design 2015
PIID 2015 – – 1 Silver Medal and 1 Diamond Medal 2015

44. Sanggar Sanjung (Hall of Fame) Award (USM) 2015
- Journal Publication Category

45. Fellow of Academy of Sciences Malaysia 2016

46. Gold Medal at Eureka Innovation Exhibition International Level - EIE 2016 2016

47. Sanggar Sanjung (Hall of Fame) Award (USM) 2016
- Journal Publication Category
- Prominent Figure (*Ketokohan*) Category

48. 10 Top Malaysian Scientists on Nano 2017

49. 2017 Albert Nelson Marquis Lifetime Achievement Award 2017

50. Gold Medal at Penang International Invention, Innovation and Research Design Platform 2017 - PIID 2017 2017

51. Bronze Medal at The 1st International Malaysia-Indonesia-Thailand Symposium on Innovation and Creativity - iMIT 2017 2017

52. Silver Medal at Invention, Innovation and Design Exposition 2017 - iideX 2017 2017

53. Sanggar Sanjung (Hall of Fame) Award (USM) 2017
- Journal Publication Category

54. Merit Reward (USM) 2017

55. 2018 Albert Nelson Marquis Lifetime Achievement Award 2018

56. Gold Medal at Asia Innovation Show 2018

57. Excellent Service Award (USM) 2018

58. Sanggar Sanjung (Hall of Fame) Award (USM) 2018
- Journal Publication Category

59. Merit Reward (USM) 2018

60. A biographee in the edition of Marquis Who's Who in the World 2018/2019

61. 2019 Lifetime Achievement Award 2019

62. Ohio University Notable Alumni Award 2019

63. Excellent Service Award (USM) 2019

64. Merit Reward (USM) 2019

65. Marquis Who's Who in the World Listee 2020/2021

66. Sanggar Sanjung (Hall of Fame) Award and Merit Reward (USM) - Patent Category 2020

67. Top 2% in the World in the Category of Citation Impact in Single Year 2020 2021

Research Grants

1. IRPA Short Term Project 5/1999 - 10/2000

Amount of grant: ***RM 17,450.00***
Title: ***Diodes and Field Effect Transistors Based on GaN Films***

Principal researcher: **Dr. Zainuriah Hassan**
Co-researcher: Prof. Madya Kamarulazizi Ibrahim

2. IRPA (RM7) 7/2000- 6/2001

Amount of grant: ***RM 283,000.00***
Title: ***Sub-Micron Technology & System-on-a-chip- Contact and Interconnect Process***

Project Leaders: Dr. Zul Azhar Zahid Jamal, Dr. Md. Roslan Hashim,
Co-researchers: Prof. Kamarulazizi Ibrahim, Dr. Azlan Abdul Aziz,
Dr. Zainuriah Hassan,

3. AUN/SEED-Net - Asean University Network South East Asia Engineering Education Development Network
1/2002 – 12/2003

Amount of grant: ***US$ 24,930.00***
Title: ***Doping of GaN and AlGaN by Plasma Enhanced MOCVD and its application to Photodetector and FET***

Team Researchers: Prof. M. Barmawi, Dr. M. Budiman (ITB, Indonesia)
Prof. Kamarulazizi Ibrahim, **Dr. Zainuriah Hassan**
(USM, Malaysia)

4. IRPA (RM8) Strategic Research

1/7/2002 – 31/12/2006

Amount of grant: ***RM 11,299,914.00***

Title: ***Material (III-V Nitrides and Organic Layers) Fabrication and Characterization*** *(Programme: Blue Light Emitting Devices, Programme Head: Prof Kamarulazizi Ibrahim – Total grant RM 22,499,598.00)*

Project Leader: **Dr. Zainuriah Hassan**
Co-researchers: Assoc. Prof Haslan Abu Hassan, Dr. Zul Azhar Zahid Jamal

5. Fulbright Grant 12/2004 – 3/2005

Amount of grant: ***US$ 10,900.00***
*Title****: III-V Nitrides (GaN and Related Alloys) Fabrication and Characterization for Optoelectronic/Novel Device Applications***

Team Researchers: **Dr. Zainuriah Hassan** (USM, Malaysia)
Prof. Dr. Paul Ruden (University of Minnesota, U.S.A)

6. Scientific Advancement Fund Allocation (SAGA) Grant
2006 – 2008

Amount of grant: ***RM 175,000.00***
*Title****: Investigation of Charge Conduction Mechanisms in Dielectric based on Wide-Bandgap Semiconductor***

Project Leader: Dr. Cheong Kuan Yew
Co-researchers: **Dr. Zainuriah Hassan**, Assoc. Prof Azizan Aziz, Dr. Zainovia Lockman

7. USM Short Term Grant
6/2006 - 5/2008

Amount of grant: ***RM 11,600.00***
Title: ***Laser induced Etching (LIE) Technique used for Synthesis of Porous GaN***

Principal researcher: Dr. Khalid Mutashar Omar
Co-researcher: Prof. Madya Haslan Abu Hassan
Dr. Zainuriah Hassan
Dr. Md Roslan Hashim

8. Fundamental Research Grant Scheme (FRGS)
11/2006 – 10/2009

Amount of grant: ***RM 60,000.00***
*Title****: Investigation of Charge Conduction Mechanisms in Dielectric based on Single-Crystal SiC and GaN***

Project Leader: Dr. Cheong Kuan Yew

Co-researchers: **Dr. Zainuriah Hassan**, Assoc. Prof Azizan Aziz, Dr. Zainovia Lockman

9. **Fundamental Research Grant Scheme (FRGS)**
   1/2007 – 1/2010

Amount of grant: ***RM 39,000.00***
*Title****: The growth mechanism of zinc oxide nanostructures***

Project Leader: Dr. Saw Kim Guan
Co-researcher: **Dr. Zainuriah Hassan**,

10. **USM Short Term Grant**
    5/2007 - 4/2009

Amount of grant: ***RM 13,200.00***
Title: ***Structural and optical properties of novel $Ni_xZn_yO_z$ nanostructures on (0001) zinc oxide***

Principal researcher: Dr. Saw Kim Guan
Co-researcher: **Dr. Zainuriah Hassan**

11. **USM Short Term Grant**
    1/2007 - 4/2009

Amount of grant: ***RM 34,872.00***
Title: ***Organic light emitting diodes (OLEDs) based on polymers of polyfluorene derivatives***

Principal researcher: Assoc. Prof. Dr. Haslan Abu Hassan
Co-researcher: **Assoc. Prof. Dr. Zainuriah Hassan**

12. **USM Short Term Grant**
    6/2007 - 6/2009

Amount of grant: ***RM 15,436.00***
Title: ***III-nitrides (GaN-based) quantum dots for optoelectronics application***

Principal researcher: **Assoc. Prof. Dr. Zainuriah Hassan**
Co-researcher: Assoc. Prof. Dr. Haslan Abu Hassan
Dr. Yam Fong Kwong

13. **Fundamental Research Grant Scheme (FRGS)**
    10/2007 – 10/2009

Amount of grant: ***RM 92,000.00***
*Title****: Growth and characterization of $In_xGa_{1-x}N$ nanostructures***

Project Leader: **Assoc. Prof. Dr. Zainuriah Hassan**
Co-researcher: Assoc. Prof. Dr. Haslan Abu Hassan
Dr. Yam Fong Kwong

14. Fundamental Research Grant Scheme (FRGS)
10/2007 – 10/2009

Amount of grant: ***RM 100,000.00***
*Title****: Effects of aluminium (Al) composition, x, on surface phonon polariton (SPP) modes of $Al_xGa_{1-x}N$ thin films***

Project Leader: Assoc. Prof. Dr. Haslan Abu Hassan
Co-researcher: **Assoc. Prof. Dr. Zainuriah Hassan**
Dr. Yam Fong Kwong

15. Science Fund
9/2007 – 11/2009

Amount of grant: ***RM 233,000.00***
*Title****: Growth and fabrication of blue laser structures based on III-V nitrides***

Project Leader: **Assoc. Prof. Dr. Zainuriah Hassan**
Co-researcher: Assoc. Prof. Dr. Haslan Abu Hassan
Assoc. Prof. Dr. Azlan Abdul Aziz
Prof. Dr. Kamarulazizi Ibrahim
Assoc. Prof. Dr. Md. Roslan Hashim

16. Science Fund
8/2007 – 7/2009

Amount of grant: ***RM 327,400.00***
*Title****: Studies on the structural and optical properties of III-V nitrides (InAlGaN) quaternary nitrides alloys thin films***

Project Leader: Assoc. Prof. Dr. Haslan Abu Hassan
Co-researcher: **Assoc. Prof. Dr. Zainuriah Hassan**

17. Science Fund
8/2007 – 7/2009

Amount of grant: ***RM 317,900.00***
*Title****: High Efficiency Multispectrum Solar Cell***

Project Leader: Prof. Dr. Kamarulazizi Ibrahim
Co-researcher: **Assoc. Prof. Dr. Zainuriah Hassan**
Assoc. Prof. Dr. Haslan Abu Hassan

Assoc. Prof. Dr. Md. Roslan Hashim

Assoc. Prof. Dr. Azlan Abdul Aziz

18. Research University (RU) Grant
10/2007 – 9/2010

Amount of grant: ***RM 873,600.00***
*Title****: Nano Optoelectronics***

Project Leader:	Prof. Dr. Kamarulazizi Ibrahim
Co-researcher:	**Assoc. Prof. Dr. Zainuriah Hassan**
	Assoc. Prof. Dr. Haslan Abu Hassan
	Assoc. Prof. Dr. Md. Roslan Hashim
	Prof. Mat Johar Abdullah
	Assoc. Prof. Dr. Azlan Abdul Aziz
	Dr. Magdy Hussien Mourad
	Dr. Yam Fong Kwong

19. Science Fund
10/2007 – 9/2009

Amount of grant: ***RM 213,000.00***
*Title****: Fabrication and characterization of blue lasing devices***

Project Leader:	Assoc. Prof. Dr. Azlan Abdul Aziz
Co-researcher:	Assoc. Prof. Dr. Md. Roslan Hashim
	Prof. Dr. Kamarulazizi Ibrahim
	Prof. Mat Johar Abdullah
	Assoc. Prof. Dr. Zainuriah Hassan
	Assoc. Prof. Dr. Haslan Abu Hassan

20. USM Short Term Grant
3/2008 - 2/2010

Amount of grant: ***RM 35,586.00***
*Title****: Development of electron-beam evaporated CeO_2 thin film on 4H-SiC as High Power Gate Oxide***

Project Leader:	Ir. Dr. Cheong Kuan Yew
Co-researchers:	Dr. Zainovia Lockman
	Dr. Zainuriah Hassan

21. Research University (RU) Grant
5/2008 – 5/2010

Amount of grant: ***RM 145,153.68***
*Title****: The fabrication and investigation of diamond/zinc oxide heterojunction***

Project Leader:	Assoc.Prof. Dr. Saw Kim Guan
Co-researcher:	Dr. Yam Fong Kwong

Assoc. Prof. Dr. Zainuriah Hassan
Dr. Ng Sha Shiong

22. USM Short Term Grant
8/2008 - 8/2010

Amount of grant: ***RM 30,671.00***
*Title****: The fabrication and investigation of hydrogen sensitive GaN device***

Project Leader: Dr. Yam Fong Kwong
Co-researchers: **Assoc. Prof. Dr. Zainuriah Hassan**

23. Research University (RU) Grant
9/2009 – 8/2011

Amount of grant: ***RM 99,549.20***
*Title****: Surface phonon and interface phonon polaritons characteristics of III-nitrides heterostructure systems***

Project Leader: Dr. Ng Sha Shiong
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Assoc. Prof. Dr. Haslan Abu Hassan
Siti Khadijah Mohd Bakhori

24. Incentive Grant (Postgraduate Student)
2009 – 2011

Amount of grant: ***RM 35,000.00*** *(accumulative total)*
*Title****:***

1. ***Characterizations of Al, Ti and TiN film and Ar preclean process***
2. ***Research on quantum chaotic maps with an emphasis on cryptography***
3. ***RF-MBE growth of III-nitrides on silicon for light emitting/detecting applications***
4. ***Investigation of the effects of doping on the characteristics of III-nitrides quantum dot laser***
5. ***Schottky diodes based on III-nitrides for gas sensing applications***
6. ***III-nitrides heterostructures for solar cells applications***

Supervisor: **Prof. Dr. Zainuriah Hassan**
Student: Leow Mun Tyng
Afshin Akhshani
Mohd Zaki Mohd Yusoff
Ghasem Alahyarizadeh
Teo Silk Guan
Rosfariza Radzali

25. Fundamental Research Grant Scheme (FRGS)
12/2009 – 12/2011

Amount of grant: ***RM 36,000.00***
*Title****: Infrared attenuated total reflection infrared studies on the surface phonon polariton in wide band gap zinc oxide semiconductors***

Project Leader: Dr. Ng Sha Shiong
Co-researcher: Assoc. Prof. Dr. Haslan Abu Hassan
Prof. Dr. Zainuriah Hassan

26. Research University (RU) Grant
4/2010 – 3/2013

Amount of grant: ***RM 247,950.00***
*Title****: III-nitride based nanostructured material grown by novel technique***

Project Leader: Dr. Yam Fong Kwong
Co-researcher: **Prof. Dr. Zainuriah Hassan**

27. Fundamental Research Grant Scheme (FRGS)
5/2010 – 4/2012

Amount of grant: ***RM 79,200.00***
*Title****: Study of nanostructured porous GaN prepared by electrochemical and laser induced etching techniques***

Project Leader: **Prof. Dr. Zainuriah Hassan**
Co-researcher: Assoc. Prof. Dr. Haslan Abu Hassan
Dr. Khalid Mutashar Omar
Mohd Anas Ahmad
Yushamdan Yusof

28. Fundamental Research Grant Scheme (FRGS)
5/2010 – 4/2012

Amount of grant: ***RM 65,600.00***
*Title****: The fabrication and investigation of TiO_2 nanotubes with embedded metallic nanoparticles***

Project Leader: Dr. Yam Fong Kwong
Co-researcher: **Prof. Dr. Zainuriah Hassan**

29. Research University (RU) Grant
8/2010 – 10/2012

Amount of grant: ***RM 244,990.00***
*Title****: Wide band gap GaN-based semiconductors for gas sensing applications***

Project Leader: **Prof. Dr. Zainuriah Hassan**
Co-researcher: Dr. Yam Fong Kwong
Dr. Ng Sha Shiong
Dr. Khalid Mutashar Omar

Mohd Anas Ahmad

30. Excellence Fund

6/2010 - 5/2011

Amount of grant: ***RM 8,000.00***
*Title****: Preparation and characterization of undoped porous gallium nitride (GaN) by UV assisted electrochemical etching***

Project Leader: Mohd Bukhari Md Yunus
Co-researchers: Ainorkhilah Mahmood
Prof. Dr. Zainuriah Hassan

31. USM Short Term Grant

11/2010 - 10/2011

Amount of grant: ***RM 36,121.00***
*Title****: Metal oxide nanostructures on silicon substrates***

Project Leader: Dr. Chuah Lee Siang
Co-researchers: **Prof. Dr. Zainuriah Hassan**
Siti Khadijah Mohd Bakhori
Yushamdan Yusof
Mohd Anas Ahmad

32. Excellence Fund

12/2010 - 11/2011

Amount of grant: ***RM 7,000.00***
*Title****: Structural and optical studies of III-nitrides heterostructures grown on silicon substrates by plasma assisted molecular beam epitaxy (PAMBE)***

Project Leader: Mohd Zaki Mohd Yusoff
Co-researchers: **Prof. Dr. Zainuriah Hassan**
Mohd Bukhari Md Yunus
Mohd Anas Ahmad
Yushamdan Yusof

33. **Fundamental Research Grant Scheme (FRGS)**

5/2011 – 4/2014

Amount of grant: ***RM 100,000.00***
*Title****: Effects of aluminum (Al), x and indium (In), y compositions on surface and interface phonon polariton (SPP and IPP) modes of*** $Al_xIn_yGa_{1-x-y}N$ ***and ZnO thin films***

Project Leader: Prof. Dr. Haslan Abu Hassan
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Dr. Ng Sha Shiong

34. Excellence Fund

6/2011 - 5/2012

Amount of grant: ***RM 10,000.00***
*Title****: Molecular beam epitaxy (MBE) growth of III-nitrides materials on silicon substrates for photodetector applications***

Project Leader:	Nurul Nazwa Mohammad
Co-researchers:	**Prof. Dr. Zainuriah Hassan**
	Mohd Zaki Mohd Yusoff

35. USM Short Term Grant

8/2011 - 8/2013

Amount of grant: ***RM 30,953.00***
*Title****: Optical study on III-nitride semiconductor materials and its devices***

Project Leader:	Dr. Norzaini Zainal
Co-researchers:	**Prof. Dr. Zainuriah Hassan**
	Dr. Ahmad Suhaimi Abu Bakar

36. **Fundamental Research Grant Scheme (FRGS)**

8/2011 – 7/2013

Amount of grant: ***RM 130,000.00***
*Title****: Studies on transition metal impregnated*** $Mx(InGa)_{1-x}N$ ***modulated structures for wide band gap multi-junction solar cells***

Project Leader:	Dr. Mutharasu Devarajan
Co-researcher:	Prof. Dr. Kamarulazizi Ibrahim
	Prof. Dr. Zainuriah Hassan
	Dr. Subramani Shanmugan

37. Exploratory Research Grant Scheme (ERGS)

8/2011 – 8/2013

Amount of grant: ***RM 231,000.00***
Title: ***Investigation on vapor phase epitaxy processes for growth of nitride-based wide bandgap semiconductor thin films***

Project Leader:	Dr. Ahmad Shuhaimi Abu Bakar
Co-researcher:	Dr. Zarina Aspanaut
	Dr. Mohd Faizul Mohd Sabri
	Prof. Dr. Zainuriah Hassan
	Assoc. Prof. Dr. Mohamad Rusop Mahmood
	Dr. Nafarizal Nayan
	Dr. Norzaini Zainal
	Dr. Zul Azri Muhamad Noh
	Mohaamad Hafiz Mamat

38. USM Short Term Grant

12/2011 - 11/2013

Amount of grant: ***RM 36,904.00***
*Title****: The fabrication of zinc oxide nanostructures on boron-doped diamond heterojunction for ultraviolet energy detection***

Project Leader:	Assoc. Prof. Dr. Saw Kim Guan
Co-researchers:	**Prof. Dr. Zainuriah Hassan**
	Dr. Ng Sha Shiong
	Dr. Yam Fong Kwong

39. Fundamental Research Grant Scheme (FRGS)

4/2011 – 3/2013

Amount of grant: ***RM 63,000.00***
*Title****: Study of nanostructured porous ZnO***

Project Leader:	Dr. Chuah Lee Siang
Co-researcher:	**Prof. Dr. Zainuriah Hassan**

40. USM Short Term Grant

8/2011 - 8/2013

Amount of grant: ***RM 37,112.00***
*Title****: Synthesis and characterization of spray pyrolysis porous Ni-doped SnO_2***

Project Leader:	Dr. Chuah Lee Siang
Co-researcher:	**Prof. Dr. Zainuriah Hassan**

41. Collaborative Research in Engineering, Science & Technology (CREST) Research Grant

2012 - 2013

Amount of grant: ***RM 284,200.00***
*Title****: Prototype design and testing of efficient metal ceramic printed circuit boards (MCPCB) as heat sinks for high power LEDs – solid state lighting applications***

Project Leader:	Assoc. Prof. Dr. Mutharasu Devarajan
Co-researchers:	Prof. Dr. Kamarulazizi Ibrahim
	Prof. Dr. Zainuriah Hassan
	Dr. Subramani Shanmugan

42. Fundamental Research Grant Scheme (FRGS)

6/2012 – 5/2014

Amount of grant: ***RM 92,000.00***
*Title****: Investigation on hexagonal inclusions in cubic gallium nitride materials***

Project Leader:	Dr. Norzaini Zainal

Co-researcher: **Prof. Dr. Zainuriah Hassan**
Dr. Ng Sha Shiong
Dr. Naser Mahmoud Ahmed
Prof. Datin Dr. Saadah Abdul Rahman
Dr. Ahmad Shuhaimi Abu Bakar

43. Research University (RU) Grant
7/2012 – 7/2015

Amount of grant: ***RM 153,335.40***
*Title****: Effect of crystal orientation on the surface and optical phonon characteristics of wurtzite crystals***

Project Leader: Dr. Ng Sha Shiong
Co-researcher: Prof. Dr. Haslan Abu Hassan
Prof. Dr. Zainuriah Hassan

44. Exploratory Research Grant Scheme (ERGS)
8/2012 – 7/2014

Amount of grant: ***RM 92,000.00***
Title: ***Fabrication and characterization of nanostructured compound semiconductors for applications as gas sensors***

Project Leader: **Prof. Dr. Zainuriah Hassan**
Co-researcher: Dr. Yam Fong Kwong
Dr. Ng Sha Shiong
Dr. Naser Mahmoud Ahmed
Dr. Norzaini Zainal
Mohd. Anas Ahmad
Yushamdan Yusof

45. Graduate on Time (GOT) Incentive
7/2012 – 6/2013

Amount of grant: ***RM 10,000.00***

Supervisor: **Prof. Dr. Zainuriah Hassan**
Student: Asaad Shakir Hussein
Asmiet Ramizy Abd-Alghafour

46. APEX Delivering Excellence 2012 (DE2012)
11/2012 – 6/2015

Amount of grant: ***RM 229,600.00***
*Title****: Development of $Al_xGa_{1-x}N$/GaN strained-layer superlattice stack structure for high energy-efficient and cost-effective InGaN based LEDs***

Project Leader: Dr. Norzaini Zainal
Co-researcher: **Prof. Dr. Zainuriah Hassan**

Dr. Yam Fong Kwong
Dr. Azlan Baharin
Assoc. Prof. Dr. Azlan Abdul Aziz
Prof. Datin Dr. Saadah Abdul Rahman
Dr. Ahmad Shuhaimi Abu Bakar
Prof. Dr. Anthony Kent
Assoc. Prof. Mohamad Rusop Mahmood

47. Research University (RU) Grant
12/2012 – 12/2015

Amount of grant: ***RM 178,800.00***
*Title****: Study of cubic GaN on porous GaAs substrate for high efficient energy devices***

Project Leader: Dr. Norzaini Zainal
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Profesor Mohamad Abu Bakar
Dr. Yam Fong Kwong
Dr. Azlan Baharin
Dr. Ahmad Shuhaimi Abu Bakar

48. Research University (RU) Grant
12/2012 – 12/2015

Amount of grant: ***RM 189,500.00***
*Title****: Fabrication and characterization of GaN-based heterostructures for energy efficient LED-based solid state lighting***

Project Leader: **Prof. Dr. Zainuriah Hassan**
Co-researcher: Dr. Yam Fong Kwong
Dr. Ng Sha Shiong
Dr. Norzaini Zainal
Mohd. Anas Ahmad
Yushamdan Yusof

49. USM Short Term Grant
4/2013 - 3/2015

Amount of grant: ***RM 30,500.00***
*Title****: Study of porous anodic alumina for synthesis of ordered nano-structures***

Project Leader: Dr. Yam Fong Kwong
Co-researcher: **Prof. Dr. Zainuriah Hassan**

50. Fundamental Research Grant Scheme (FRGS)
4/2013 – 4/2015

Amount of grant: ***RM 159,000.00***

*Title**: Surface phonon polariton resonance modulation in wurtzite III-nitride semiconductor system via modification of surface structure and formation of alloy structure***

Project Leader: Dr. Ng Sha Shiong
Co-researcher: Prof. Dr. Haslan Abu Hassan
Prof. Dr. Zainuriah Hassan

51. Fundamental Research Grant Scheme (FRGS)
5/2013 – 4/2015

Amount of grant: ***RM 119,200.00***
*Title**: Study of nanostructured porous WO_3***

Project Leader: Dr. Chuah Lee Siang
Co-researcher: **Prof. Dr. Zainuriah Hassan**

52. Exploratory Research Grant Scheme (ERGS)
6/2013 – 5/2015

Amount of grant: ***RM 104,000.00***
Title: ***Producing high quality cubic GaN using porous GaAs substrate for high efficient devices***

Project Leader: Dr. Norzaini Zainal
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Prof. Datin Dr. Saadah Abd Rahman
Dr. Ahmad Suhaimi Abu Bakar

53. Exploratory Research Grant Scheme (ERGS)
6/2013 – 5/2015

Amount of grant: ***RM 180,000.00***
Title: ***Exploration of titania nanostructures for fabrication of high performance dye-sensitized solar cell***

Project Leader: Dr. Yam Fong Kwong
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Prof. It-Meng (Jim) Low
Dr. Ng Sha Shiong

54. Fundamental Research Grant Scheme (FRGS)
12/2013 – 11/2015

Amount of grant: ***RM 137,000.00***
*Title**: Study of structural and optical properties of nanostructured wide band gap ternary alloy semiconductors***

Project Leader: **Prof. Dr. Zainuriah Hassan**
Co-researcher: Dr. Naser Mahmoud Ahmed

Dr. Ng Sha Shiong
Dr. Norzaini Zainal
Dr.Yam Fong Kwong

55. Fundamental Research Grant Scheme (FRGS)
12/2013 – 11/2015

Amount of grant: ***RM 114,900.00***
*Title****: Correlated structural and lattice phonon behavioural studies on metal imparted ZnO ($Mn_xZn_{1-x}O$) multilayer interfaces***

Project Leader: Assoc. Prof. Dr. Abdul Razak Ibrahim
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Dr. Subramani Shanmugan
Assoc. Prof. Dr. Devarajan Mutharasu
Assoc. Prof. Dr. Azlan Abdul Aziz

56. External Grant
11/2013 – 2/2016

Amount of grant: ***RM 100,000.00***
*Title****: A strategy for the production of thermochromic energy saving materials for use in roofing and other applications***

Project Leader: **Prof. Dr. Zainuriah Hassan**
Co-researcher: Prof. Dr. Farook Adam
Assoc. Prof. Ir. Cheong Kuan Yew
Dr.Yam Fong Kwong
Dr. Ng Sha Shiong
Dr. Naser Mahmoud Ahmed
Mr. Mohd Nor Isman Ismail

57. Fundamental Research Grant Scheme (FRGS)
1/2014 – 12/2016

Amount of grant: ***RM 200,000.00***
*Title****: Preparation and characterization of nanostructured porous ternary and quaternary III-nitrides alloys***

Project Leader: **Prof. Dr. Zainuriah Hassan**
Co-researcher: Dr. Naser Mahmoud Ahmed
Dr. Ng Sha Shiong
Dr. Norzaini Zainal
Dr.Yam Fong Kwong
Dr. Chuah Lee Siang

58. Research University (RU) Grant Top-Down
7/2014 – 6/2017

Amount of grant: ***RM 1,000,000.00***

*Title**: LED technology research cluster (LEDTREC) for development of next generation solid state lighting based on GaN-on-GaN and OLED***

Project Leader: **Prof. Dr. Zainuriah Hassan**

59. ScienceFund

1/2015 – 6/2017

Amount of grant: ***RM 348,630.00***
*Title**: Producing high quality free-standing GaN substrate through cost-effective technique for excellent performance nitrides based devices***

Project Leader: Dr. Norzaini Zainal
Co-researcher: Prof. Dr. Kamarulazizi Ibrahim
Prof. Dr. Zainuriah Hassan
Dr. Ahmad Shuhaimi Abu Bakar
Puan Syarifah Norfaezah Sabki

60. ScienceFund

5/2015 – 10/2017

Amount of grant: ***RM 395,115.00***
*Title**: Low-cost sol-gel spin coating growth of GaN-based semiconductors for optoelectronic applications***

Project Leader: Dr. Ng Sha Shiong
Co-researcher: Prof. Dr. Haslan Abu Hassan
Prof. Dr. Zainuriah Hassan
Dr. Yam Fong Kwong

61. Graduate on Time (GOT) Incentive

11/2015 – 10/2017

Amount of grant: ***RM 10,000.00***

Supervisor: **Prof. Dr. Zainuriah Hassan**
Student: Jalal Jabbar Hassan
Mazin Auny Mahdi

62. Fundamental Research Grant Scheme (FRGS)

8/2016 – 7/2019

Amount of grant: ***RM 164,000.00***
*Title**: Novel cocept of role of pitch and shape of patterned sapphire substrate (PSS) in initial epi-growth of nitrides based LEDs for high efficient lighting***

Project Leader: Dr. Norzaini Zainal
Co-researcher: Dr. Ahmad Shuhaimi Abu Bakar
Assoc. Prof. Dr. Prabakaran Poopalan
Prof. Dr. Zainuriah Hassan
Mohd Anas Ahmad

63. Fundamental Research Grant Scheme (FRGS)
7/2016 – 7/2018

Amount of grant: ***RM 75,000.00***
*Title****: Fundamental study of ohmic transparent conductive contacts for energy efficient photonics device applications***

Project Leader:	Dr. Ahmad Hadi Ali
Co-researcher:	Dr. Ahmad Shuhaimi Abu Bakar
	Assoc. Prof. Dr. Mohd Kamarulzaki Mustafa
	Prof. Dr. Zainuriah Hassan

64. Research University (RU) Grant
3/2017 – 2/2020

Amount of grant: ***RM 100,000.00***
*Title****: High cycling performance lithium battery using titanium-based materials***

Project Leader:	Dr. Yam Fong Kwong
Co-researcher:	**Prof. Dr. Zainuriah Hassan**
	Dr. Norzaini Zainal

65. External Grant
12/2015 – 12/2022

Amount of grant: ***RM 190,883.19***
*Title****: GaN on GaN***

Project Leader:	**Prof. Dr. Zainuriah Hassan**

66. LRGS Special Focused Industry Driven Program
10/2017 – 4/2021

Amount of grant: ***RM 2,000,000.00***
*Title****: Energy efficient lighting (Program: Wide band gap semiconductors)***

Project Leader:	**Prof. Dr. Zainuriah Hassan**
Co-researcher:	Dr. Ng Sha Shiong
	Dr Lim Way Foong
	Dr Quah Hock Jin
	Dr Norzaini Zainal
	Mohd Anas Ahmad
	Prof Dr Abdul Manaf Hashim
	Dr. Shaharin Fadzli Abd Rahman

67. Research University (RU) Grant USM
7/2018 – 9/2020

Amount of grant: ***RM 87,100.00***
Title: ***Growth and characterization of hybrid heterostructures for ultraviolet emission***

Project Leader:	**Prof. Dr. Zainuriah Hassan**
Co-researcher:	Dr. Naser Mahmoud Ahmed
	Dr. Yam Fong Kwong
	Dr Lim Way Foong
	Dr Quah Hock Jin

68. Fundamental Research Grant Scheme (FRGS)
1/2019 – 12/2021

Amount of grant: ***RM 106,500.00***
*Title****:*** ***The mechanism of charge transfer for dual-gate SiNW sensor***

Project Leader:	Assoc. Prof. Dr. Khatijah Aisha
Co-researcher:	Assoc. Prof. Dr. Pung Swee Yong
	Prof. Dr. Zainuriah Hassan
	Dr. Nur Zatil 'Ismah Hashim

69. Fundamental Research Grant Scheme (FRGS)
1/2019 – 12/2021

Amount of grant: ***RM 137,800.00***
*Title****:*** ***An insight into the structural, optical and electrical properties of transparent conductive gallium oxide this films prepared by sol-gel spin coating method***

Project Leader:	Assoc. Prof. Dr. Ng Sha Shiong
Co-researcher:	Dr. Naser Mahmoud Ahmed
	Prof. Dr. Zainuriah Hassan
	Assoc. Prof. Dr. Saw Kim Guan
	Mohd Anas Ahmad
	Prof. Dr. Haslan Abu Hassan
	Dr Muhammad Firdaus Omar
	Muhammad Fadhirul Izwan Abdul Malik

70. Innovation Seed Fund (DIA)
5/2019 – 4/2020

Amount of grant: ***RM 24,000.00***
*Title****:*** ***Surface alteration of gallium nitride as growth template***

Project Leader:	Dr Lim Way Foong
Co-researcher:	**Prof. Dr. Zainuriah Hassan**
	Dr. Naser Mahmoud Ahmed
	Dr Quah Hock Jin

71. USM Short Term Grant
10/2019 - 9/2021

Amount of grant: ***RM 35,000.00***
*Title****:*** ***Template-assisted growth of group III-nitrides nanomaterials and their integration in sensing applications***

Project Leader: Dr. Beh Khi Poay
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Dr. Yam Fong Kwong

72. Hubert Curien Partnership – Hibiscus (PHC-Hibiscus) Grant
11/2019 - 3/2022

Amount of grant: ***RM 66,000.00***
*Title****:*** ***Development of InGaN Schottky-based solar cells (INSOL)***

Project Leader: **Prof. Dr. Zainuriah Hassan**
Co-researcher: Assoc. Prof. Dr. Ng Sha Shiong
Dr. Lim Way Foong
Mohd Anas Ahmad
Prof. Dr. Nicolas Fressengeas
Prof. Dr. Sidi Hamady
Queny Kieffer

73. Year 2019 MTSF Science & Technology Research Grant
1/2020 - 12/2020

Amount of grant: ***RM 15,000.00***
*Title****:*** ***Growth and characterization of InGaN thin films for solar cell application***

Project Leader: Ahmad Sauffi Yusof
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Assoc. Prof. Dr. Ng Sha Shiong

74. Fundamental Research Grant Scheme (FRGS)
9/2019 - 8/2021

Amount of grant: ***RM 135,000.00***
*Title****:*** ***Investigation of passivating mechanism and metal-oxide-semiconductor characteristics of trivalent Ce doped gallium oxide on wide band gap semiconductors***

Project Leader: Dr. Quah Hock Jin
Co-researcher: Prof. Abdul Manaf Hashim
Prof. Cheong Kuan Yew
Assoc. Prof. Dr. Zainovia Lockman
Dr. Naser Mahmoud Ahmed
Prof. Dr. Zainuriah Hassan
Dr. Lim Way Foong
Dr. Mohd Syamsul Nasyriq Bin Samsol Baharin

75. **Fundamental Research Grant Scheme (FRGS)**
9/2019 - 8/2021

Amount of grant: ***RM 74,200.00***
Title: ***The role of chlorophyll concentration in modelling underwater optical wireless communication channels***

Project Leader:	Dr. Faezah Jasman
Co-researcher:	Assoc. Prof. Dr. Rosmiwati Mohd Mokhtar
	Prof. Dr. Zainuriah Hassan
	Dr. Wan Haliza Wan Hassan
	Dr. Zaiton Binti Abdul Mutalip

76. **Fundamental Research Grant Scheme (FRGS)**
9/2019 - 8/2021

Amount of grant: ***RM 148,250.00***
Title: ***Investigation of growth mechanism and metal-oxide-semiconductor characteristics of different gate oxide configuration in the passivation of silicon carbide surface***

Project Leader:	Dr. Lim Way Foong
Co-researcher:	Prof. Cheong Kuan Yew
	Assoc. Prof. Dr. Zainovia Lockman
	Prof. Dr. Zainuriah Hassan
	Assoc. Prof. Dr. Yam Fong Kwong
	Dr. Quah Hock Jin
	Dr. Beh Khi Poay

77. **Fundamental Research Grant Scheme (FRGS)**
9/2019 - 8/2021

Amount of grant: ***RM 133,000.00***
Title: ***Mechanism of optical limiting action based inorganic-organic hybrid perovskite under continuous laser irradiation***

Project Leader:	Dr. Mundzir Abdullah
Co-researcher:	Dr. Naser Mahmoud Ahmed
	Prof. Dr. Zainuriah Hassan
	Dr. Ganesan A/L Krishnan
	Dr. Nur Athirah Mohd Taib
	Dr. Sabah M. Mohammad

78. **Fundamental Research Grant Scheme (FRGS)**
9/2019 - 8/2021

Amount of grant: ***RM 84,500.00***
Title: ***Properties of aluminium alums (TAWAS) as a novel coagulant of dye sensitizer molecules in dye-sensitized PV***

Project Leader:	Ts. Anith Nurani Abd Rashid (UiTM)
Co-researcher:	Ts. Dr. Mohd Natashah Norizan
	Prof. Dr. Zainuriah Hassan
	Dr. Mohd Hanapiah Abdullah

Nur Sa'adah Muhamad Sauki

79. USM Short Term Grant
2/2020 - 1/2022

Amount of grant: ***RM 32,200.00***
*Title****: Modelling turbulence in diffused underwater optical wireless communication links***

Project Leader: Dr. Faezah Jasman
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Assoc. Prof. Ir. Dr. Rosmiwati Mohd Mokhtar

80. AUN/SEED-Net and JICA
10/2020 - 10/2021

Amount of grant: ***RM 203,384.60***
*Title****: AlGaN/GaN high-electron-mobility transistor (HEMT) for SARS-Cov-2 (COVID-19) rapid detection***

Project Leader: Dr. Mohd Syamsul Nasyriq Samsol Baharin
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Dr. Shaili Falina
Rahil Izzati Mohd Asri
Prof. Dr. Junya Suehiro
Assoc. Prof. Dr. Michihiko Nakano
Dr. Masafumi Inaba

81. Nippon Sheet Glass Foundation for Materials Science and Engineering
1/2021 - 12/2022

Amount of grant: ***USD 5000.00***
*Title****: Modify (DHS-MCBD) method to fabricate high aspect-ratio of inorganic oxides materials***

Project Leader: Dr. Sabah M. Mohammad
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Dr. Mundzir Abdullah

82. USM Short Term Grant
1/2021 - 12/2022

Amount of grant: ***RM 42,062.00***
*Title****: Using ultralong ZnO NRs-metal nanoparticles/GaN hybrid heterostructure to improve the performance of optoelectronic devices***

Project Leader: Dr. Sabah M. Mohammad
Co-researcher: **Prof. Dr. Zainuriah Hassan**
Dr. Naser Mahmoud Ahmed
Dr. Quah Hock Jin

Dr. Mundzir Abdullah

83. USM Short Term Grant

1/2021 - 12/2022

Amount of grant: ***RM 37,999.00***
*Title****: Preparation and characterization of solution processed Ce-doped Ga_2O_3 passivation layer for MOS-based device***

Project Leader:	Dr. Quah Hock Jin
Co-researcher:	**Prof. Dr. Zainuriah Hassan**
	Prof. Dr. Zainovia Lockman
	Dr. Sabah M. Mohammad
	Dr. Lim Way Foong

84. USM Short Term Grant

1/2021 - 12/2022

Amount of grant: ***RM 33,195.00***
*Title****: Deposition and characterization of high dielectric permittivity ternary-based CeO_2 passivation film***

Project Leader:	Dr. Lim Way Foong
Co-researcher:	**Prof. Dr. Zainuriah Hassan**
	Assoc. Prof. Dr. Yam Fong Kwong
	Dr. Quah Hock jin

85. USM Short Term Grant

2/2021 - 1/2023

Amount of grant: ***RM 41,000.00***
Title: ***Cost effective polycrystalline diamond transistor for power electronics***

Project Leader:	Dr. Mod Syamsul Nasyriq Samsol Baharin
Co-researcher:	**Prof. Dr. Zainuriah Hassan**
	Prof. Dr. Hiroshi Kawarada

86. USM Short Term Grant

3/2021 - 2/2023

Amount of grant: ***RM 44,620.00***
Title: ***Local-field correction to the nonlinear optical susceptibility of dye-incorporated nanocomposite materials under intense laser irradiation***

Project Leader:	Dr. Mundzir Abdullah
Co-researcher:	**Prof. Dr. Zainuriah Hassan**
	Dr. Sabah M. Mohammad
	Dr. Ganesan Krishnan

87. USM Short Term Grant

8/2021 - 7/2023

Amount of grant: ***RM 10,000.00***
Title: ***Fabrication of black silicon by silver nanoparticles mask-asisted plasma etching***

Project Leader:	Mohd Anas Ahmad
Co-researcher:	**Prof. Dr. Zainuriah Hassan**
	Ts. Dr. Mohd Zamir Pakhuruddin
	Nur Atiqah Hamzah
	Rahil Izzati Mohd Asri

88. USM Short Term Grant

8/2021 - 7/2023

Amount of grant: ***RM 10,000.00***
Title: ***Investigation of Ni/Au ohmic contacts on p-GaN epitaxial layer***

Project Leader:	Nur Atiqah Hamzah
Co-researcher:	**Prof. Dr. Zainuriah Hassan**
	Assoc. Prof. Dr. Ng Sha Shiong
	Mohd Anas Ahmad
	Rahil Izzati Mohd Asri

Other Grants

1. Grant Number N62909-12-1-1068
   - awarded by Department of the Navy, Office of Naval Research Global to provide partial support of the meeting entitled "The 8th Asian Meeting on Electroceramics, 2012"
   - Grantee: Prof. Zainuriah Hassan
   - Period: 9 March 2012 – 1 July 2013
   - Total grant amount: US$ 5,000.00

Post-doctoral/ Visiting Researcher Supervision

1. Dr. Naser Mahmoud Ahmed, 10/2010-10/2011, Growth and fabrication of blue laser structures based on III-V nitrides

2. Dr. R. Perumal, 12/2014-12/2015, Growth and characterization of gallium nitride and related materials for solid state lighting applications

3. Dr. Lim Way Foong, 1/2015-12/2016, Research and investigation on organic thin film as the emissive layer for the realization of organic light emitting diode

4. Dr. Quah Hock Jin, 1/2015-12/2016, Investigation of GaN-on-GaN Technology for Solid State Lighting

5. Dr. Li Hongjian, 8/2018-8/2019, High efficiency InGaN LEDs on bulk GaN and patterned sapphire substrate by MOCVD

6. Dr. Mohamed Salleh Mohamed Saheed, 7/2019-9/2019, Metal oxide-based heterostructures for solar cell applications

7. Dr. Muhd Azi Che Seliman, 2/2020-8/2020, Research on GaN and other materials in the areas of epitaxy, fabrication, packaging and applications

8. Dr. Muhd Azi Che Seliman, 8/2020-6/2021, GaN on GaN

Postgraduate Supervision

(a) **Ph.D projects** (MS: main supervisor, CS: co-supervisor)

1. GaN-based Gas Sensor – Abdo Yahya Omer Hudeish (viva completed – December 2005) CS
2. Design and experimental studies of multilayer coating for the application of nitride based semiconductor in light emitting devices – Naser Mahmoud Ahmed (viva completed – June 2006) CS
3. Studies on GaN-based materials for device applications – Yam Fong Kwong (viva completed - December 2006) MS
4. Structural and optical studies of wide band gap $Al_xGa_{1-x}N$ ($0 \leq x \leq 1$) semiconductors – Ng Sha Shiong (viva completed - September 2007) MS
5. Design of laser structures based on group III-nitrides – Sabah M. Thahab (viva completed - November 2008) CS
6. GaN-based optoelectronics on silicon substrate – Chuah Lee Siang (viva completed - September 2009) MS
7. Thermal effect and optimization of multi-quantum wells (MQWs) for vertical cavity surface emitting lasers (VCSELs) – Farah Z Jasim (viva completed - January 2010) CS
8. AlGaN thin films on silicon substrates for optoelectronic and electronic applications – Asaad Shakir Hussein (viva completed – July 2011) MS
9. Study of Si and GaN nanostructures prepared by laser-induced etching – Asmiet Ramizy Abd-AlGhafour (viva completed – August 2011) MS
10. Optoelectronic properties of quaternary AlInGaN thin films for device applications – Alaa Jabbar Ghazai (viva completed – July 2012) CS
11. Fabrication and characterization of solar cell based on porous silicon – Khaldun A. Salman (viva completed – July 2012) MS
12. Synthesis of wide band gap II-VI chalcogenide nanostructures for high speed photodetection devices – Mazin A Mahdi (viva completed – February 2013) MS
13. Synthesis, characterization, and device applications of ZnO nanorod arrays prepared by microwave-assisted chemical bath deposition – Jalal Jabbar Hassan (viva completed – February 2013) MS
14. Simulation and design of vertical cavity surface emitting lasers based on III-nitrides – Azita Zandi Goharrizi (viva completed – February 2013) MS
15. Optimization of structural properties of deep violet InGaN multi quantum well lasers – Ghasem Alahyarizadeh (viva completed – March 2013) MS
16. Characterization of GaN nanowires grown by thermal evaporation and the study of its capability as a solar cell – Leila Shekari Gholamhossein (viva completed – March 2013) CS
17. A study on the synthesis of nanostructured zinc oxide (ZnO) for sensor applications – Hind I AbdulGafour (viva completed – April 2013) MS
18. Characterization of silicon nanowire transistor and its application in inverter circuits – Yasir H Naif (viva completed – June 2013) CS

19. Study of GaN-based semiconductors grown on Si(110) substrates – Maryam Amirhoseiny (viva completed – September 2013) MS
20. Synthesis of lead sulfide (PbS) nanostructures for solar cell applications – Ahmed Salman Obaid (viva completed – September 2013) MS
21. A study of GaN-based MOS device – Yeoh Lai Seng (viva completed – March 2014) CS
22. Porous $In_xGa_{1-x}N$ for sensing applications – Saleh Hasson Abud Al-Amery (viva completed – September 2014) MS
23. A study of CdO thin film and its applications - Mustafa Zaien Mohammed (viva completed – September 2014) CS
24. Growth and investigation of nitride-based nano-wires – Beh Khi Poay (viva completed – January 2015) CS
25. Growth and characterization of GaN and Ga_2O_3 nanostructures for hydrogen sensing application – Qahtan Nofan Abdullah (viva completed – June 2015) CS
26. Chaotic cryptography: Alternative Perspectives and Approaches – Afshin Akhshani (viva completed – June 2015) MS
27. Novel structural and optical properties of ZnO thin films and their applications – Tneh Sau Siong (viva completed – August 2015) MS
28. Synthesis and characterization of nanocrystalline CdS thin films by microwave-assisted chemical bath deposition for photodetectors application – Mohammed Husham Mohammed Ali (viva completed – October 2015) MS
29. Growth and characterization of rutile TiO_2 nanostructures synthesized by chemical bath deposition for UV photodetector applications – Abbas Mohammed Selman (viva completed – November 2015) MS
30. Spin coating growth and characterizations of gallium nitride (GaN) thin films – Fong Chee Yong (viva completed – December 2015) CS
31. RF-MBE growth of III-nitrides on silicon for light detecting applications – Mohd Zaki Mohd Yusoff (viva completed – January 2016) MS
32. Transparent conductive electrodes for GaN-based solid state lighting – Ahmad Hadi Ali (viva completed – February 2016) MS
33. Fabrication and characterization of porous III-nitrides alloys for application for sensing devices – Rosfariza Radzali (viva completed – December 2016) MS
34. Hydrothermal and modified chemical bath deposition methods for growth of ZnO nanorods for device applications– Sabah M. Mohammad (viva completed – January 2017) MS
35. Porous III-nitrides for sensor applications – Ainorkhilah Mahmood (viva completed – January 2017) MS
36. RF-MBE growth of III-nitrides heterostructures for gas sensing applications – Chin Che Woei (viva completed – January 2017) MS
37. Synthesis and characterization of CuS thin film using CO_2 laser for pyrolytic and photolytic processes for sensor application - Fayroz Arif Sabah (viva completed – September 2017) CS
38. Growth and characterization of low-dimensional WO_3 by low cost method and their applications – Chai Yingqi (viva completed – October 2017) CS
39. Polycrystalline GaN layer on non-polar sapphire substrate for metal-semiconductor-metal photodetector – Azharul Ariff Kamarulzaman (viva completed – October 2017) CS
40. Synthesis and characterization of undoped and Mg-doped ZnO nanorods by hydrothermal method for optoelectronic device applications - Shrook Adnan Azzez (viva completed – October 2017) MS
41. Synthesis and characterization of V_2O_5 nanorods using spray pyrolysis method for different applications – Nabeel Mohammed Abdulghafour Azzez (viva completed – November 2017) CS
42. Investigation of ZnO nanostructures on glass substrate by thermal evaporation method for high-sensitivity UV detection- Alnomani Forat Hamzah Abed (viva completed – January 2018) MS
43. Synthesis and characterization of carbon nanotube prepared using microwave oven for hydrogen gas sensing application - Natheer Ali Suliman Al Gadri (viva completed – January 2018) MS

44. Spin coating growth and characterizations of indium nitride (InN) thin films – Lee Zhi Yin (viva completed – February 2018) CS
45. Secondary materials modified anodic titanium dioxide nanotube layers – Ng Siow Woon (viva completed – July 2018) CS
46. Fabrication and characterization of GaN-based low dimensional structures – Tan Lay Kim (viva completed – July 2018) CS
47. Synthesis and characterization of laser annealed nanoporous Si/ZnO nanoclusters for ultraviolet photodetector application - Asad A. Thahe (External Co-Supervisor for Universiti Teknologi Malaysia) (viva completed – November 2018) CS
48. Chromaticity investigation of curcuminoids dye composite with silicone and nanofiber technique for white light down-conversion - Shafouri Mahmood Shaikhan Ta Eeb (viva completed – August 2020) CS
49. Synthesis and characterization of phosphor for white light emitting diode - Husnen R. Abd (viva completed – September 2020) MS
50. Fabrication and characterization of Cu-stabilized ultrathin silicon dies using ultrashort-pulse laser dicing – Michael Raj a/l Marks (viva completed – September 2021) CS
51. Fabrication of GaN on GaN deep green light emitting diode – Shamsul Amir Abdul Rais (viva completed – December 2021) MS
52. Deposition and characterisation of solution processed indium gallium zinc oxide - Nabihah Kassim MS
53. Epitaxial growth of III-nitrides semiconductors for multiple quantum well GaN-based near ultraviolet light emitting diodes - Mohd Ann Amirul Zulffiqal Md Sahar MS
54. Synthesis and characterization of rare earth activated phosphor by microwave solution combustion for light emitting diodes applications - Lau Khai Shenn MS
55. Growth of fluorine doped zinc oxide nanostructures for ultra-violet photodetector using modified chemical bath-hydrothermal method – Muhammad Aminu MS
56. White light-emitting diode with enhanced luminous efficiency using variable colloidal quantum dots materials - Emad Adnan Said Kabaa MS
57. Fabrication and characterization of InGaN based solar cell – Ahmad Sauffi Yusof MS (International thesis Co-Mentorship with Universite de Lorraine, France – Cotutelle program)
58. Green synthesized cerium oxide nanoparticles embedded aloe barbadensis for MOS-based application - Saad Milad Ali Nsar CS
59. ZnO NRs/metal nanoparticles/GaN hybrid heterostructure for fabrication of high efficiency optoelectronic devices – Shireen Mohammed Abed CS
60. Electrospun Polymer Composite Fibers as Down Conversion Phosphor Layers for White Light Emitting Diodes – Nabeel Zabar Abed MS
61. Synthesize of Bimetallic (Gold- Silver) Nanoparticles Prepared by Pulsed Laser Ablation in Liquid, and Application in Biomedicine - Hameed Naser Khalaf MS
62. Investigation of DC-RF Magnetron Co-Sputtered Cerium doped Gallium Oxide as Passivation Layer for Wide Bandgap Semiconductor – Puteri Haslinda Megat Abdul Hedei CS
63. Investigation of Boron Doped Cerium Oxide Gate On 4H-Silicon Carbide – Ainita Rozati Mohd Zabidi CS

(b) **M.Sc projects (Masters by Research)** (MS: main supervisor, CS: co-supervisor)

1. Titanium cap cobalt silicide comparison, with and without a thin titanium interlayer – Lim Chung Ooi (viva completed – July 2004) *CS*
2. Formation and characterization of cobalt silicide on silicon wafer (111) at different substrate and annealing temperatures – Noorhisyam Abdul Hamid (viva completed – June 2005) CS
3. Ni based ohmic contact on p-type GaN – Lim Cheong Wan (viva completed – January 2006) CS
4. A study on GaN films grown by PA-MOCVD with hydrogen plasma – Oh Sue Ann (viva completed – February 2006) CS
5. Structural and electrical characterization of photodetectors based on III-V nitrides – Lee Yan Cheung (viva completed – April 2006) MS

6. Simulation and design of light emitting structures based on III-V nitrides – Norzaini Zainal (viva completed – June 2006) MS
7. Fabrication of III-nitrides quantum dots for optoelectronic applications – Chin Che Woei (viva completed – June 2009) MS
8. A class of measurable dynamical systems for chaotic cryptography – Afshin Akhshani (viva completed – September 2009) MS
9. Investigation of cerium oxide thin film on silicon wafer – Farah Anis Jasni (viva completed – April 2010) CS
10. Investigation of metal-organic decomposed (MOD) cerium oxide (CeO_2) gate deposited on Si and GaN substrates via spin-on coating technique – Quah Hock Jin (viva completed – June 2010) CS
11. Anodization of zirconium for ZrO_2 for high-k dielectric material formation – Noor Rehan Zainal Abidin (viva completed – September 2010) CS
12. Characterizations of AlCu/TiN/Ti film stack by physical vapor deposition – Leow Mun Tyng (viva completed – November 2011) MS
13. Metal-insulator-semiconductor (MIS) structures based on III-nitrides – Azzafeerah Mahyuddin (viva completed – February 2012) MS
14. Synthesis and characterization of nickel thin film on single crystal (0001) ZnO substrate and on ZnO thin film – Tan Gaik Leng (viva completed – March 2012) CS
15. Schottky diodes based on III-nitrides for gas sensing applications – Teo Silk Guan (viva completed – October 2012) MS
16. Fabrication and characterization of porous zinc oxide – Ching Chin Guan (viva completed – July 2012) CS
17. Stabilization of ultra-thin silicon dies – Michael Raj a/l Marks (viva completed – August 2016) MS
18. ScN as an intermediate layer for high quality GaN growth - Alvin Yong Shee Meng (viva completed – May 2017) CS
19. Structural, electrical and optical properties of indium nitride nano films – Ganie Umar Bashir (viva completed – February 2018) MS
20. Sol-gel spin coating growth of aluminium gallium nitride thin films – Nurul Atikah Mohd Isa (viva completed – March 2018) CS
21. Fabrication and characterization of Cu-doped ZnO films using reactive magnetron sputtering - Ahmad Sauffi Yusof (viva completed – September 2018) MS
22. Synthesis, analysis and reliability studies of metal oxide thin films deposited on Al substrate using various deposition methods for thermal management applications - Nur Jasriatul Aida Jamaludin (viva completed – November 2018) CS
23. Luminescent properties of phosphor nanofibers for white light emitting diode – Hasmaifarahatul Hidayah Abd Wahab (viva completed – June 2021) MS
24. Synthesis of poly (9,9-di-n-octylfluorenyl-2,7-diyl) (PFO) and Ag Nanoparticles-Carbon-PFO composite thin films via drop casting method – Suvindraj Rajamanickam (viva completed – August 2021) CS
25. Growth and Characterization of Mg-Doped GaN and High Aluminium Content Mg-Doped AlGaN – Noor Afifa Mohd Hanafiah (viva completed – October 2021) MS
26. Emission tuning of hybrid organic-inorganic LED heterostructure through incorporation of gold nanoparticles - Farah Hayati Haji Ahmad CS

(c) **M.Sc projects - Masters by Coursework candidates** (Main supervisor)

2000/2001
1. Fabrication and characterization of metal-insulator-semiconductor (MIS) diodes based on GaN films - Chuah Cheow Theng

2001/2002
1. Fabrication and characterization of cobalt silicide layers for contacts and interconnects applications – Hong Lay Leng

2002/2003
1. Study of the effect of surface treatment on the contact resistance of ohmic contact on p-GaN – Tan Soo Chin
2. Structural and electrical characterization of GaN-based heterostructures – Chew Gaik Leng

2003/2004
1. Investigation of Ni/Ag and Ni/Au contacts on GaN – Lim Wei Chye
2. Characterization of GaN epilayers grown on sapphire substrates – Mandy Lim Hui Sean
3. Thermal stability of metal contacts on GaN-based heterostructures – Teoh Poh Aun

2005/2006
1. Optical analysis of $Al_xGa_{1-x}N$ film using Fourier transform infrared spectroscopy– Lo Chee Yee
2. Fabrication and characterization of organic light emitting diode (OLED) – Tan Lin Lin
3. Structural and optical characterization of aluminium nitride (AlN) thin film on sapphire (Al_2O_3) substrate – Robin Ong
4. Structural and optical characterization of InN/GaN/Al_2O_3 – Choo Soo Hoon
5. Porous III-nitrides for UV photodetector (light sensor) applications - Adelene Ng Geok Ling
6. Fabrication and characterization of gas sensors based on porous III-nitrides - P'ng Soo Hui

2006/2007
1. Porous GaN for gas sensing applications – Nurul Huda Mohd Noor
2. Light emission from poly[(9,9-dioctylfluorenyl-2,7-diyl)-co-(1,4-phenylene)] polymers – Siti Nur Sarah Ridhwan (CS)

2007/2008

1. Deposition of indium nitride using RF reactive magnetron sputtering – Foo Li Yin

2013/2014

1. ZnO nanorod photodetector on porous silicon substrate – Fatima Salem Mosbah Elbskri

Undergraduate Supervision

Final year B.Sc projects

1999/2000
1. Fabrication and characterization of GaN-based device structures

2000/2001
1. Electrical characterization of various metal contacts to n-GaN
2. Pixar LED performance (competence) research
3. Numerical simulation of cobalt silicide formation and phase transformation

2001/2002
1. Metal-oxide-semiconductor (MOS) capacitors based on GaN films
2. Characteristics of cobalt silicide contacts on GaN
3. Optimization of processing parameters for patterning of device structures

2002/2003
1. Investigations of metal-semiconductor contacts
2. Fabrication and characterization of metal silicide layers

2003/2004
1. Schottky contact and the thermal stability of Ni on Si(111)

2. Characteristics of Ni/Ag and Ni/Au contacts on Si(111)
3. Thermal stability of thin cobalt silicide films on silicon substrates
4. Study of thin film surface texture

2004/2005
1. CAI (Computer Aided Instruction) package: Semiconductor Materials
2. Study of the effects of rotation speed of the spinner on photoresists
3. Study and optimization of UV exposure time on photoresists
4. Study of the effects of UV lamp intensity on photoresists

2005/2006
1. Fabrication and characterization of AlGaN-based Schottky diode for gas sensing applications
2. Fabrication and characterization of photodetectors based on GaN
3. Fabrication and characterization of LEDs based on GaN
4. Fabrication and characterization of porous GaN
5. CAI (Computer Aided Instruction) package: Semiconductor Fabrication Process
6. The role of oxygen and temperature in forming SiO_2 on Si using RTP system
7. Design and fabrication of mask for n-MOSFET

2006/2007
1. Structural characterization of AlN
2. Growth and characterization of GaN
3. Growth and characterization of InN

2007/2008
1. Deposition of indium nitride using RF-magnetron sputtering
2. Deposition of aluminium nitride using RF-magnetron sputtering
3. Ohmic metal contacts to InGaN (indium gallium nitride)

2008/2009
1. High work function metal contacts on III-nitrides
2. Characterization of AlGaN/GaN grown on Si substrate
3. Properties of Al-doped ZnO by using reactive RF sputtering technique

2009/2010
1. Study on characteristics of GaN grown on sapphire and Si substrates

2010/2011
1. Reactive sputtering deposition of InN on silicon substrates

2013/2014
1. Growth and characterization of nanostructured semiconductors

2014/2015
1. Synthesis of dye sensitized solar cell based on titanium dioxide

2015/2016
1. Growth and characterization of nanostructured metal oxides

External Examiner for Higher Degree Students

1. The development of barium strontium titanate ceramics bolometer as distance sensor
   M.Sc (2006) –Universiti Kebangsaan Malaysia
   Nur Hanani Zainal Abidin

2. Design of InGaAlAs/InP Quantum-Well Lasers
   M.Eng.Sc (2010) – Multimedia University
   Yong Yean Seng

3. Development of carbon nanotubes for pressure sensing application
   PhD (2010) – Universiti Teknologi Petronas
   Lai Mun Kou

4. Multiplication gain and excess noise factor in double heterojunction avalance photodiodes
   M.Eng.Sc (2011) – Multimedia University
   Tan Siew Lin

5. The growth and characterization of the dilute nitride InGaAsN
   PhD (2012) – La Trobe University, AUSTRALIA
   Hashimah Hashim

6. Synthesis of graphene and its application as a channel of three-branch junction device
   PhD (2013) – Universiti Teknologi Malaysia
   Shaharin Fadzli Abd Rahman

7. Penyediaan sel suria organik menggunakan kaedah cetakan inkjet
   dan kesan plasmonik nanozarah emas ke atas prestasi sel suria
   PhD (2013) – Universiti Kebangsaan Malaysia
   Vivi Fauzia

8. Aerosol-assisted CVD grown FTO thin films for transparent electrode, flexible transparent electrode in photovoltaic applications and luminescent FZO thin films
   PhD (2013) – Anna University, INDIA
   Anusha M

9. Electrodeposited germanium on silicon and its crystallization by rapid melting growth
   PhD (2014) – Universiti Teknologi Malaysia
   Mastura Shafinaz Zainal Abidin

10. Investigations on the growth, characterization and applications of vertically aligned zinc oxide nanorods by radio frequency magnetron sputtering
    PhD (2014) – Bharathidasan University, INDIA
    P. Sundara Venkatesh

11. Mechanical and electrical properties of microwave sintered nano 8YSZ and synthesis, dielectric and conductivity studies of zirconium tin titanate
    PhD (2014) – Anna University, INDiA
    P. Ganesh Babu

12. Nitrogen doping of nanostructured amorphous carbon thin film for carbon-based solar cell apllications
    PhD (2014) – Universiti Teknologi MARA
    Nurfadzilah Ahmad

13. Sensitivity behavior of nanostructured zinc oxide based gas sensor fabricated by immersion method
    MSc (2017) – Universiti Teknologi MARA
    Siti Shafura A Karim

14. Functionalisation and optimization of GaN/AlGaN/GaN/ HEMTs for use as contaminant sensors

PhD (2018) – The University of Western Australia, AUSTRALIA
Farah Liyana Muhammad Khir

15. Synthesis and characterization of V_xO_y and $V_2O_5.MoO_3$ nanostructured thin films deposited by plasma assisted sublimation process
PhD (2020) – Indian Institute of Technology Delhi, INDIA
MeghaSingh

16. Sputter deposition and characterization of metal sandwiched indium tin oxide/silicon for solar cell application
PhD (2020) – Universiti Tun Hussein Onn Malaysia
Aliyu Kabiru Isiyaku

17. Atom-thick tungsten disulfide nanosheet as electron transport layer of perovskite solar cell
MSc (2021) – Universiti Kebangsaan Malaysia
Nurul Ain Abd Malek

Internal Examiner for Higher Degree Students

1. Characteristics of nickel silicide-aluminium Schottky diode
M.Sc by Coursework Project (1999) – Ahmad Kamal

2. Development of laser detection system for semiconductor materials
M.Sc by Coursework Project (2000) – Yeoh Mei Ling

3. Failure and Reliability Study in InGaN diodes
M.Sc by Coursework Project (2001) – Goh Eong Swan

4. The effects of rare earth doping on the electrical performance of ZnO varistors
M.Sc by Research (2002) – Lim Kok Keong

5. Modelling of charges and small signal capacitance in MOSFET with MATLAB
M.Sc by Coursework Project (2003) – H'ng Meng Chong

6. A study of oxide properties in MOS under electrical stress
M.Sc by Coursework Project (2004) – Yeoh Lai Seng

7. Simulation of GaN LED
M.Sc by Coursework Project (2004) – Lim Keng Chong

8. One dimensional phonons in semiconductor superlattices
M.Sc by Coursework Project (2004) – Lim Chin Thiam

9. Phase transition in physical system
M.Sc by Coursework Project (2004) – Lim Kien Hin

10. The effects of zinc oxide microstructure on the electrical characteristics of low voltage ceramic varistors
M.Sc by Research (2004) – Shahrom Mahmud

11. Energy band gap and refractive indices of $Si_{1-x-y}Ge_xC_y$ thin films and their role in $Si_{1-x-y}Ge_xC_y$ waveguides
M.Sc by Research (2004) – Nihad K. Ali

12. Anisotropic silicon dioxide reactive ion etching in 0.13 micron technology

M.Sc by Research (2006) – Teoh Kok Seng

13. Fabrication and characterization of zinc oxide by sputtering technique
    M.Sc by Coursework Project (2006) – Faridah Lisa Supian

14. Theoretical modeling of phonons in GaAs-AlAs short period superlattices
    M.Sc by Coursework Project (2006) – Chai Ming Shian

15. Characteristics of zinc oxide film by DC sputtering
    M.Sc by Coursework Project (2006) – Poo Hoe Kiat

16. Development of Kelvin probe measuring instrument for cathode characteristics in OLED applications
    M.Sc by Coursework Project (2006) – Mohd Anuar Ismail

17. Development of photoelectric effect measuring instrument for anode characteristics in OLED applications
    M.Sc by Coursework Project (2006) – Ahmad Nazib Alias

18. Case study of TC700 thermal modeling in microwave package
    M.Sc by Coursework Project (2007) – Lo Kin Mun

19. Development of QFN casting process
    M.Sc by Coursework Project (2007) – Koay Hian Beng

20. Bipolar transistor electrical characteristics: Effects of different die bond material and different wire bond diameter
    M.Sc by Coursework Project (2007) – Lina Lim Lay Hoon

21. Fabrication, structural and electrical characteristics of p-type ZnO thin films
    M.Sc by Research (2008) – Haslinda Abdul Hamid

22. The fabrication and characterization of hydrogen sensitive device based on porous gallium nitride, GaN
    M.Sc by Coursework Project (2008) – Oh May Ling

23. Design and simulation of multiple band gap solar cell using the Silvaco Athena and Atlas software package
    M.Sc by Coursework Project (2008) – Farha Maskuriy

24. Zinc oxide nanostructures: Synthesis, characteristics, crystallography, and optoelectronic responses
    PhD (2008) – Shahrom Mahmud

25. Fabrication and characterization of nanocrystalline Si and GaAs
    PhD (2008) – Nihad Khalaf Ali

26. Hetero-epitaxial vapor deposition growth of SiC
    PhD (2008) – Alex Lim Ying Keat

27. Fabrication and characterization of two dimensional silicon photonic crystal
    PhD (2008) – Sin Yew Keong

28. Simulation of lightwave propagation in planar photonic waveguide
    PhD (2009) – Mohd Hanapiah Mohd Yusoff

29. Design and simulation of GaN-based light emitting diodes geometrics and contacts
    MSc (2010) – Muhammad Firdaus Othman

30. Simulation performance of multi-quantum wells violet InGaN laser diode and analysis of its output for digital modulation
    PhD (2010) – Rafid A. Abdullah

31. Structural, electrical properties and applications of $Bi_2Se_{3x}Te_{3(1-x)}$, $Bi_{2x}Sb_{2(1-x)}Te$ and $Bi_{0.4}Sb_{1.6}Se_{3x}Te$ thermoelectric bulk materials grown using solid state microwave synthesis
    PhD (2013) – Arej Khadim Abbas

32. Study of germanium nanostructures from electrochemical deposition for photonic applications
    PhD (2013, Re-viva 2015) – Mohammed J. Jawad

33. Study of GaN nanostructures on silicon substrate grown by thermal evaporation techniques for photosensing applications
    PhD (2013) – Kameleldin Mohamed A. Abdel Rahman

34. Development of SiO_2 thin film on 4H-SiC by direct thermal oxidation and post oxidation annealing techniques in HNO_3 and H_2O vapour
    PhD (2014) – Banu Poobalan

35. Fabrication and characterization of organic and hybrid solar cell
    MSc (2015) – Izzati Husna Ismail

36. Fabrication and characterization of germanium, zinc oxide and their compounds by thermal evaporation technique
    PhD (2015) – Mohd Muzafa Jumidali

37. Fabrication and characterization (TiO_2 Nanofiber-PVP) using electrospinning method for gas sensing
    MSc (2016) – Nabeel Zabar Abed

38. Development of anodic aluminum oxide templates for growth of CuO nanorods for photodetection
    PhD (2016) – Khaled Majid Chahrour

39. Synthesis of nanostructured ZnS using chemical spray pyrolysis technique for sensing applications
    PhD (2018) – Ahmad Mohammad Muflih Aldiabat

Publications

A. International

1.Low temperature ECR-plasma assisted MOCVD microcrystalline and amorphous GaN deposition and characterization for electronic devices
Z. Hassan, M. E. Kordesch, W. M. Jadwisienzak, H. Lozykowski, W. Halverson, P.C. Colter, Mat. Res. Soc. Symp. Proc. 536, 245-250 (1999).

2.Properties of amorphous GaN grown on silicon.
Z. Hassan, K. Ibrahim, M. E. Kordesch, W. Halverson, P. C. Colter, International Journal of Modern Physics B, 16, 1086-1090 (2002).

3.A comparative study of the characteristics of GaN films grown by MOCVD.
F. K. Yam, Z. Hassan, Z. Jamal, A. Abdul Aziz, M. E. Kordesch, 2002 IEEE International Conference on Semiconductor Electronics Proceedings, 353-356 (2002).

4.Comparison between a Ti cap cobalt silicide to a flashed Ti-Ti cap cobalt silicide.
C. O. Lim, Z. Jamal, A. Abdul Aziz, Z. Hassan, 2002 IEEE International Conference on Semiconductor Electronics Proceedings, 329-332 (2002).

5.Infrared characterization of GaN/Si grown at different temperatures by MOCVD.
S. S. Ng, Z. Hassan, M. R. Hashim, M. E. Kordesch, W. Halverson, P. C. Colter, 2002 IEEE International Conference on Semiconductor Electronics Proceedings, 209-212 (2002)

6.Microcrystalline GaN film grown on Si(100) and its application to MSM photodiode
Z. Hassan, Y. C. Lee, F. K. Yam, M. J. Abdullah, K. Ibrahim, M. E. Kordesch, Materials Chemistry and Physics, 84, 369-374 (2004)

7.Thermal stability of Ni/Ag contacts on p-type GaN
Z. Hassan, Y. C. Lee, F. K. Yam, Z. J. Yap, N. Zainal, H. Abu Hassan, K. Ibrahim, Physica Status Solidi (c), 1(10), 2528-2532 (2004)

8.Thermal stability of contacts on AlGaN-based UV photodetectors
K. Ibrahim, A. A. Aljubouri, Y. C. Lee Z. Hassan, M.R. Hashim, Proc. of SPIE - Semiconductor Photodetectors, 5353, 151-159 (2004)

9.Hydrogen sensitive Pt Schottky diode sensor based on GaN
Y. Hudeish, A. Abdul Aziz, Z. Hassan, K. Ibrahim, 2004 IEEE International Conference on Semiconductor Electronics Proceedings, 52-55 (2004)

10.Electrical properties of Ti/Ag contacts to n-type $Al_{0.1}Ga_{0.9}N$
S. Othman, F. K. Yam, Z. Hassan, 2004 IEEE International Conference on Semiconductor Electronics Proceedings, 213-217 (2004)

11.Multi layer metallization scheme (Ni/Pd/Ag) ohmic contact on p-type GaN
C. W. Lim, C. K. Tan, A. Abdul Aziz, Z. Hassan, F. K. Yam, 2004 IEEE International Conference on Semiconductor Electronics Proceedings, 232-236 (2004)

12.Optical properties of GaN on sapphire substrates grown by plasma-assisted MOCVD
S. A. Oh, M. R. Hashim, S. S. Ng, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin, 2004 IEEE International Conference on Semiconductor Electronics Proceedings, 252-256 (2004)

13.Optimization of optical and electrical behavior of quantum well GaN-based LED
N. Zainal, M. R. Hashim, H. Abu. Hassan, Z. Hassan, 2004 IEEE International Conference on Semiconductor Electronics Proceedings, 581-584 (2004)

14.High-temperature Pd Schottky diode gas sensor on p-type GaN
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, 2004 IEEE International Conference on Semiconductor Electronics Proceedings, 589-591 (2004)

15.High temperature structural and electrical behavior of metal contacts on n-type GaN
F. K. Yam, P. A. Teoh, Z. Hassan, Proceedings of 6th International Conference on Electronic Materials and Packaging, 188-191 (2004)

16.Overview of thin film hydrogen gas sensors
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, Proceedings of 6th International Conference on Electronic Materials and Packaging, 574-581 (2004)

17.Characteristics of low-temperature-grown GaN films on Si(111)

Z. Hassan, Y. C. Lee, F. K. Yam, K. Ibrahim, M. E. Kordesch, W. Halverson, P. C. Colter, Solid State Communications, 133, 283-287 (2005)

18. Innovative advances in LED technology
F. K. Yam, Z. Hassan, Microelectronics Journal, 36, 129-137 (2005)

19. Growth and properties of GaN/Si heterojunction
Z. Hassan, S. S. Ng, G. L. Chew, F. K. Yam, M. J. Abdullah, M. R. Hashim, K. Ibrahim, M. E. Kordesch, Materials Science Forum, 480-481, 531-536 (2005)

20. Characteristics of Ni-based bi-layer contacts on GaN
Z. Hassan, F. K. Yam, W. C. Lim, A. Abdul Aziz, K. Ibrahim, Materials Science Forum, 480-481, 525-530 (2005)

21.Optical properties of GaN on Si substrate using plasma-assisted-MOCVD technique in the infrared and visible region
M. D. R. Hashim, S. A. Oh, S. S. Ng, Z. Hassan, M. Barmawi, Sugianto, M. Budiman, P. Arifin, Materials Science Forum, 480-481, 519-524 (2005)

22.$CoSi_2$ formation with a thin interlayer-Ti capping layer and Ti capping layer
A. Abdul Aziz, C. O. Lim, Z. Hassan, Z. Jamal, Recent Advances in Multidisciplinary Applied Physics, 337-342 (2005)

23.Effects of annealing treatments on the characteristics of ohmic contacts on n-type AlGaN
Z. Hassan, F. K. Yam, Y. C. Lee, S. Othman, Proc. of SPIE – Light-Emitting Diodes: Research, Manufacturing, and Applications IX, 169-176 (2005)

24.Simulation of high performance quantum well GaN-based LED
Z. Hassan, N. Zainal, M. R. Hashim, H. Abu Hassan, Proc. of SPIE – Physics and Simulation of Optoelectronic Devices XIII, 540-549 (2005)

25.Crystallinity studies of GaN/Si films grown at different temperatures by infrared reflectance spectroscopy
S. S. Ng, Z. Hassan, M. R. Hashim, M. E. Kordesch, Materials Chemistry and Physics, 91, 404-408 (2005)

26.A comparative study of the electrical characteristics of metal-semiconductor-metal (MSM) photodiodes based on GaN grown on silicon
Y. C. Lee, Z. Hassan, F. K. Yam, M. J. Abdullah, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P.Arifin, Applied Surface Science, 249, 91-96 (2005).

27.Dark current characteristics of thermally treated contacts on GaN-based ultraviolet photodetectors
Y. C. Lee, Z. Hassan, M. J. Abdullah, M. R. Hashim, K. Ibrahim, Microelectronic Engineering, 81, 262-267 (2005)

28.Low applied bias for p-GaN electroluminescent devices
F. K. Yam, Z. Hassan, C. K. Tan, C. W. Lim, A. Abdul Aziz, K. Ibrahim, Microelectronic Engineering, 81, 268-272 (2005)

29.Electrical characteristics of GaN-based metal-oxide-semiconductor (MOS) structures
K. A. Abdullah, M. J. Abdullah, F. K. Yam, Z. Hassan, Microelectronic Engineering, 81, 201-205 (2005)

30.A methane sensitive Ni/n-GaN Schottky barrier sensor
A. Y. Hudeish, A. A. Aziz, Z. Hassan, C. K. Tan, H. Abu Hassan, K. Ibrahim, 2005 Asian Conference on Sensors and the International Conference on New Techniques in Pharmaceutical and Biomedical Research Proceedings, 127-129 (2005)

31.High temperature Pt Schottky barrier gas sensor on p-type GaN
A. Y. Hudeish, A. A. Aziz, Z. Hassan, C. K. Tan, H. Abu Hassan, K. Ibrahim, 2005 Asian Conference on Sensors and the International Conference on New Techniques in Pharmaceutical and Biomedical Research Proceedings, 159-161 (2005)

32.Investigations of surface roughness of GaN based gas sensor using atomic force microscope
A. Y. Hudeish, A. A. Aziz, Z. Hassan, C. K. Tan, H. Abu Hassan, K. Ibrahim, 2005 Asian Conference on Sensors and the International Conference on New Techniques in Pharmaceutical and Biomedical Research Proceedings, 222-225 (2005)

33.Effect of hydrostatic pressure on the Schottky barrier height of n-AlGaN
Y. Liu, M. Z. Kauser, P.P Ruden, Z. Hassan, Y. C. Lee, S. S. Ng, F. K. Yam, Applied Physics Letters, 88, 022109 (2006)

34.Electrical characteristics and thermal stability of Ti contacts to p-GaN
C. K. Tan, A. Abdul Aziz, Z. Hassan, F. K. Yam, A. Y. Hudeish, Physica Status Solidi c, 3(6) 1762-1766 (2006)

35.AlGaN metal-semiconductor-metal structure for pressure sensing applications
Z. Hassan, Y. C. Lee, S. S. Ng, F. K. Yam, Y. Liu, Z. Rang, M. Z. Kauser, P. P. Ruden, M. I. Nathan, Physica Status Solidi c, 3(6), 2287-2290 (2006)

36.Large enhancement of GaN UV light emission using silver mirror resonator
N. M. Ahmed, M. R. Hashim, Z. Hassan, Physica Status Solidi c, 3(6), 2022-2025 (2006)

37.Charge injection in polymer light -emitting diodes based on poly[(9,9-dioctylfluorenyl-2,7-diyl)-co-(1,4-phenylene)]
A. Yusoff, Z. Hassan, and H. Abu. Hassan, Applied Physics Letters, 88, 242109 (2006)

38.Optimization of InGaN based light emitting diodes
N. Zainal, H. Abu Hassan, Z. Hassan, M. R. Hashim, N. M. Ahmed, Materials Science Forum, 517, 195-201 (2006)

39.Crystallinity studies of GaN/Si films grown by MOCVD at various substrate temperatures using XRD
S. S. Ng, Z. Hassan, Haslan Abu Hassan, M. E. Kordesch, Materials Science Forum, 517, 69-72 (2006)

40.Investigation on Ag/Ti ohmic contacts to Si-doped n-type $Al_{0.27}Ga_{0.73}N$ and the effect of post annealing treatments
S. Othman, F. K. Yam, H. Abu Hassan, Z. Hassan, Materials Science Forum, 517, 281-286 (2006)

41.Epitaxial GaN film grown at low temperature by hydrogen plasma-assisted MOCVD
F. K. Yam, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin, Materials Science Forum, 517, 9-12 (2006)

42.Structural and optical analysis of GaN films grown by low-pressure metalorganic chemical vapor deposition
F. K. Yam, Z. Hassan, H. Abu Hassan, M. E. Kordesch, Materials Science Forum, 517, 5-8 (2006)

43.A chemical sensor based on AlGaN
A. Y. Hudeish, C. K. Tan, A. Abdul Aziz, Z. Hassan, Materials Science Forum, 517, 33-36 (2006)

44.Response mechanism of Pd-GaN Schottky barriers comparative to Pd-Si gas sensors
A. Y. Hudeish, C. K. Tan, A. Abdul Aziz, Z. Hassan, Materials Science Forum, 517, 61-64 (2006)

45.Design of DBR mirrors for GaN vertical cavity surface emitting laser
N. M. Ahmed, M. R. Hashim, Z. Hassan, Materials Science Forum, 517, 25-28 (2006)

46.Effects of layer thickness and incident angle variations on DBR reflectivity
N. M. Ahmed, M. R. Hashim, Z. Hassan, Materials Science Forum, 517, 29-32 (2006)

47.The study of thermal treatment on electrical properties at Cr/p-GaN
C. K. Tan, A. Abdul Aziz, Z. Hassan, F. K. Yam, C. W. Lim, A. Y. Hudeish, Materials Science Forum, 517, 247-251 (2006)

48.Pinning Fermi level of p-GaN due to three different (Zr, Ti, and Cr) metal contacts
C. K. Tan, A. Abdul Aziz, Z. Hassan, F. K. Yam, C. W. Lim, A. Y. Hudeish, Materials Science Forum, 517, 262-266 (2006)

49.Effect of thermal treatment for Pd and PdSi Schottky contacts on p-GaN
C. K. Tan, A. Abdul Aziz, F. K. Yam, C. W. Lim, Z. Hassan, A. Y. Hudeish, Materials Science Forum, 517, 242-246 (2006)

50.Optical performance of InGaN/AlGaN double heterostructure light emitting diodes
S. M. Thahab, H. Abu Hassan, Z. Hassan, IEEE Proceedings of the 6th International Conference on Numerical Simulation of Optoelectronic Devices, 13-14 (2006)

51.Effect of post annealing treatments on the characteristics of ohmic contacts to n-type InN
L. S. Chuah, Z. Hassan, H. Abu Hassan, 2006 IEEE International Conference on Semiconductor Electronics Proceedings, 614-617 (2006)

52.Nanoporous InN films synthesized using photoelectrochemical (PEC) wet etching
L. S. Chuah, Z. Hassan, F. K. Yam, H. Abu Hassan, 2006 IEEE International Conference on Semiconductor Electronics Proceedings, 618-621 (2006)

53.Characteristics of thermally treated contacts on porous silicon based metal-semiconductor-metal (MSM) photodetector structures
L. S. Chuah, C. W. Chin, Z. Hassan, H. Abu Hassan, 2006 IEEE International Conference on Semiconductor Electronics Proceedings, 442-445 (2006)

54.Porous silicon dioxide synthesized using photoelectrochemical (PEC) wet etching
L. S. Chuah, C. W. Chin, Z. Hassan, H. Abu Hassan, 2006 IEEE International Conference on Semiconductor Electronics Proceedings, 438-441 (2006)

55.The study of Pt/porous GaN Schottky contact for hydrogen sensing
F. K. Yam, Y. P. Ali, Z. Hassan, N. H. Mohd. Noor, C. W. Chin, 2006 IEEE International Conference on Semiconductor Electronics Proceedings, 951-954 (2006)

56.The growth of III-V nitrides heterostructure on Si substrate by plasma-assisted molecular beam epitaxy
F. K. Yam, Z. Hassan, L. S. Chuah, N. Zainal, C. W. Chin, S. M. Thahab, M. Hussein, 2006 IEEE International Conference on Semiconductor Electronics Proceedings, 928-932 (2006)

57.The energy band gap of $Al_xGa_{1-x}N$ thin films as a function of Al-mole fraction
S. S. Ng, F. K. Yam, Z. Hassan, H. Abu Hassan, 2006 IEEE International Conference on Semiconductor Electronics Proceedings, 933-937 (2006)

58.Simulation of InGaN multiple quantum wells (MQWs) light emitting diodes

S. M. Thahab, H. Abu Hassan, Z. Hassan, 2006 IEEE International Conference on Semiconductor Electronics Proceedings, 1034-1037 (2006)

59. Effects of metal work function and operating temperatures on the electrical properties of contacts to n-type GaN
S. M. Thahab, H. Abu Hassan, Z. Hassan, 2006 IEEE International Conference on Semiconductor Electronics Proceedings, 815-819 (2006)

60. Porous GaN prepared by UV assisted electrochemical etching
F. K. Yam, Z. Hassan, S. S. Ng, Thin Solid Films, 515, 3469-3474 (2007)

61. Experimental and theoretical studies of surface phonon-polariton of AlN thin film
S. S. Ng, Z. Hassan, H. Abu Hassan, Applied Physics Letters, 90, 081902 (2007)

62. Performance and optical characteristic of InGaN MQWs laser diodes
S. M. Thahab, H. Abu Hassan, Z. Hassan, Optics Express, 15 (5), 2380-2390 (2007)

63. The study of Pt Schottky contact on porous GaN for hydrogen sensing
F. K. Yam, Z. Hassan, A. Y. Hudeish, Thin Solid Films, 515, 7337-7341 (2007)

64. Investigation of structural and optical properties of nanoporous GaN film
F. K. Yam, Z. Hassan, L. S. Chuah, Y. P. Ali, Applied Surface Science, 253, 7429-7434 (2007)

65. High quality $Al_{0.09}Ga_{0.91}N$ on Si(111) by RF-MBE and its application to MSM photodiode
L. S. Chuah, Z. Hassan, H. Abu Hassan, F. K. Yam, S. M. Thahab, C. W. Chin, N. M. Ahmed, Proceedings of the ICMAT 2007: Materials for Advanced Sensors and Detectors, 1-8 (2007) – on CD

66. Enhanced UV photodetector responsivity in porous GaN by Pt assisted electroless etching
L. S. Chuah, Z. Hassan, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 1(8), 400-403 (2007)

67. Comparative study of single and multiple quantum wells $In_{0.13}Ga_{0.87}N$ based LED by simulation method
N. Zainal, Z. Hassan, H. Abu Hassan, M. R. Hashim, Optoelectronics and Advanced Materials – Rapid Communications, 1(8), 404-407 (2007)

68. Surface phonon polariton mode of wurtzite structure $Al_xGa_{1-x}N$ ($0 \leq x \leq 1$) thin films
S. S. Ng, Z. Hassan, H. Abu Hassan, Applied Physics Letters, 91, 081909 (2007)

69. High carrier concentration of n- and p-doped GaN on Si(111) by nitrogen plasma-assisted molecular beam epitaxy (PAMBE)
L. S. Chuah, Z. Hassan, S. S. Ng, H. Abu Hassan, Journal of Materials Research, 22 (9), 2623-2630 (2007)

70. Polarized IR reflectance study of wurtzite GaN thin film: the effects of angle of incidence on the optical phonon modes
S. S. Ng, Z. Hassan, H. Abu Hassan, Journal of Vacuum Science and Technology A, 25(6), 1557-1561 (2007)

71. Dark current characteristics of Ni contacts on porous AlGaN-based UV photodetector
L. S. Chuah, Z. Hassan, H. Abu Hassan, Journal of Optoelectronics and Advanced Materials, 9(9), 2886-2890 (2007)

72. Schottky diode based on porous GaN for hydrogen gas sensing application
F. K. Yam, Z. Hassan, S. H. P'ng, C. W. Chin, Applied Surface Science, 253, 9525-9528 (2007)

73. The study of Pd Schottky contact on porous GaN for UV metal-semiconductor-metal (MSM) photodetectors
L. S. Chuah, Z. Hassan, H. Abu Hassan, Journal of Nonlinear Optical Physics and Materials, 16 (4), 497-503 (2007)

74. InGaN: An overview of the growth kinetics, physical properties and emission mechanisms
F. K. Yam, Z. Hassan, Superlattices and Microstructures, 43, 1-23 (2008)

75. Surface phonon polariton of wurtzite GaN thin film grown on c-plane sapphire substrate
S. S. Ng, Z. Hassan, H. Abu Hassan, Solid State Communications, 145, 535-538 (2008)

76. Effect of zinc in the growth mechanism of zinc oxide nanostructures in the nitrogen environment
K. G. Saw, Y. T. Lim, G. L. Tan, Z. Hassan, K. Ibrahim, F. K. Yam, S. S. Ng, J. Phys D: Appl. Phys. 41, 055506 (7pp) (2008)

77. The growth of AlN thin films on Si(111) substrate by plasma-assisted molecular beam epitaxy
L. S. Chuah, Z. Hassan, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 2(3), 137-139 (2008)

78. The investigation of dark current reduction in MSM photodetector based on porous GaN
F. K. Yam, Z. Hassan, Journal of Optoelectronics and Advanced Materials, 10(3), 545-548 (2008)

79. Large area GaN metal semiconductor metal (MSM) photodiode using a thin low temperature GaN cap layer
L. S. Chuah, Z. Hassan, H. Abu Hassan, C. W. Chin, S. M. Thahab, Journal of Nonlinear Optical Physics and Materials, 17 (1), 59-69 (2008)

80. Growth of III-nitrides on Si(111) by RF-MBE and its application to MSM photodiodes
L. S. Chuah, Z. Hassan, H. Abu Hassan, F. K. Yam, C. W. Chin, N. M. Ahmed, Journal of Optoelectronics and Advanced Materials, 10(3), 569-572 (2008)

81. Structural and optical characterization of hexagonal crack free GaN films grown on Si(111) by plasma-assisted molecular beam epitaxy (PAMBE)
L. S. Chuah, Z. Hassan, H. Abu Hassan, C. W. Chin, Optoelectronics and Advanced Materials – Rapid Communications, 2(5), 296-298 (2008)

82. The methodology effects on surface morphology pattern of porous semiconductors
K. M. Omar, N. K. Ali, Z. Hassan, M. R. Hashim, H. A. Hassan, AIP Conference Proceedings, 1017, 129-133 (2008)

83. Effect of varying quantum well thickness on the performance of InGaN/GaN single quantum well laser diode
S. M. Thahab, H. Abu Hassan, Z. Hassan, AIP Conference Proceedings, 1017, 149-153 (2008)

84. Structural, optical and electrical properties of n-type GaN on Si(111) grown by RF-plasma assisted molecular beam epitaxy
C. W. Chin, Z. Hassan, F. K. Yam, AIP Conference Proceedings, 1017, 358-362 (2008)

85. High quality $In_{0.47}Ga_{0.53}N$/GaN heterostructure on Si(111) and its application to MSM detector
L. S. Chuah, Z. Hassan, H. Abu Hassan, Microelectronics International, 25(2), 3-8 (2008)

86. Barrier height enhanced GaN Schottky diodes using a thin AlN surface layer

L. S. Chuah, Z. Hassan, H. Abu Hassan, International Journal of Modern Physics B. 22(29), 5167-5173 (2008)

87. Optical characterization of nanoporous GaN through electroless wet chemical etching
L. S. Chuah, Z. Hassan, H. Abu Hassan, Materials Science – Poland, 26(3), 609-615 (2008)

88. Investigation on the effects of porous layer on the electrical properties of Pt/n-GaN Schottky contacts
F. K. Yam, Z. Hassan, Physica B, 403, 3105-3109 (2008)

89. Highly Mg-doped GaN thin film grown by RF plasma-assisted molecular beam epitaxy
C. W. Chin, Z. Hassan, F. K. Yam, Optoelectronics and Advanced Materials – Rapid Communications, 2(9), 533-536 (2008)

90. Ohmic metal contact to InGaN
L. S. Chuah, Z. Hassan, N. Shamsuddin, N. Amirruddin, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 2(10), 650-654 (2008)

91. Spectroscopic investigation of porous silicon prepared by laser-induced etching
Khalid M. Omar, N. K. Ali, Z. Hassan, M. R. Hashim, H. Abu Hassan, Journal of Optoelectronics and Advanced Materials, 10(10), 2653-2656 (2008)

92. Electrical resistance of crack-free GaN/AlN heterostructure grown on Si(111)
L. S. Chuah, Z. Hassan, H. Abu Hassan, C. W. Chin, Journal of Nonlinear Optical Physics & Materials, 17(3), 299-304 (2008)

93. Enhanced UV photodetector responsivity in porous GaN/Si(111) by metal-assisted electroless etching
L. S. Chuah, Z. Hassan, H. Abu Hassan, Advanced Materials Research, 31, 39-41 (2008)

94. Structural and electrical characteristics of metal contacts on n-type GaN/Si(111)
L. S. Chuah, Z. Hassan, C. W. Chin, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 2(12), 842-845 (2008)

95. Composition dependence of the surface phonon-polariton mode in wurtzite $In_xGa_{1-x}N$ ($0 \leq x \leq 1$) ternary alloy
S. S. Ng, Z. Hassan, H. Abu Hassan, Chinese Physics Letters, 25 (12), 4378-4380 (2008)

96. p-GaN/n-Si heterojunction photodiodes
L. S. Chuah, Z. Hassan, H. Abu Hassan, M. Hussein Mourad, Surface Review and Letters, 15 (5), 699-703 (2008)

97. RF-MBE growth of GaN on sapphire for gas sensing application
C. W. Chin, Z. Hassan, F. K. Yam, Journal of Nonlinear Optical Physics and Materials, 17 (4), 435-442 (2008)

98. InGaN/GaN laser diode characterization and quantum well number effect
S. M. Thahab, H. Abu Hassan, Z. Hassan, Chinese Optics Letters, 7(3), 226-230 (2009)

99. Influence of Al monolayers on the properties of AlN layers on Si(111)
L. S. Chuah, Z. Hassan, H. Abu Hassan, Surface Review and Letters, 16 (1), 99-103 (2009)

100. Structural and optical features of porous silicon prepared by electrochemical anodic etching
L. S. Chuah, Z. Hassan, F. K. Yam, H. Abu Hassan, Surface Review and Letters, 16 (1), 93-97 (2009)

101. Synthesis porous GaN by using UV-assisted electrochemical etching and its optical studies

Khalid Omar, Z. Hassan, K. Goh, H. Teh, H. Abu Hassan, Modern Applied Science, 3 (3), 132-139 (2009)

102. Structural and optical characteristics of porous GaN generated by electroless chemical etching
F. K. Yam, Z. Hassan, Materials Letters, 63, 724-727 (2009)

103. Porous Si(111) and Si(100) as an intermediate buffer layer for nanocrystalline InN films
L. S. Chuah, Z. Hassan, S. S. Ng, H. Abu Hassan, Journal of Alloys and Compounds, 479, L54-L58 (2009)

104. The effects of annealing treatment in oxygen ambient on Ni/$Al_{0.09}Ga_{0.91}N$ UV photodetectors
L. S. Chuah, Z. Hassan, H. Abu Hassan, Journal of Optoelectronics and Advanced Materials, 11(1), 76-82 (2009)

105. The effect of doping concentration on VCSEL performance
F. Z. Jasim, K. Omar, Z. Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 3(1), 10-12 (2009)

106. Silicon Schottky barrier photodiodes with a thin AlN nucleation layer
L. S. Chuah, Z. Hassan, H. Abu Hassan, C. W. Chin, S. M. Thahab, S. C. Teoh, Microelectronics International, 26(2), 41-44 (2009)

107. GaN Schottky barrier photodiode on Si(111) with low-temperature-grown cap layer
L. S. Chuah, Z. Hassan, H. Abu Hassan, N. M. Ahmed, Journal of Alloys and Compounds, 481, L15-L19 (2009)

108. Surface phonon-polariton modes of wurtzite structure InN semi-infinite crystal
S. S. Ng, Z. Hassan, H. Abu Hassan, Surface Review and Letters, 16(3), 355-358 (2009)

109. Strong coupling of sapphire surface polariton with aluminum nitride film phonon
V. A. Yakovlev, N. N. Novikova, E. A. Vinogradov, S. S. Ng, Z. Hassan, H. Abu Hassan, Physics Letters A, 373, 2382-2384 (2009)

110. The size effect in small aperture confined vertical cavity surface emitting laser
F. Z. Jasim, K. Omar, Z. Hassan, AIP Conference Proceedings, 1136, 103-107 (2009)

111. The study of energy bandgap of $In_xAl_yGa_{1-x-y}N$ quarternary alloys using UV-VIS spectroscopy
N. H. Abd. Raof, S. S. Ng, H. Abu Hassan, Z. Hassan, AIP Conference Proceedings, 1136, 176-180 (2009)

112. The studies of doping concentration effects on VCSEL laser
Farah Z. Jasim, Khalid Omar, Z. Hassan, AIP Conference Proceedings, 1136, 243-247 (2009)

113. Metal-insulator-semiconductor (MIS) structure with AlN dielectric
A. Mahyuddin, Z. Hassan, K. Y. Cheong, AIP Conference Proceedings, 1136, 494-498 (2009)

114. Surface and interface phonon polaritons of wurtzite GaN thin film grown on 6*H*-SiC substrate
S. S. Ng, T. L. Yoon, Z. Hassan, H. Abu Hassan, Applied Physics Letters, 94, 241912 (2009)

115. Hash function based on hierarchy of 2D piecewise nonlinear chaotic maps

A. Akhshani, S. Behnia, A. Akhavan, M. A. Jafarizadeh, H. Abu Hassan, Z. Hassan, Chaos, Solitons & Fractals, 42, 2405-2412 (2009)

116. Surface morphology and formation of nanostructured porous GaN by UV-assisted electrochemical etching
L. S. Chuah, Z. Hassan, C. W. Chin, H. Abu Hassan, World Academy of Science, Engineering and Technology, 55, 16-19 (2009)

117. Performance of InGaN/GaN laser diode based on quaternary alloys stopper and superlattice layers
S. M. Thahab, H. Abu Hassan, Z. Hassan, World Academy of Science, Engineering and Technology, 55, 11-15 (2009)

118. Surface phonon polariton in InAlGaN quaternary alloys
S. S. Ng, Z. Hassan, H. Abu Hassan, World Academy of Science, Engineering and Technology, 55, 189-193 (2009)

119. InAlGaN quaternary multi-quantum wells UV laser diode performance and characterization
S. M. Thahab, H. Abu Hassan, Z. Hassan, World Academy of Science, Engineering and Technology, 55, 352-355 (2009)

120. Structural and optical properties of $In_xAl_yGa_{1-x-y}N$ quaternary alloys
N. H. Abd. Raof, H. Abu Hassan, S. K. Mohd Bakhori, S. S. Ng, Z. Hassan, World Academy of Science, Engineering and Technology, 55, 348-351 (2009)

121. High Al-content $Al_xGa_{1-x}N$ epilayers grown on Si substrate by plasma-assisted molecular beam epitaxy
A. SH. Hussein, S. M. Thahab, Z. Hassan, C. W. Chin, H. Abu Hassan, S. S. Ng, Journal of Alloys and Compounds, 487, 24-27 (2009)

122. Laser effects on porous silicon synthesis by photoelectrochemical etching process
A. Ramzy, K. Omar, Z. Hassan, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 3 (11), 1190-1194 (2009)

123. Temperature effect on VCSEL output performance
Farah Z. Jasim, Khalid Omar, Z. Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 3 (11), 1136-1138 (2009)

124. Small aperture confined vertical cavity surface emitting laser effects on output performance
Farah Z. Jasim, Khalid Omar, Z. Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 3 (11), 1247-1249 (2009)

125. The performance of silicon solar cell with different texturing processes
Wisam J. Aziz, Asmiet Ramizy, K. Ibrahim, Khalid Omar, Z. Hassan, Journal of Optoelectronics and Advanced Materials, 11 (11), 1632-1636 (2009)

126. Zinc oxide nanorods on porous silicon/silicon substrates
L. S. Chuah, Z. Hassan, S. S. Tneh, Journal of Optoelectronics and Advanced Materials, 11 (11), 1637-1640 (2009)

127. Laser effects on porous silicon synthesis by photoelectrochemical etching process, Khalid Omar, Z. Hassan, Asmiet Ramzy, H. Abu Hassan, Journal of Optoelectronics and Advanced Materials, 11 (11), 1641-1646 (2009)

128. Multiple quantum well of GaAs VCSEL structure
Farah Z. Jasim, Khalid Omar, Z. Hassan, Journal of Optoelectronics and Advanced Materials, 11 (11), 1723-1727 (2009)

129. Effect of the orientation of porous silicon on solar cells performance
W. J. Aziz, A. Ramizy, K. Ibrahim, K. Omar, Z. Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 3 (12), 1368-1370 (2009)

130. Structural properties of doped GaN on Si(111) studied by x-ray diffraction techniques
L. S. Chuah, Z. Hassan, S. S. Ng, H. Abu Hassan, Journal of Nondestructive Evaluation, 28 (3-4), 125-130 (2009)

131. Structural and optical properties of large scale ZnO nano-wires and nano-sheets prepared by dry thermal oxidation
S. S. Tneh, H. Abu Hassan, K. G. Saw, F. K. Yam, Z. Hassan, Surface Review and Letters, 16 (6), 901-904 (2009)

132. Preferential orientation growth of AlN thin films on Si(111) substrates by plasma-assisted molecular beam epitaxy
L. S. Chuah, Z. Hassan, H. Abu Hassan, Surface Review and Letters, 16 (6), 925-928 (2009)

133. Ohmic contact properties of Ni/Ag metallization scheme on p-type GaN
L. S. Chuah, Z. Hassan, H. Abu Hassan, Journal of Non-Crystalline Solids, 356, 181-185 (2009)

134. High Photoluminescence of Silicon Nanostructures Synthesized by Laser- Induced Etching
Asmiet Ramizy, Khalid Omar, Z. Hassan, Microelectronics International, 27(1), 45-48 (2010)

135. Effects of postdeposition annealing in argon ambient on metallorganic decomposed CeO_2 gate spin coated on silicon
H. J. Quah, K. Y. Cheong, Z. Hassan, Z. Lockman, F. A. Jasni, W. F. Lim, Journal of the Electrochemical Society, 157 (1), H6-H12 (2010)

136. MOS characteristics of metallorganic-decomposed CeO_2 spin-coated on GaN
Hock Jin Quah, Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, Electrochemical and Solid-State Letters, 13(4), H116-H118 (2010)

137. PA-MBE growth and characterization of high Si-doped AlGaN on Si(111) substrate
A. Sh. Hussein, Z. Hassan, S. S. Ng, S. M. Thahab, C. W. Chin, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 4 (1), 59-62 (2010)

138. Sapphire surface polariton splitting due to resonance with aluminum nitride film phonon
V. A. Yakolev, N. N. Novikova, E. A. Vinogradov, S. S. Ng, Z. Hassan, H. A. Hassan, Journal of Physics: Conference Series, 210, 012027 (2010)

139. Pseudo random number generator based on synchronized chaotic maps
Afshin Akhshani, Sohrab Behnia, Amir Akhavan, Siew Choo Lim, Zainuriah Hassan, International Journal of Modern Physics C, 21 (2), 275-290 (2010)

140. Surface phonon polariton characteristics of $In_{0.04}Al_{0.06}Ga_{0.90}N/AlN/Al_2O_3$ heterostructure
S. S. Ng, S. C. Lee, S. K. Mohd Bakhori, Z. Hassan, H. Abu Hassan, Optics Express, 18 (10), 10354-10359 (2010)

141. The structural and optical characterizations of ZnO synthesized using the “bottom-up” growth method
S. S. Tneh, Z. Hassan, K. G. Saw, F. K. Yam, H. Abu Hassan, Physica B, 405, 2045-2048 (2010)

142. The effect of different anti-reflection coating process on silicon solar cells performance

Asmiet Ramizy, wisam J. Aziz, Z. Hassan, K. Ibrahim, Khalid Omar, World Academy of Science, Engineering and Technology, 62, 1554-1561 (2010)

143. Thermal annealing effect on properties of Zn thin films deposited on Si(111) substrates by dc sputtering
L. S. Chuah, Z. Hassan, S. S. Tneh, Optoelectronics and Advanced Materials – Rapid Communications, 4(4), 502-504 (2010)

144. Structural properties of high Ga-content $Al_xGa_{1-x}N$ on Si substrate studied by high resolution x-ray diffraction and photoluminescence
M. Z. M. Yusoff, Z. Hassan, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 4(5), 644-646 (2010)

145. The effect of porosity on the properties of silicon solar cell
Asmiet Ramizy, Wisam J Aziz, Z Hassan, Khalid Omar and K Ibrahim, Microelectronics International, 27 (2), 117-120 (2010)

146. Red light emitting Schottky diodes on p-type GaN/AlN/Si(111) substrate
L. S. Chuah, Z. Hassan, H. Abu Hassan, International Journal of Modern Physics B, 24(9), 1129-1135 (2010)

147. p-polarized infrared attenuated total reflection study of InN thin films grown on Si(1110 substrate
S. S. Ng, S. C. Lee, P. K. Ooi, Z. Hassan, H. Abu Hassan, W. L. Chen, Phys. Status Solidi RRL 4, 8-9, 191-193 (2010)

148. The effect of number of distributed Bragg reflectors on VCSEL output performance
F. Z. Jasim, K. Omar, Z. Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 4(6), 774-777 (2010)

149. Thermal annealing dependence of Ni/Ag ohmic contact in oxygen ambience on GaN pn-junction diode
M. Z. M. Yusoff, Z. Hassan, C. W. Chin, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 4(6), 863-866 (2010)

150. Plasma-assisted molecular beam epitaxy growth of crack-free AlN cap layer on GaN-based heterostructures
A. Mahyuddin, Z. Hassan, C. W. Chin, M. H. M. Mohamed, K. Y. Cheong, Optoelectronics and Advanced Materials – Rapid Communications, 4(6), 925-928 (2010)

151. Investigation of non-annealed Al ohmic contacts on undoped ZnO synthesized using the “bottom-up” growth method
S. S. Tneh, Z. Hassan, K. G. Saw, F. K. Yam, K. P. Beh, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 4(7), 965-967 (2010)

152. Structural and optical properties of $Al_xIn_yGa_{1-x-y}N$ quaternary alloys grown on sapphire substrates by molecular beam epitaxy
M. A. Ibid, H. Abu Hassan, Z. Hassan, S. S. Ng, S. K. Mohd Bakhori, N. H. Abd Raof, Microelectronics International, 27(3), 148-153 (2010)

153. Growth of zinc oxide nanoflowers by thermal evaporation method
H. I. Abdulgafour, Z. Hassan, N. H. Al-Hardan, F. K. Yam, Physica B, 405(11), 2570-2572 (2010)

154. A novel scheme for image encryption based on 2D piecewise chaotic maps
A. Akhshani, S. Behnia, A. Akhavan, H. Abu Hassan, Z. Hassan, Optics Communications, 283, 3529-3266 (2010)

155. Thermal degradation of single crystal zinc oxide and the growth of nanostructures
K. G. Saw, G. L. Tan, Z. Hassan, F. K. Yam, S. S. Ng, AIP Conference Proceedings, 1250, 43-46 (2010)

156. Characterization of AlGaN/GaN heterostructure field effect transistors (HFETs) with variable thickness channel and substrate type
A. Sh. Hussein, Z. Hassan, H. Abu Hassan, S. M. Thahab, AIP Conference Proceedings 1250, 81-84 (2010)

157. Single and double quantum ell effects on GaN-based VCSELs performance
Azita Zandi, Farah Z. Jasim, Z. Hassan, H. Abu Hassan, AIP Conference Proceedings, 1250, 101-104 (2010)

158. Electrical characteristics and interface properties of III nitride-based metal-insulator-semiconductor structure
A. Mahyuddin, Z. Hassan, Y. Yusof, K. Y. Cheong, AIP Conference Proceedings, 1250, 105-108 (2010)

159. Polarized infrared reflectance study of InGaN semiconductor
M. A. Ahmad, S. C. Lee, S. K. Mohd Bakhori, S. S. Ng, Z. Hassan, H. Abu Hassan, AIP Conference Proceedings, 1250, 109-112 (2010)

160. The influence of geometrical structure of AlInGaN double quantum well (DQWs) UV diode laser on its performance and operating parameters
A. J. Ghazai, S. M. Thahab, H. Abu Hassan, Z. Hassan, AIP Conference Proceedings, 1250, 117-120 (2010)

161. The study of energy band gap of $Al_xIn_yGa_{1-x-y}N$ quaternary alloys using UV-VIS spectroscopy
M. A. Ibid, H. Abu Hassan, Z. Hassan, S. S. Ng, N. H. Abd Raof, S. K. Mohd Bakhori, AIP Conference Proceedings, 1250, 297-300 (2010)

162. XRD Analyses of $In_{0.10}Al_xGa_{0.90-x}N$ ($0 \leq x \leq 0.20$) quaternary alloys
Y. Yusof, M. A. Ibid, N. H. Abd Raof, S. S. Ng, H. Abu Hassan, Z. Hassan, AIP Conference Proceedings, 1250, 301-304 (2010)

163. Kramers-Kronig analysis of infrared reflectance spectra for quaternary $In_xAl_yGa_{1-x-y}N$ alloy
N. H. Abd Raof, S. S. Ng, H. Abu Hassan, Z. Hassan, AIP Conference Proceedings, 1250, 337-340 (2010)

164. Determination of the Al composition of $Al_xGa_{1-x}N$ thin films by means of EDX and XRD techniques
S. S. Ng, Z. Hassan, H. Abu Hassan, AIP Conference Proceedings, 1250, 353-356 (2010)

165. Visible-light emission due to quantum size effects in porous crystalline silicon
L. S. Chuah, Z. Hassan, H. Abu Hassan, AIP Conference Proceedings, 1250, 385-388 (2010)

166. Study on the properties of ionized metal plasma methodology on titanium
M. T. Leow, Z. Hassan K. E. Lee, G. Omar, S. P. Lim, C. F. Chan, E. T. Siew, Z. M. Chuah, AIP Conference Proceedings, 1250, 448-451 (2010)

167. Ultraviolet photoresponse properties of zinc oxide on type IIb diamond heterojunction
K. G. Saw, S. S. Tneh, F. K. Yam, S. S. Ng, Z. Hassan, Physica B, 405, 4123-4127 (2010)

168. Growth of high-quality ZnO nanowires without a catalyst
H. I. Abdulgafour, Z. Hassan, N. H. Al-Hardan, F. K. Yam, Physica B, 405, 4216-4218 (2010)

169. The growth of III-V nitrides heterostructure on Si substrate by plasma-asissted molecular beam epitaxy
K. P. Beh, F. K. Yam, C. W. Chin, S. S. Tneh, Z. Hassan, Journal of Alloys and Compounds, 506, 343-346 (2010)

170. Porous silicon as an intermediate buffer layer for zinc oxide nanorods
L. S. Chuah, Z. Hassan, S. S. Tneh, H. Abu Hassan, Composite Interfaces, 17, 733-742 (2010)

171. Performance improvement of large area GaN MSM photodiode with thin AlGaN surface layer
L. S. Chuah, Z. Hassan, H. Abu Hassan, Microelectronics International, 27(3), 140-142 (2010)

172. HR-XRD and PL studies of $Al_xGa_{1-x}N$ layers grown on Si(111) substrate by plasma assisted MBE
M. Z. Mohd Yusoff, Z. Hassan, H. Abu Hassan, Y. Yusof, M. J. Abdullah, Optoelectronics and Advanced Materials – Rapid Communications, 4(9), 1289-1292 (2010)

173. Characteristics of undoped porous GaN prepared by US assisted electrochemical etching
A. Mahmood, Z. Hassan, F. K. Yam, L. S. Chuah, Optoelectronics and Advanced Materials – Rapid Communications, 4(9), 1316-1320 (2010)

174. Current conduction mechanisms of atomic-layer-deposited Al_2O_3/nitride SiO_2 stacking gate oxide on 4H-SiC
K. Y. Cheong, Z. Lockman, A. Aziz, J. H. Moon, H. J. Kim, W. Bahng, N. K. Kim, Z. Hassan, International Journal of Modern Physics B, 24(27), 5371-5378 (2010)

175. Effect of thermal annealing on the Ir/Ag contact to p-type GaN
L. S. Chuah, Z. Hassan, S. G. Teo, Journal of Non-Crystalline Solids, 356, 1863-1866 (2010)

176. Synthesis, characterization and optical properties of Ni-doped nancrystalline SnO2
L. S. Chuah, M. Y. Yaacob, M. S. Fan, S. S. Tneh, Z. Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 4(10), 1542-1545 (2010)

177. The morphological, electrical, and vibrational characteristics of zinc to zinc suboxide
S. S. Tneh, Z. Hassan, K. G. Saw, F. K. Yam, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 4(11), 1659-1662 (2010)

178. Electrical properties of AlGaN/GaN heterostructure field-effect transistors (HFETs) with and without Mg-doped carrier confinement layer
A. Sh. Husssein, Z. Hassan, H. Abu Hassan, International Journal of Nanoscience, 9(4), 263-267 (2010)

179. The studies of thermal annealing on Pt/AlGaN grown on Si(111) by plasma-assisted molecular beam epitaxy (PA-MBE)
M. Z. Mohd Yusoff, Z. Hassan, C. W. Chin, S. M. Thahab, H. Abu Hassan, Modern Physics Letters B, 24(29), 2889-2898 (2010)

180. Plasma-assisted MBE of GaN pn-junction grown on Si (111) substrate
M. Z. Mohd Yusoff, Z. Hassan, C. W. Chin, H. Abu Hassan, Chinese Journal of Chemical Physics, 23(4), 431-436 (2010)

181. The electrical and vibrational characteristics of ZnO synthesized using the “bottom-up” growth method

S. S. Tneh, Z. Hassan, K. G. Saw, F. K. Yam, H. Abu Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 4(12), 2068-2071 (2010)

182. The effect of heat treatments on the properties of Ti/Pt heating elements for gas sensor applications
N. H. Al-Hardan, M. J. Abdullah, A. Abdul Aziz, Z. Hassan, Materials Science in Semiconductor Processing, 13, 199-204 (2010)

183. Sm_2O_3 gate dielectric on Si substrate
Wen Chiao Chin, Kuan Yew Cheong, Zainuriah Hassan, Materials Science in Semiconductor Processing, 13, 303-314 (2010)

184. The effects of thermal treatments on microstructure phosphorus-doped ZnO layers grown by thermal evaporation
L.S. Chuah, Z Hassan, S.S. Tneh, K. G. Saw, S. S. Ng, F. K. Yam, F. Azhari, Composite Interfaces, 17, 863-872 (2010)

185. A study of the operating parameters and barrier thickness of $Al_{0.08}In_{0.08}Ga_{0.84}N/Al_xIn_yGa_{1-x-y}N$ double quantum well laser diodes
A. J. Ghazai, S. M. Thahab, H. Abu Hassan, Z. Hassan, Science China Technological Sciences, 54 (1), 1-5 (2011)

186. Catalyst-free growth and characterization of ZnO nanoscrewdrivers prepared by thermal evaporation
L. S. Chuah, Z. Hassan, S. S. Tneh, M. A. Ahmad, S. K. Mohd Bakhori, Y. Yusof, Microelectronics International, 28(3), 3-6 (2011)

187. Characterization of $Al_xIn_yGa_{1-x-y}N$ quaternary alloys grown on sapphire substrates by molecular beam epitaxy
M. A. Ibid, H. Abu Hassan, Z. Hassan, S. S. Ng, S. K. Mohd Bakhori, N. H. Abd. Raof, Materials Science in Semiconductor Processing, 14, 164-169 (2011)

188. Characterization of InN thin film grown on Si (100) substrate by reactive sputtering
M. Amirhoseiny, Z. Hassan, S. S. Ng, Journal of Nanomaterials, doi;10.115/2011/579427 (2011)

189. Comparison of metal-organic decomposed (MOD) cerium oxide (Ce_2O_3) gate deposited on GaN and SiC substrates
H. J. Quah, W. F. Lim, K. Y. Cheong, Z. Hassan, Z. Lockman, Journal of Crystal Growth, 326, 2-8 (2011)

190. Dispersion of surface and interface phonon polariton modes in wurtzite based multilayer system
Sai Cheong Lee, Sha Shiong Ng, Haslan Abu Hassan, Zainuriah Hassan, Journal of the Physical Society of Japan, 80, 084712, 1-7 (2011)

191. Effect of Al mole fraction on structural and electrical properties of $Al_xGa_{1-x}N$/GaN heterostructures grown by plasma-assisted molecular beam epitaxy
A. Sh. Hussein, Z. Hassan, S. M. Thahab, S. S. Ng, H. Abu Hassan, C. W. Chin, Applied Surface Science, 257, 4159-4164 (2011)

192. Effect of Porosity on the Characteristics of GaN Grown on Sapphire
Ainorkhilah Mahmood, Zainuriah Hassan, Yam Fong Kwong, Siti Khadijah Mohd Bakhori, and Chuah Lee Siang, AIP Conference Proceedings, 1341, 45-47 (2011)

193. Effect of post-deposition annealing temperature on CeO_2 thin film deposited on silicon substrate via RF magnetron sputtering technique

Soo Kiet Chuah, Kuan Yew Cheong, Zainovia Lockman, Zainuriah Hassan, Materials Science in Semiconductor Processing, 14, 101-107 (2011)

194. Effect of post-deposition annealing in oxygen ambient on gallium nitride-based MOS capacitors with cerium oxide gate
Hock Jin Quah, Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, IEEE Transactions on Electron Devices, 58(1), 122-131 (2011)

195. Effect of postdeposition annealing on electrical properties of RF-mmagnetron sputtered CeO_x gate on 4H-silicon carbide
SooKiet Chuah, Kuan Yew Cheong, Zainovia Lockman, Zainuriah Hassan, Physica Status Solidi A, 208 (8), 1925-1930 (2011)

196. Effects of N2O Postdeposition Annealing on Metal-Organic Decomposed CeO2 Gate Oxide Spin-Coated on GaN Substrate
Quah HJ, Cheong KY, Hassan Z, Lockman Z, Journal of the Electrochemical Society, Vol.158, No.4, H423-H432 (2011)

197. Enhancing photoresponse time of low cost Pd/ZnO nanorods prepared by thermal evaporation techniques for UV detection
H. I. Abdulgafour, Z. Hassan, F. K. Yam, K. AL-Heuseen, Y. Yusof, Applied Surface Science, 258, 461-465 (2011)

198. Experimental investigation of long-wavelength optical lattice vibrations in quaternary AlxInyGa1−x−yN alloys and comparison with results from the pseudo-unit cell model
M.A. Abid, H. Abu Hassan, Z. Hassan, S.S. Ng, S.K. Mohd. Bakhori, N.H. Abd. Raof, Physica B: Condensed Matter, 406 (8), 1379-1384 (2011)

199. Fabrication of titanium dioxide nanofibers via anodic oxidation
K.P. Beh, F.K. Yam, S.S. Tneh, Z. Hassan, Applied Surface Science, 257 (10), 4706-4708 (2011)

200. Far infrared optical properties of bulk wurtzite zinc oxide semiconductor
Poh Kok OOi, Saicheong Lee, Shashiong Ng, Zainuriah Hassan, Haslan Abu Hassan, J. Mater. Sci. Technol., 27(5), 465-470 (2011)

201. Forthcoming gallium nitride based power devices in prompting the development of high power applications
H. J. Quah, K. Y. Cheong, Z. Hassan, Modern Physics Letters B, 25(2), 77-78 (2011)

202. Growth of ZnO nanowires without catalyst on porous silicon
H. I. Abdulgafour, Z. Hassan, F. K. Yam, and M. J. Jawad, ENABLING SCIENCE AND NANOTECHNOLOGY: 2010 International Conference On Enabling Science And Nanotechnology Escinano2010; doi:10.1063/1.3586945

203. High-quality vertically aligned ZnO nanorods synthesized by microwave-assisted CBD with ZnO–PVA complex seed layer on Si substrates
J.J. Hassan, Z. Hassan, H. Abu-Hassan, Journal of Alloys and Compounds, 509 (23), 6711-6719 (2011)

204. Improved performance of a crystalline silicon solar cell based on ZnO/PS anti-reflection coating layers
Khaldun A. Salman, Khalid Omar, Z. Hassan, Superlattices and Microstructures, 50, 517-528 (2011)

205. Investigation of forming-gas annealed CeO2 thin film on GaN
Hock Jin Quah, Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, Journal of Materials Science-Materials in Electronics, 22 (6), 583-591 (2011)

206. Laser-induced etching parameters impact on optical properties of the silicon nanostructures
Asmiet Ramizy, Z. Hassan, Khalid Omar, Science China Technological Sciences, 54 (1), 1-5 (2011)

207. Nanostructured GaN on silicon fabricated by electrochemical and laser induced etching
Asmiet Ramizy, Z. Hassan, Khalid Omar, Materials Letters, 65, 61-63 (2011)

208. New optical features to enhance solar cell performance based on porous silicon surfaces
Asmiet Ramizy, Z. Hassan, Khalid Omar, Y. Al-Douri, M. A. Mahdi, Applied Surface Science, 257, 6112-6117 (2011)

209.. Photoluminescence Characterization of ZnO Thin Films Grown by RF- Sputtering
S. K. Mohd Bakhori, S. S. Ng, M. A. Ahmad, H. Ahmad, Z. Hassan, H. Abu Hassan, and M. J. Abdullah, Malaysia Annual Physics Conference 2010 (Perfik-2010), 1328, 245-247 (2011)

210. Porous GaN on Si(111) and its application to gas sensor
Asmiet Ramizy, Z. Hassan, Khalid Omar, Sensors & Actuators: B. Chemical, 155, 699-708 (2011)

211. Porous silicon nanowires fabricated by electrochemical and laser induced etching
Asmiet Ramizy, Z. Hassan, Khalid Omar, Journal of Materials Science: Materials in Electronics, 22 (7), 717-723 (2011)

212. Self-assembled ZnO nanostripes prepared by acidified ethanoloc anodization
S. W. Ng, F. K. Yam, L. L. Low, K. P. Beh, M. F. Mustapha, E. N. Sota, S. S. Tneh, Z. Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 5(1), 89-91 (2011)

213. Single crystalline ZnO nanowires by oxidizing granular zinc film
L. S. Chuah, Z. Hassan and S. S. Tneh, Journal of Dispersion Science and Technology, 32 (5), 677-679 (2011)

214. Stiffness properties of porous silicon nanowires fabricated by electrochemical and laser-induced etching
Khalid Omar, Y. Al-Douri, Asmiet Ramizy, Z. Hassan, Superlattices and Microstructures, 50, 119-127 (2011)

215. Structural characterization of nanocrystalline InN grown on porous silicon by reactive sputtering
L.S. Chuah, Z. Hassan, S.S. Ng, H. Abu Hassan, Optoelectronics and Advanced Materials-Rapid Communications (OAM-RC), 5 (1), 34-38 (2011)

216. Structural properties studies of GaN on 6H-SiC by means of X-ray diffraction techniques
C. G. Ching, S. S. Ng, Z. Hassan, H. Abu Hassan, Advanced Materials Research- X-ray and Related Techniques, 173, 40-43 (2011)

217. Structural Properties Studies of Zinc Oxide Thin Film Grown on Silicon Carbide by Means of X-ray Diffraction Technique
C. G. Ching, S. S. Ng, Z. Hassan, H. Abu Hassan, N. H. Al-Hardan, and M. J. Abdullah, Malaysia Annual Physics Conference 2010 (Perfik-2010), 1328, 261-263 (2011)

218. Structural, optical and electrical properties of undoped and Si-doped $Al_xGa_{1-x}N$ thin films on Si(111) substrate grown by PA-MBE
A. Sh. Hussein, Z. Hassan, S. M. Thahab, Abu Hassan, M. A. Ibid, C. W. Chin, Physica B, 406, 1267-1271 (2011)

219. Studies of surface and interface phonon polariton characteristics of wurtzite ZnO thin film on wurtzite 6H-SiC substrate by p-polarized infrared attenuated total reflection spectroscopy
S. C. Lee, S. S. Ng, N. H. Al-Hardan, M. J. Abdullah, Z. Hassan, H. Abu Hassan, Thin Solid Films, 519, 3703-3708 (2011)

220. Study of electrical characteristics of ZnO Schottky photodiode on Si substrate
L.S. Chuah, Z. Hassan, S. S. Tneh, S.G. Teo, Microelectronics International, 28, 8-11 (2011)

221. Surface and interface phonon polariton characteristics of wurtzite ZnO/GaN heterostructure
S. C. Lee, S. S. Ng, P. K. Ooi, H. Abu Hassan, Z. Hassan, N. H. Al-Hardan, M. J. Abdullah, V. A. Yakovlev, N. N. Novikova, Applied Physics Letters, 98, 241909 (2011)

222. Surface phonon polariton characteristics of bulk wurtzite ZnO crystal
S. C. Lee, S. S. Ng, K. G. Saw, Z. Hassan, H. Abu Hassan, Physica B, 406, 115-118 (2011)

223. The effect of anti-reflection coating of porous silicon on solar cells efficiency
Wisam J. Aziz, Asmiet Ramizy, K. Ibrahim, Z. Hassan, Khalid Omar, Optik, 122 (16), 1462-1465 (2011)

224. The effect of growth parameters and mechanism of titania nanotubes prepared by anodic process
S. W. Ng, F. K. Yam, K. P. Beh, S. S. Tneh, Z. Hassan, Optoelectronics and Advanced Materials: Rapid Communications, 5 (3-4), 258-262 (2011)

225. The influence of Ga source and substrate position on the growth of low dimensional GaN wires by chemical vapor deposition
L. L. Low, F. K. Yam, K. P. Beh, Z. Hassan, Applied Surface Science, 258 (1), 542-546 (2011)

226. The influence of growth temperatures on the characteristics of GaN nanowires
L.L. Low, F.K. Yam, K.P. Beh, Z. Hassan, Applied Surface Science, 258 (1), 542-546 (2011)

227. Theoretical studies of surface phonon polariton in wurtzite AlInN ternary alloy
P.K. Ooi, S.C. Lee, S.S. Ng, Z. Hassan, H. Abu Hassan, Thin Solid Films, 519 (16), 5481-5485 (2011)

228. X-ray diffraction studies of $Al_xGa_{1-x}N$ ($0 \leq x \leq 1$) ternary alloys grown on sapphire substrate
Ng Sha Shiong, Ching Chin Guan, Zainuriah Hassan, Haslan Abu Hassan, Microelectronics International, 28(2), 44-48 (2011)

229. ZnO nanocoral reef grown on porous silicon substrates without catalyst
H. I. Abdulgafour, F. K. Yam, Z. Hassan, K. AL-Heuseen, M. J. Jawad, Journal of Alloys and Compounds, 5627-5630 (2011)

230. Photoluminescence and XRD crystalline studies of $In_xAl_yGa_{1-x-y}N$ quaternary alloys
S. K. Mohd Bakhori, N. H. Abd. Raof, S. S. Ng, H. Abu Hassan, Z. Hassan, IOP Conf. Series: Materials Science and Engineering, 17, 0120006 (2011)

231. Study of electrical characteristics of ZnO Schottky photodiode on Si substrate
L. S. Chuah, Z. Hassan, S. S. Tneh, S. G. Teo, Microelectronics International, 28(1), 8-11 (2011)

232. Quaternary ultraviolet AlInGaN MQW laser diode performance using quaternary AlInGaN electron blocking layer

A. J. Ghazai, S. M. Thahab, H. Abu Hassan, Z. Hassan, Optics Express, 19 (10), 9245-9254 (2011)

233. Comparison of metal-organic decomposed (MOD) cerium oxide (Ce_2O_3) gate deposited on GaN and SiC substrates
H. J. Quah, W. F. Lim, K. Y. Cheong, Z. Hassan, Z. Lockman, Journal of Crystal Growth, 326, 2-8 (2011)

234. The effect of reflectivity on VCSEL output performance
Farah Z. Jasim, Khalid Omar, Z. Hassan, Int. J. Nanoelectronics and Materials, 4, 65-72 (2011)

235. Thermal annealing effect of Au- and Pt-based Schottky contacts on unintentionally and n-type doped $Al_xGa_{1-x}N$
A. Sh. Hussein, Z. Hassan, H. Abu Hassan, Osama S. Hamad, C. W. Chin, M. A. Ahmad, Journal of Optoelectronics and Advanced Materials, 13(9), 1149-1152 (2011)

236. Growth of nanostructured CdO by solid-vapour deposition
M. Zaien, K. Omar, Z. Hassan, International Journal of the Physical Sciences, 6(17), 4176-4180 (2011)

237.. Characterization of porous Si solar cell
Khalid Omar, Asmiet Ramziy, Khaldun A. Salaman, Z. Hassan, Journal of Advanced Science and Engineering Research, 1, 68-75 (2011)

238. Morphological, optical, and Raman characteristics of ZnO nanflakes prepared via a sol-gel method
M. Kashif, Syed M. Usman Ali, M. E. Ali, H. I. Abdulgafour, U. Hashim, M. Willander, Z. Hassan, Phys. Status Solidi A, 209 (1), 143-147 (2011)

239. The effect of etching time of porous silicon on solar cell performance
Khaldun A. Salman, Khalid Omar, Z. Hassan, Superlattices and Microstructures, 50, 647-658 (2011)

240. The growth of heavily Mg-doped GaN thin film on Si substrate by molecular beam epitaxy
C.W. Chin, F.K. Yam, K.P. Beh, Z. Hassan, M.A. Ahmad, Y. Yusof, S.K. Mohd Bakhori, Thin Solid Films, 520 (2), 756-760 (2011)

241. Analytical and visual modeling of InGaN/GaN single quantum well laser based on rate equations
Gh. Alahyarizadeh, H. Aghajani, H. Mahmodi, R. Rahmani, Z. Hassan, Optics & Laser Technology, 44, 12-20 (2011)

242. Growth and characterization of high quality GaN nanowires on PZnO and PGaN by thermal evaporation
Leila Shekari, Haslan Abu Hassan, Sabah Thahab, Z. Hassan, Journal of Nanomaterials, doi:10.1155/2011/454730 (2011)

243. Synthesis of dendrite – like petals of CdO nanostructure
M. Zaien, K. Omar, Z. Hassan, Optoelectronics and Advanced Materials: Rapid Communications, 5 (9), 982-984 (2011)

244. The effect of sub-band gap photon illumination on the properties of GaN layers grown on Si(111) by MBE
Asmiet Ramizy, Khalid Omar, Z. Hassan, Omar Alattas, Journal of Nanoparticle Research, doi:10.1007/s11051-011-0625-3, 13, 7139-7148 (2011)

245. Polarized infrared reflectance studies for wurtzite InN epilayers on Si(111) grown by molecular beam expitaxy
P.K. Ooi, S.C. Lee, S.S. Ng, Z. Hassan, H. Abu Hassan, W.L. Chen, Thin Solid Films, 520 (2), 739-742 (2011)

246. The effects of morphological changes on the vibrational properties of self-organized TiO2 nanotubes
F.K. Yam, K.P. Beh, S.W. Ng, Z. Hassan, Thin Solid Films, 520 (2), 807-812 (2011)

247. Improved performance of solar cell based on porous silicon surfaces
Asmiet Ramizy, Wisam J. Aziz, Z. Hassan, Khalid Omar, K. Ibrahim, Optik - International Journal for Light and Electron Optics, 122, 2075-2077 (2011)

248. Effect of the changing DBR doping concentration on performance of MQW GaN-based vertical cavity surface emitting lasers
A. Zandi, A. J. Ghazai, Z. Hassan, S. M. Thahab, H. Abu Hassan, International Journal of Science & Emerging Technologies, 2(2), 58-65 (2011)

249. Optical Analysis of Nanocrystalline ZnO Films Coated on Porous Silicon by Radio Frequency (RF) Magnetron Sputtering
Chuah, L.S., Hassan, Z., Bakhori, S. K. Mohd, Al-Hardan, N.H., Abdullah, M.J, Composite Interfaces, 18 (5), 441-448 (2011)

250. Synthesis of Porous Ni-Doped SnO2 Thin Film by Using Spray Pyrolysis
Chuah, L.S., Tneh, S.S., Hassan, Z., Composite Interfaces, 18 (4), 371-376 (2011)

251. Strong Room Temperature 505 nm Emission from Hexagonal Crack Free InGaN Thin Film on Si(111) Grown by MBE
Chuah, L.S., Hassan, Z., Chin, C.W., Mourad, M. Hussein, Yam, F.K., Ng, S.S., Composite Interfaces, 18 (1), 37-47 (2011)

252. Tetrapod-Like ZnO Nanostructures Deposited on Si Substrates with AlN as Buffer Layer
Chuah, L.S., Hassan, Z., Tneh, S.S, Composite Interfaces, 18 (1), 49-56 (2011)

253. Synthesis of ZnO Nanosheets by a Combined Electrodeposition and Illumination Method
L. S. Chuah, A. Ramizy, M. A. Mahdi, M. A. Ahmad, Z. Hassan and S. K. Mohd Bakhori, Composite Interfaces, 18 (6), 543-550 (2011)

254. Nanocrystalline ZnO Film Grown on Porous SnO2/Si(111) Substrate
L. S. Chuah, M. A. Ahmad, Z. Hassan, S. K. Mohd Bakhori and M. J. Abdullah, Composite Interfaces, 18 (7), 627-635 (2011)

255. n-ZnO/p-Si Heterojunctions for photosensor applications
L.S. Chuah, Z. Hassan, S. S. Tneh, Y. Yusuf, S. K. Mohd Bakhori, M. A. Ahmad, Conference Proceedings – 2011 IEEE 2nd International Conference on Photonics, ICP 2011, art. no. 6106818, page1-3 (2011)

256. Nanocrystalline ZnO film grown on porous silicon layer by radio frequency sputtering system
Khaldun A. Salman, Khalid Omar, Z. Hassan, Materials Letters, 68, 51-53 (2012)

257. The effects of quantum wells number and the built-in polarization on the performance of quaternary AlInGaN UV laser diode
A.J. Ghazai, S.M. Thahab, H. Abu Hassan, Z. Hassan, Optik - International Journal for Light and Electron Optics, 123, 856-859 (2012)

258. Nano and micro porous GaN characterization using image processing method

Naser M. Ahmed, Asmiet Ramizy, Z. Hassan, Ali Amer, Khalid Omar, Yarub Al-Douri, Omar S. Alattas, Optik - International Journal for Light and Electron Optics, 123, 1074-1078 (2012)

259. Simulation and optimization of deep violet InGaN double quantum well laser
Gh. Alahyarizadeh, A.J. Ghazai, R. Rahmani, H. Mahmodi, Z. Hassan, Optics Communications, 258, 746-750 (2012)

260. Enhanced properties of porous GaN prepared by UV assisted electrochemical etching
Ainorkhilah Mahmood, Naser Mahmoud Ahmed, Zainuriah Hassan, Yam Fong Kwong, Siti Khadijah Mohd. Bakhori, Yushamdan Yusof, Chuah Lee Siang, Advanced Materials Research, 364, 90-94 (2012)

261. Optical and structural characterizations of GaN nanostructures
L. Shekari, H. Abu Hassan, Z. Hassan, Advanced Materials Research, 364, 348-352 (2012)

262. The fabrication of Ag islands on AlN/GaN/AlN/Si(111) by using thermal evaporator and thermal annealing methods
M. Z. Mohd Yusoff, A. Mahyuddin, Z. Hassan, H. Abu Hassan, M. J. Abdullah, Y. Yusof, Advanced Materials Research, 364, 327-332 (2012)

263. The investigation of porous $Al_xGa_{1-x}N$ layers on Si(111) substrate with GaN/AlN as buffer layer
Yushamdan Yusof, Mohd Zaki Mohd Yusoff, Ainorkhilah Mahmood, Zainuriah Hassan, Haslan Abu Hassan, Mat Johar Abdullah, Advanced Materials Research, 364, 164-168 (2012)

264. A study on the effect of process parameters on surface topography of Al thin films on various substrates using AFM
S. Shanmugam, D. Mutharasu, Z. Hassan, H. Abu Hassan, Advanced Materials Research, 364, 383-390 (2012)

265. Characterization of GaN p-n junction grown on Si(111) substrate by plasma-assisted molecular beam epitaxy
Rosfariza Radzali, Mohd Anas Ahmad, Zainuriah Hassan, Norzaini Zainal, Yam Fong Kwong, Chin Che Woei, Mohd Zaki Mohd Yusoff, Siti khadijah Mohd. Bakhori, Yushamdan Yusof, Advanced Materials Research, 364, 139-143 (2012)

266. Effective conversion efficiency enhancement of solar cell using ZnO/PS antireflection coating layers
Khaldun A. Salman, Khalid Omar, Z. Hassan, Solar Energy, 86, 541-547 (2012)

267. Surface phonon polariton characteristics of wurtzite ZnO thin film grown on silicon substrate
Sha Shiong Ng, Poh Kok Ooi, Sai Cheong Lee, Mat Johar Abdullah, Zainuriah Hassan, Haslan Abu Hasan, Physica Status Solidi B, 1-5 (2012)

268. Effect of silicon porosity on solar cell efficiency
Khaldun A. Salman, Z. Hassan, Khalid Omar, International Journal of Electrochemical Science, 7, 376-386 (2012)

269. The effect of oxide aperture diameter on the electrical characteristics of the GaN-based vertical cavity surface emitting laser
Azita Zandi Goharrizi, Zainuriah Hassan, Haslan Abu Hassan, IEICE Electronics Express, 9 (3), 179-184 (2012)

270. Structural and optical properties properties of nanocrystalline CdS thin films prepared using microwave-assisted chemical bath deposition

M. A. Mahdi, Z. Hassan, S. S. Ng, J. J. Jabbar, S. K. Mohd Bakhori, Thin Solid Fims, 520, 3477-3484 (2012)

271. CdS nanocrystalline structured grown on porous silicon substrates via chemical bath deposition method
M. A. Mahdi, Asmiet Ramizy, Z. Hassan, S. S. Ng, J. J. Hassan, S. J. Kasim, Chalcogenide Letters, 1, 19-25 (2012)

272. Microwave assisted chemical bath deposition of vertically aligned ZnO nanorods on a variety of substrates seeded by PVA-Zn(OH)2 nanocomposites
J.J. Hassan, M. A. Mahdi, C. W. Chin, Z. Hassan, H. Abu-Hassan, Applied Surface Science, 258, 4467-4472 (2012)

273. Growth of cadmium oxide nanorods by vapor transport
M. Zaien, N. M. Ahmed, Z. Hassan, Chalcogenide Letters, 3, 115-119 (2012)

274. Properties of Ag doped CdTe thin film prepared by Stacked Elemental Layer (SEL) Method
Shanmugam Subramani, Mutharasu Devarajan, Zainuriah Hassan, Advanced Materials Research, 488-489, 742-747 (2012)

275. Current-voltage characteristics of n-$Al_{0.08}In_{0.08}Ga_{0.84}N$ Schottky diode using Pt metal contact
Alaa J. Ghazai, H. Abu Hassan, Z. Hassan, Advanced Materials Research, 501, 226-230 (2012)

276. GaN nanowire growth by thermal evaporation method
L. Shekari, H. Abu Hassan, Z. Hassan, Advanced Materials Research, 501, 276-280 (2012)

277. Surface phonon polariton of wurtzite AlN thin film grown on sapphire
S. S. Ng, P. K. Ooi, S. C. Lee, Z. Hassan, H. Abu Hassan, Materials Chemistry and Physics, 134, 493-498 (2012)

278. Fabrication of porous ZnO thin films using wet chemical etching with 0.5%HNO3
Ang Chai Im, Leonard Lu Tze Jian, Ooi Poh Kok, Suriani Yaakob, Ching Chin Guan, Ng Sha Shiong, Zainuriah Hassan, Haslan Abu Hassan, Mat Johar Abdullah, Microelectronics International, 29(2), 96-100 (2012)

279. Synthesis and characterization of single-crystal CdS nanosheet for high speed photodetection
M. A. Mahdi, J. J. Hassan, S. S. Ng, Z. Hassan, Naser M. Ahmed, Physica E, 44, 1716-1721 (2012)

280. MSM-photodetectors based on $Al_xGa_{1-x}N$/GaN heterostructures grown on Si(111) by molecular beam epitaxy
A. SH. Hussein, Z. Hassan, S. M. Thahab, H. Abu Hassan, N. M. Ahmed, AIP Conference Proceedings, 1455, 91-96 (2012)

281. AlInGaN based ultraviolet phtodetector with Au contact electrodes
A. J. Ghazai, S. M. thahab, H. Abu Hassan, Z. Hassan, A. SH. Hussein, AIP Conference Proceedings, 1455, 176-180 (2012)

282. The investigation of $Al_{0.29}Ga_{0.71}N$/GaN/AlN and AlN/GaN/AlN thin films grown on Si(111) by RF plasma-assisted MBE
Mohd Zaki Mohd Yusoff, Azzafeerah Mahyuddin, Zainuriah Hassan, Haslan Abu Hassan, Mat Johar Abdullah, AIP Conference Proceedings, 1455, 248-254 (2012)

283. Structural and optical studies of GaN pn-junction with AlN buffer layer grown on Si(111) by RF plasma enhanced MBE

Mohd Zaki Mohd Yusoff, Zainuriah Hassan, Chin Che Woei, Haslan Abu Hassan, Mat Johar Abdullah, AIP Conference Proceedings, 1455, 271-278 (2012)

284. Fabrication and structural and optical characterizations of GaN nano and micro structures grown by thermal evaporation method
Leila Shekari, Haslan Abu Hassan, Zainuriah Hassan, Advanced Materials Research, 545, 88-92 (2012)

285. Reactive sputtering growth and characterizations of InN thin films on Si substrates
Maryam Amirhoseiny, Zainuriah Hassan, Ng Sha Shiong, Mohd Anas Ahmad, Advanced Materials Research, 545, 290-293 (2012)

286. Effect of current density on optical properties of anisotropic photo electrochemical etched silicon (110)
M. Amirhoseiny, Z. Hassan, S. S. Ng, Modern Physics Letters B, 26(20), 1250131-1-6 (2012)

287. Performance enhancement of deep violet indium gallium nitride double quantum well lasers using delta barrier close to electron blocking layer
Ghasem Alahyarizadeh, Zainuriah Hassan, Sabah M. Thahab, Alaa J. Ghazai, Hadi Mahmodi, Journal of Nanophotonics, 6, 063514-1-9 (2012)

288. An image encryption scheme based on quantum logistic map
A. Akhshani, A. Akhavan, S. C. Lim, Z. Hassan, Communications in Nonlinear Science and Numerical Simulation, 17, 4653-4661 (2012)

289. Growth and analysis of GaN nanowire on PZnO by different-gas flow
L. Shekari, H. Abu Hassan, S. M. Thahab, A. J. Ghazai, Z. Hassan, Applied Surface Science, 258, 6590-6594 (2012)

290. Enhancement of structural and optical properties of porous $In_{0.27}Ga_{0.73}N$ thin film synthesized using electrochemical etching technique
Saleh H. Abud, Z. Hassan, F. K. Yam, International Journal of Electrochemical Science, 7, 10038-10046 (2012)

291. Nanocoral PbS thin film growth by soiid-vapor deposition
A. S. Obaid, M. A. Mahdi, Z. Hassan, Optoelectronics and Advanced Materials-Rapid Communications, 6, 422 – 426 (2012)

292. Characterization of nanocrystalline PbS thin films prepared using microwave-assisted chemical bath deposition
A. S. Obaid, M. A. Mahdi, Z. Hassan, M. Bououdina, Materials Science in Semiconductor Processing, 15, 564–571 (2012)

293. Growth and characterization of $Zn_xCd_{1-x}S$ nanoflowers by microwave-assisted chemical bath deposition
M. A. Mahdi, J. J. Hassan, Z. Hassan, S. S. Ng, Journal of Alloys and Compounds, 541, 227-233 (2012)

294. Growth of CdS nanosheets and nanowires through the solvothermal method
M. A. Mahdi, J. J. Hassan, S. S. Ng, Z. Hassan, Journal of Crystal Growth, 359, 43-48 (2012)

295. The study of $Al_{0.29}Ga_{0.71}N$ and AlN cap layers grown on GaN/AlN/Si(111) by RF plasma assisted MBE
M. Z. Mohd Yusoff, A. Mahyuddin, A. Baharin, Z. Hassan, H. Abu Hassan, M.J. Abdullah, Journal of Optoelectronics and Advanced Materials, 14 (11—12), 935-940 (2012)

296. Quaternary n-$Al_{0.08}In_{0.08}Ga_{0.84}N$/p-Si-based solar cell
Alaa Ghazai, H. Abu Hassan, Z. Hassan, Wisam J. Aziz, Superlattices and Microstructures, 51, 480–485 (2012)

297. InN photoconductors on different orientations of Si substrates
M. Amirhoseiny, Z. Hassan, S. S. Ng, International Journal of Modern Physics B, 26, 1250137 (2012)

298. Fabrication and characterization of nanocrystalline n-CdO/p-Si as a solar cell
M. Zaien, N.M. Ahmed, Z. Hassan, Superlattices and Microstructures, 52, 800-806 (2012)

299. Comparative study of UV detectors based on ZnO nanostructures grown on different substrates
H. I. Abdulgafour, F. K. Yam, Z. Hassan, Journal of Applied Physics, 112, 074510 (2012)

300. Electrochemical impregnation of silver nanostructures in titanium dioxide nanotubes
S. W. Ng, F. K. Yam, Z. Hassan, Journal of the Electrochemical Society, 159 (12), D742-D746 (2012)

301. High quality GaN nanowires grown on Si and porous silicon by thermal evaporation.
L. Shekari, Asmiet Ramizy, H. Abu Hassan, Z. Hassan, Applied Surface Science, 263, 50-53 (2012)

302. Effects of applied voltage on the properties of anodic zirconia thin film on (100) silicon
Zainovia Lockman, N. R. Z. Abidin, S. Ismail, K. Y. Cheong, Z. Hassan, Thin Solid Films, 522, 117-124 (2012)

303. Growth and investigations of GaN-Ga_2O_3 nano-composites
K. P. Beh, F. K. Yam, L. L. Low, S. S. Tneh, S. W. Ng, L. K. Tan, Y. Q. Chai, Z. Hassan, Optoelectronics and Advanced Materials – Rapid Communications, 1015-1018 (2012)

304. High sensitivity and fast response and recovery times in a ZnO nanorod array/p-Si self-powered ultraviolet detector
J. J. Hassan, M. A. Mahdi, S. J. Kasim, Naser M. Ahmed, H. Abu Hassan, and Z. Hassan, Applied Physics Letters, 101, 261108 (2012)

305. Porous silicon based violet-UV detector
Naser M. Ahmed, Z. Hassan, Naif Alhardan, Yarub Aldouri, M. J. Jassim, Muhammad Anis Ibnu Hajar, S. K. Mohd Bakhdri, and N. A. Ahmad Zaini, AIP Conference Proceedings, 1502, 196-210 (2012)

306. Effect of deposition time on the PbS thin films prepared using microwave assisted chemical bath deposition: Structure and optical characterization
A. S. Obaid, M. A. Mahdi, Alaa Ahmad Dihe, Z. Hassan, International Conference proceedings of PSRC, 86-89 (2012)

307. Hydrogen gas sensor based on a single crystal GaN/AlN/Si(111) prepared via PAMBE
Asmiet Ramizy, Issam M. Ibrahim, Mohammad A. M. Al-saadi, Khalid Omar, Z. Hassan, Journal of American Science, 8(12), 1209-1214 (2012)

308. Characterization of GaN nanowires grown on Psi, PZnO and PGaN on Si(111) substrates by thermal evaporation
Leila Shekari, Haslan Abu Hassan, Sabah M Thahab, Zainuriah Hassan, AIP Conference proceedings, 1454, 256-259 (2012)

309. Reduced contact resistance Ti/Al Ohmic contacts to vertically aligned ZnO Nanorod
L.S. Chuah, Z. Hassan, Y. Sivalingam, C. Di. Natale, C. Falconi, Journal of Materials Science and Engineering with Advanced Technology, 6, 1-17 (2012)

310. The effects of thermal treatments on nanocrystalline ZnO layers synthesized on zinc foil
L.S. Chuah, Y. Yusuf, M. A. Ahmad, Z. Hassan, S. K. Mohd Bakhori, Journal of Advanced Microscopy Research, 7, 118-122 (2012)

311. GaN on silicon substrate with AlN buffer layer for UV photodiode
L.S. Chuah, S. M. Thahab, Z. Hassan, Journal of Nonlinear Optical Physics & Materials, 21, 1250014-1250025 (2012)

312. Low temperature synthesis of Ni-doped SnO2 thin films by spin coating route
L.S. Chuah, M. S. Yaacob, Z. Hassan, Optoelectronics and Advanced Materials Rapid Communications, 6, 149-153 (2012)

313. High-resolution TEM observation of AlN/GaN grown on Si substrates
L.S. Chuah, A. Mahyuddin, Z. Hassan, C.W. Chin, Applied Mechanics and Materials, 110-116, 991-996 (2012)

314. Synthesis of nanocrystalline In_2O_3 on different Si substrates at wet oxidation environment
Maryam Amirhoseiny, Zainuriah Hassan, Ng Sha Shiong, Optik, 124, 2679-2681 (2013)

315. PbS nanocrystal solar cells fabricated using microwave-assisted chemical bath deposition
A. S. Obaid, M. A. Mahdi, Z. Hassan, M. Bououdina, International Journal of Hydrogen Energy, 38, 807–815 (2013)

316. Structure and optical properties of InN thin film grown on SiC by reactive magnetron sputtering
Maryam Amirhoseiny, Zainuriah Hassan, Ng Sha Shiong, Surface Review and Letters, 20, 1350008 (2013)

317. Fabrication of GaN Homo-Junction on Si (111) Substrate for Sensor Applications
M. Z. Mohd Yusoff, Z. Hassan, C. W. Chin, H. Abu Hasan, M. J. Abdullah, M. A. Ahmad and Y. Yusof, Journal of Molecular and Engineering Materials, 1, 1250006 (6 pages) (2013)

318. Growth and conversion of β-Ga2O3 nanobelts into GaN nanowires via catalyst-free Chemical Vapor Deposition technique
Qahtan N.A, F.K. Yam, Z. Hassan, M. Bououdina, Superlattices and Microstructures, 54, 215–224 (2013)

319. Fabrication and characterization of ZnO nanorods/p-6H-SiC heterojunction LED by microwave-assisted chemical bath deposition
J.J. Hassan, M. A. Mahdi, Asmiet Ramizy, H. Abu-Hassan, Z. Hassan, Superlattices and Microstructures, 53, 31-38 (2013)

320. A high-sensitivity room-temperature hydrogen gas sensor based on oblique and vertical ZnO nanorod arrays
J.J. Hassan, M.A. Mahdi, C.W. Chin, H. Abu-Hassan, Z. Hassan, Sensors and Actuators B: Chemical, 176, 360-367 (2013)

321. Room temperature hydrogen gas sensor based on ZnO nanorod arrays grown on SiO_2/Si substrate via a microwave-assisted chemical solution method
J.J. Hassan, M. A. Mahdi, C. W. Chin, H. Abu-Hassan, Z. Hassan, Journal of Alloys and Compounds, 546, 107-111 (2013)

322. Structural and surface studies of undoped porous GaN grown on sapphire
Ainorkhilah Mahmood, Zainuriah Hassan, Yushamdan Yusof, Yam Fong Kwong, Chuah Lee Siang, Naser Mahmoud Ahmed, Advanced Materials Research, 620, 45-49 (2013)

323. Electrical and optical characterization of Mg doping in GaN

E. Azimah, N. Zainal, Z. Hassan, A. Shuhaimi, Azlan Bahrin, Advanced Materials Research, 620, 453-457 (2013)

324. Structural and optical properties of $In_{0.27}Ga_{0.73}N$/Si(111) film grown using PA-MBE technique
S. H. Abud, Z. Hassan, F. K. Yam, A. J. Ghazai, Advanced Materials Research, 620, 368-372 (2013)

325. Structural and optical properties of nanocrystalline CdO thin film growth by solid-vapor deposition
M. Zaien, N. M. Ahmed, Z. Hassan, Advanced Materials Research, 620, 241-245 (2013)

326. A simple method to prepare indium oxide nanoparticles on Si(110)
Maryam Amirhoseiny, Zainuriah Hassan, Ng Shashiong, Advanced Materials Research, 620, 193-197 (2013)

327. Growth of ZnO nanostructures at different temperatures without catalyst by wet thermal oxidation process
H. I. Abdulgafour, Y. Yusof, F. K. Yam, Z. Hassan, Advanced Materials Research, 620, 132-136 (2013)

328. Growth of nanocrystalline PbS thin films by solid-vapor deposition
A. S. Obaid, M. A. Mahdi, Z. Hassan, Advanced Materials Research, 620, 1-6 (2013)

329. Compositional and structural characterization of heterostructure InGaN-based light emitting diode by high resolution x-ray diffraction
Ahmad Hadi Ali, Ahmad Shuhaimi, Zainuriah Hassan, Yushamdan Yusof, Advanced Materials Research, 620, 22-27 (2013)

330. Effect of cavity length on optical characteristics of deep violet InGaN DQW lasers
Ghasem Alahyarizadeh, Zainuriah Hassan, Sabah M. Thahab, Maryam Amirhoseiny, Alaa J. Ghazai, Advanced Materials Research, 626, 605-609 (2013)

331. Fabrication of porous ZnO via electrochemical etching using 10wt% potassium hydroxide solution
G. C. Ching, P. K. Ooi, S. S. Ng, M. A. Ahmad, Z. Hassan, H. Abu Hassan, M. J. Abdullah, Materials Science in Semiconductor Processing, 16, 70-76 (2013)

332. Growth and characterization of CdS single-crystalline micro-rod photodetector
M.A. Mahdi, J.J. Hassan, Naser M. Ahmed, S.S. Ng, Z. Hassan, Superlattices and Microstructures, 54, 137-145 (2013)

333. MBE growth of GaN pn-junction photodetector on AlN/Si(111) substrate with Ni/Ag as ohmic contact
M. Z. Mohd Yusoff, A. Baharin, Z. Hassan, H. Abu Hassan, M. J. Abdullah, Superlattices and Microstructures, 56, 35–44 (2013)

334. Preparation and characterization of silicon nanowires catalyzed by aluminum
H. F. Al-Taay, M. A. Mahdi, D. Parlevliet, Z. Hassan, P. Jennings, Physica E, 48, 21-28 (2013)

335. Fabrication and characterization of n-CdS/p-PbS heterojunction solar cells using microwave-assisted chemical bath deposition
A. S. Obaid, Z. Hassan, M. A. Mahdi, M. Bououdina, Solar Energy, 89, 143-151 (2013)

336. Light extraction from GaN-microcavity
Naser M. Ahmed, Z. Hassan, Nano Hybrids, 3, 51-65 (2013)

337. Porous WO_3 formed by anodization in oxalic acid
Y. Chai, C. W. Tan, K. P. Beh, F. K. Yam, Z. Hassan, Journal of Porous Materials, DOI 10.1007/s10934-013-9675-5 (2013)

338. A novel AC technique for high quality porous GaN
Ainorkhilah Mahmood, Naser Mahmoud Ahmed, Yushamdan Yusof, Yam Fong Kwong, Chuah Lee Siang, Husnen R. Abd, Zainuriah Hassan, International Journal of Electrochemical Science, 8, 5801-5809 (2013)

339. Fabrication of ZnO nanorod/p-GaN high-brightness UV LED by microwave-assisted chemical bath deposition with $Zn(OH)_2$-PVA nanocomposites as seed layer
J.J. Hassan, M. A. Mahdi, Y.Yusof, H. Abu-Hassan, Z. Hassan, H. A. Al-Attar, A. P. Monkman, Optical Materials, 35, 1035–1041 (2013)

340. Growth of InN thin films on different substrates at ambient temperature
Maryam Amirhoseiny, Zainuriah Hassan, Ng Sha Shiong, Microelectronics International, 30 (2), 63-67 (2013)

341. One-step growth of curled GaN nanowires using chemical vapour deposition method
K. P. Beh, F. K. Yam, L. L. Low, Z. Hassan, Vacuum, 95, 6–11 (2013)

342. Surface phonon polariton characteristic of honeycomb nanoporous GaN thin films
S. F. Cheah, S. C. Lee, S. S. Ng, F. K. Yam, H. Abu Hassan, and Z. Hassan, Applied Physics Letters, 102, 101601 (2013)

343. Free catalyst synthesis of GaN nanostructures on Si- Substrate via CVD
Qahtan Nofan Abdullah, Fong Kwong Yam, Zainuriah Hassan, and Mohamed Bououdina, Materials Science Forum, 756, 59-65 (2013)

344. A study of properties of the nanocrystalline CdO thin film prepared by solid-vapor deposition method
Mustafa Zaien, Naser Mahmoud Ahmed, Zainuriah Hassan, Materials Science Forum, 756, 54-58 (2013)

345. Improvement of the performance characteristics of deep violet InGaN MQW laser diodes using step-graded electron blocking layers and a delta barrier
Ghasem Alahyarizadeh, Zainuriah Hassan, F. K. Yam, Journal of Applied Physics, 113, 123108 (2013)

346. Study of growth mechanism of self-catalytic branched GaN nanowires
L. K. Tan, F. K. Yam, K. P. Beh, Z. Hassan, Superlattices and Microstructures, 58, 38-43 (2013)

347. Substrate surface polariton splitting due to thin zinc oxide and aluminum nitride films presence
N. N. Novikova, V. A. Yakovlev, E. A. Vinogradov, S. S. Ng, Z. Hassan, H. Abu Hassan, Applied Surface Science, 267, 93-96 (2013)

348. Growth and characterization of different structured CdO using a vapor transport
M. Zaien, A. Hmood, N. M. Ahmed, Z. Hassan, Materials Letters, 102–103, 12–14 (2013)

349. ZnO nano-stripes synthesized using photoelectrochemical wet etching method
L. S. Chuah, Asmiet Ramizy, M. A. Mahdi, Z. Hassan, International Journal of Materials Science and Applications, 2(2), 77-80 (2013)

350. The study of $Al_{0.29}Ga_{0.71}N$-based Schottky photodiodes grown on silicon by plasma-assisted molecular beam epitaxy

M. Z. Mohd Yusoff, Z. Hassan, C. W. Chin, H. Abu Hassan, M. J. Abdullah, N. N. Mohammad, M. A. Ahmad, Y. Yusof, Modern Physics Letters B, 27, 1350085 (12 pages) (2013)

351. Fabrication and characterization of an n-CdO/p-Si solar cell by thermal evaporation in a vacuum
M. Zaien, N. M. Ahmed, Z. Hassan, International Journal of Electrochemical Science, 8, 6988-6996 (2013)

352. Effects of annealing on the optical and electrical properties of CdO thin films prepared by thermal evaporation
M. Zaien, N.M. Ahmed, Z. Hassan, Materials Letters, 105, 84-86 (2013)

353. Comparative study on structural and optical properties of nitrogen rich-InN on Si(110) and SiC
M. Amirhoseiny, Z. Hassan, S. S. Ng, Surface Engineering, 29(7), 561-565 (2013)

354. Photoelectrochemical fabrication of porous GaN and their applications in ultraviolet and ammonia sensing
Khi Poay Beh, Fong Kwong Yam, Lay Kim Tan, Siow Woon Ng, Che Woei Chin, Zainuriah Hassan, Japanese Journal of Applied Physics, 52, 08JK03 (6 pages) (2013)

355. Sensing devices based on ZnO hexagonal tube-like nanostructures grown on p-GaN heterojunction by wet thermal evaporation
H. I. Abdulgafour, Z. Hassan, F. K. Yam, C. W. Chin, Thin Solid Films, 540, 212-220 (2013)

356. Infrared reflectance studies of hillock-like porous zinc oxide thin films
C. G. Ching, S. C. Lee, S. S. Ng, Z. Hassan, H. Abu Hassan, Thin Solid Films, 539, 70-74 (2013)

357. A comparative study of the structural and electrical properties of n-type InGaN epilayer grown by MBE and commercially
Saleh H. Abud, Asmiet Ramizy, A. S. Hussein, Z. Hassan, F. K. Yam, Superlattices and Microstructures, 60 (2013), 224-230

358. InGaN-based multi-quantum well light-emitting diode structure with the insertion of superlattices under-layer
Ahmad Hadi Ali, Ahmad Shuhaimi Abu Bakar, Takashi Egawa, Zainuriah Hassan, Superlattices and Microstructures, 60, 201-207 (2013)

359. High quality ZnCdS nanosheets prepared using solvothermal synthesis
M.A. Mahdi, J.J. Hassan, S.S. Ng, Z. Hassan, Journal of Nanoscience, 897638, 6 pages (2013)

360. Plasma-assisted MBE growth of AlN/GaN/AlN heterostructures on Si(111) substrate
M. Z. Mohd Yusoff, A. Mahyuddin, Z. Hassan, Y. Yusof, M. A. Ahmad, C. W. Chin, H. Abu Hassan, M. J. Abdullah, Superlattices and Microstructures, 60, 500–507 (2013)

361. Effect of oxygen percentage on the growth of copper oxide thin films by reactive radio frequency sputtering
P. K. Ooi, S. S. Ng, M. J. Abdullah, H. Abu Hassan, Z. Hassan, Materials Chemistry and Physics, 140(1), 243-248 (2013)

362. Structural properties of porous $In_{0.08}Ga_{0.92}N$ synthesized using photoelectrochemical etching
Saleh H. Abud, Z. Hassan, F. K. Yam, Materials Letters, 107, 367-369 (2013)

363. Optical and structural properties of porous zinc oxide fabricated via electrochemical etching method
C. G. Ching, S. C. Lee, P. K. Ooi, S. S. Ng, Z. Hassan, H. Abu Hassan, M. J. Abdullah, Materials Science and Engineering B, 178, 956-959 (2013)

364. Structural and optical properties of Au-catalyzed SiNWs grown using pulsed plasma-enhanced chemical vapour deposition
H. F. Al-Taay, M. A. Mahdi, D. Parlevliet, Z. Hassan, P. Jennings, Superlattices and Microstructures, 61, 134-145 (2013)

365. Nanoporous InGaN of high In composition prepared by KOH electrochemical etching
R. Radzali, N. Zainal, F. K. Yam, Z. Hassan, Materials Science in Semiconductor Processing, 16, 2051-2057 (2013)

366. p-n Junction photodiode based on GaN grown on Si(111) by plasma-assisted molecular beam epitaxy
M. Z. Mohd Yusoff, Z. Hassan, Naser M. Ahmed, H. Abu Hassan, M. J. Abdullah, M. Rashid, Materials Science in Semiconductor Processing, 16, 1859-1864 (2013)

367. Microstructural and optical properties of SnO thin film by thermal evaporation
L. S. Chuah, Z. Mohamed, Z. Hassan, Advanced Materials Research, 795, 558-562 (2013)

368. Growth of vertically aligned ZnO nanorods arrays by hydrothermal method
Mahmoud Alimanesh, Jalal Rouhi, Norzaini Zainal, Saeid Kakooei, Zainuriah Hassan, Advanced Materials Research, 795, 616-619 (2013)

369. Numerical study of performance characteristics of deep violet InGaN DQW laser diodes with AlInGaN quaternary multi quantum barrier electron blocking layer
Gh. Alahyarizadeh, Z. Hassan, S. M. thahab, F. K. Yam, A. J. Ghazai, Optik - International Journal for Light and Electron Optics, 124, 6765-6768 (2013)

370. Fabrication of InN-based photodetector by using porous silicon buffer layer
M. Amirhoseiny, Z. Hassan, S. S. Ng, Surface Engineering, 29 (10), 772-777 (2013)

371. Applications of the image processing method on the structure measurements in porous GaN
Ainorkhilah Mahmood, Naser Mahmoud Ahmed, yam Fong Kwong, Chuah Lee Siang, Mohd Bukhari Md Yunus, Zainuriah Hassan, Journal of Experimental Nanoscience, 17458080.2013.814173 (2013)

372. Influence of al-flux on the growth of AlN/GaN/AlN films on Si(111) substrate by MBE
M. Z. Mohd Yusoff, A. Mahyuddin, Z. Hassan, H. Abu Hassan, M. J. Abdullah, Superlattices and Microstructures, 64, 367-374 (2013)

373. Influence of deposition temperature on the growth of rutile TiO2 nanostructures by CBD method on seed layer prepared by RF magnetron sputtering
Abbas M. Selman, Z. Hassan, Superlattices and Microstructures, 64, 27-36 (2013)

374. X-ray analysis of nanoporous TiO_2 synthesized by electrochemical anodization
Y. L. Cheong, F. K. Yam, I. K. Chin, Z. Hassan, Superlattices and Microstructures, 64, 37-43 (2013)

375. Effects of traps and polarization charges on device performance of AlGaN/GaN high electron mobility transistors
A. SH. Hussein, Alaa J. Ghazai, Emad A. Salman, Z. Hassan, Superlattices and Microstructures, 63, 141-148 (2013)

376. Effect of thermal annealing on ohmic contacts properties of undoped and Si-doped AlxGa1-xN on Si (1 1 1) substrate grown by PA-MBE
A. S.H. Hussein, Alaa J. Ghazai, Z. Hassan, Optik - International Journal for Light and Electron Optics, 124, 4257-4259 (2013)

377. Synthesis of two-dimensional gallium nitride via spin coating method: influences of nitridation temperatures
C. Y. Fong, S. S. Ng, F. K. Yam, H. Abu Hassan, Z. Hassan, Journal of Sol-Gel Science and Technology, 68, 95-101 (2013)

378. Effects of thermal annealing on Ti/Al Ohmic contacts on quaternary n-Al0.08In0.08Ga0.84N alloy film
Alaa J. Ghazai, H. Abu Hassan, Z. Hassan, A. SH. Hussein, International Journal of Nanoelectronics and Materials, 6, 113-119 (2013)

379. Effects of oxygen percentage on the growth of copper oxide thin films by reactive radio frequency sputtering
P.K. Ooi, S.S. Ng, M.J. Abdullah, H. Abu Hassan, Z. Hassan, Materials Chemistry and Physics, 140, 243-248 (2013)

380. Growth of self-assembled InGaN quantum dots on Si (111) at reduced temperature by molecular beam epitaxy
C.W. Chin, Z. Hassan, F.K. Yam, M.A. Ahmad, Thin Solid Films, 544, 33-36 (2013)

381. Structural and optical properties of nanocrystalline lead sulfide thin films prepared by microwave-assisted chemical bath deposition
A.S. Obaid, M.A. Mahdi, Y. Yusof, M. Bououdina, Z. Hassan, Materials Science in Semiconductor Processing, 16, 971-979 (2013)

382. Fabrication and characterization of macroporous zinc oxide
S. S. Ng, C. G. Ching, S. F. Cheah, C. Y. Fong, Z. Hassan and H. Abu Hassan, AIP Conference Proceedings 1528 , 342-345 (2013)

383. Structural and morphological properties of zinc oxide thin films grown on silicon substrates
S. S. Ng , P. K. Ooi , C. G. Ching , Z. Hassan , H. Abu Hassan and M. J. Abdullah, AIP Conference Proceedings 1528 , 306-309 (2013)

384. Polarized infrared reflectance characterization of wurtzite ZnO/GaN heterostructure on 6H-SiC substrate
S. C. Lee , S. S. Ng , P. K. Ooi , H. Abu Hassan , Z. Hassan and M. J. Abdullah, AIP Conference Proceedings 1528 , 93-98 (2013)

385. Surface and optical phonon characteristics of ZnO/diamond heterostructure
S.S. Ng, S.C. Lee, P.K. Ooi, K.G. Saw, M.J. Abdullah, Z. Hassan, H. Abu Hassan, Ceramics International, 39, S529-S532 (2013)

386. Study on effect of quantum well number on performance characteristics of GaN-based vertical cavity surface emitting laser
A. Zandi Goharrizi, Gh. Alahyarizadeh, Z. Hassan, H. Abu Hassan, Physica E: Low-dimensional Systems and Nanostructures, 50, 61-66 (2013)

387. Fabrication of GaN nanowires on porous GaN substrate by thermal evaporation
L. Shekari, H. Abu Hassan, S.M. Thahab, Z. Hassan, Materials Science in Semiconductor Processing, 16, 485-488 (2013)

388. Investigation of the performance characteristics of 500 nm to 510 nm green InGaN MQWs laser diodes

G. H. Alahyarizadeh, Z. Hassan, S.M. Thahab, F.K. Yam, Digest Journal of Nanomaterials and Biostructures, 8, 529-540 (2013)

389. High performance room temperature GaN-nanowires hydrogen gas sensor fabricated by chemical vapor deposition (CVD) technique
Q.N. Abdullah, F.K. Yam, J.J. Hassan, C.W. Chin, Z. Hassan, M. Bououdina, International Journal of Hydrogen Energy, 38, 14085-14101 (2013)

390. Effect of thermal annealing on GaN pn-junction diode with Pt/Ag as ohmic contact
M. Z. Mohd Yusoff, A. Baharin, Z. Hassan, Naser M. Ahmed, H. Abu Hassan, M. J. Abdullah, Composite interfaces, DOI: 10.1080/15685543.2014.864942 (2013)

391. Metal-semiconductor-metal photodetector based on porous $In_{0.08}Ga_{0.92}N$
Saleh H. Abud, Z. Hassan, F. K. Yam, International Journal of Materials Science and Engineering, 7 (12), 909-911 (2013)

392. New optical properties of porosity layer controlled by laser-induced etching
Khalid Omar, Asmiet Ramizy, Khaldun A. Salman, Z. Hassan, Micro and Nanosystems, 5, 267-272 (2013)

393. Growth of InN thin films on different Si substrates at ambient temperature
Maryam Amirhoseiny, Zainuriah Hassan, Sha Shiong Ng, Microelectronics International, 30, 63 – 67 (2013)

394. Fabrication of heterostructure InN/photo-electrochemical etched silicon (110)
M. Amirhoseiny, Z. Hassan, S. S. Ng, International Journal of Electrochemical Science, 8, 5042-5051 (2013)

395. Fabrication and characterization of ZnO nanostructures on Si(111) substrate using a thin AlN buffer layer
L. S. Chuah, Z. Hassan, S. K. Mohd Bakhori, M. A. Ahmad, Y. Yusof, American Journal of Nanoscience and Nanotechnology (NANO), 1,1-5 (2013)

396. The growth of Al-doped ZnO via Solid-State Chemical Vapor Deposition
L. S. Chuah, S. S. Tneh, Z. Hassan, Abhinav-National Monthly Refereed Journal of Research in Science & Technology, 2, 8-14 (2013)

397. Preparation of Aluminium foil-supported ZnO Nanocoral Reef films
L. S. Chuah, H. I. Abdulgafour, Z. Hassan, The International Journal of Engineering and Science (IJES), 2, 42-45 (2013)

398. Ohmic contacts to p-type doped ZnO
L.S. Chuah, S. S. Tneh, Z. Hassan, K. K. Saw, F. F. Yam, International Journal of Materials Engineering, 3, 1-3 (2013)

399. Nanoflakes of W/WO3 Thin Films Grown by Electrochemical Anodization method
L.S. Chuah, Z. Hassan, Nanoscience and Nanotechnology Letters, 6, 515-518 (2014)

400. Device properties of zinc oxide on diamond heterojunction under ultraviolet Illumination
K.G. Saw, S.S. Tneh, F.K. Yam, S.S. Ng, Z. Hassan, PLOS ONE, 9, e89348 (2014)

401. Characterization of surface roughness of Pt Schottky contacts on quaternary n-$Al_{0.08}In_{0.08}Ga_{0.84}N$ thin film assessed by atomic force microscopy and fractal analysis
Stefen Talu, Alaa J Ghazai, Sebastian Stach, Abu Hassan, Zainuriah Hassan, Mihai Talu, J. Mater Sci: Mat Electron, 25, 466-477 (2014)

402. Comparison of the structural and optical properties of porous In0.08Ga0.92N thin films synthesized by electrochemical etching

Saleh H. Abud, Z. Hassan, F.K. Yam, A.J. Ghazai, Journal of Solid State Chemistry, 212, 242-248 (2014)

403. Fabrication and characterization of nanocrystalline CdS thin film-based optical sensor grown via microwave-assisted chemical bath deposition
M. Husham, Z. Hassan, M. A. Mahdi, Abbas M. Selman, Naser M. Ahmed, Superlattices and Microstructures, 67, 8-16 (2014)

404. Structural characterizations of GaN nanowires grown on Si (111) substrates by thermal evaporation
L. Shekari, H. Abu Hassan, Z. Hassan, Materials Letters, 114, 140-143 (2014)

405. Structural, optical and electrical characterization of ITO, ITO/Ag and ITO/Ni transparent conductive electrodes
Ahmad Hadi Ali, Ahmad Shuhaimi, Zainuriah Hassan, Applied Surface Science, 288, 599-603 (2014)

406. Temperature-dependent current conduction mechanism and charge trapping in Ta2O5 RF-sputtered on GaN
Lai-Seng Yeoh, Mat-Johar Abdullah, Zainuriah Hassan, Current Applied Physics, 14, 23-29 (2014)]

407. Synthesis of wurtzite GaN thin film via spin coating method
C.Y. Fong, S.S. Ng, F.K. Yam, H. Abu Hassan, Z. Hassan, Materials Science in Semiconductor Processing, 17, 63-66 (2014)

408. Pseudo Random Number Generator Based on Quantum Chaotic Map
A. Akhshani, A. Akhavan, S. C. Lim, Z. Hassan, Communications in Nonlinear Science and Numerical Simulation, 19, 101-111 (2014)

409. Performance characteristics of deep violet InGaN DQW laser diodes with InGaN/GaN superlattice waveguide layers
Gh. Alahyarizadeh, Z. Hassan, S. M. Thahab, F. K. Yam, A. J. Ghazai, Optik - International Journal for Light and Electron Optics, 125, 341-344 (2014)

410. Calculation of dispersion of surface and interface phonon polariton resonances in wurtzite semiconductor multilayer system taking damping effects into account
Sai Cheong Lee, Sha Shiong Ng, Haslan Abu Hassan, Zainuriah Hassan, Thomas Dumelow, Thin Solid Films, 551, 114-119 (2014)

411. The influence of growth temperatures on the characteristics of GaN nanowires: The Raman study
L.K. Tan, F.K. Yam, L.L. Low, K.P. Beh, Z. Hassan, Physica B: Condensed Matter, 434, 101-105 (2014)

412. Photoluminescence spectra of nitrogen rich InN thin films grown on Si(110) and photoelectrochemical etched Si(110)
M. Amirhoseiny, Z. Hassan, S. S. Ng, Vacuum, 101, 217-220 (2014)

413. Structural and optical properties of In-doped ZnO thin films under wet annealing
P.K. Ooi, S.S. Ng, M.J. Abdullah, Z. Hassan, Materials Letters, 116, 396-398 (2014)

414. Fabrication and characterization of metal–semiconductor–metal photodetector based on porous InGaN
Saleh H. Abud, Z. Hassan, F.K. Yam, Materials Chemistry and Physics, 144, 86-91 (2014)

415. Characteristics of MSM photodetector fabricated on porous $In_{0.08}Ga_{0.92}N$
Saleh H. Abud, Z. Hassan, F.K. Yam, C. W. Chin, Measurement, 50, 172-174 (2014)

416. Ohmic-rectifying conversion of Ni contacts on ZnO and the possible determination of ZnO thin film surface polarity
Kim Guan Saw, Sau Siong Tneh, Gaik Leng Tan, Fong Kwong Yam, Sha Shiong Ng, Zainuriah Hassan, PLOS ONE, 9(1), e86544, 1-7 (2014)

417. Properties of Pt Schottky contact on porous $In_{0.27}Ga_{0.73}N$ thin film revealed from I-V measurements
Saleh H. Abud, Z. Hassan, F.K. Yam, M. A. Ahmad, Advanced Materials Research, 895, 558-563 (2014)

418. Effect of nitridation temperatures on gallium nitride thin films formed on silicon substrates
Chee Yee Fong, Sha Shiong Ng, Fong Kwong Yam, Haslan Abu Hassan, Zainuriah Hassan, Advanced Materials Research, 895, 57-62 (2014)

419. Formation and optical studies of porous GaN thin films via UV-assisted electrochemical etching approach
Cheah Sook Fong, Ng Sha Shiong, Yam Fong Kwong, Abu Hassan Haslan, Hassan Zainuriah, Advanced Materials Research, 895, 45-50 (2014)

420. Characteristics of cuprous oxide thin films deposited on glass and polyethylene terephthalate substrates
Poh Kok Ooi, Chin Guan Ching, Sha Shiong Ng, Mat Johar Abdullah, Haslan Abu Hassan, Zainuriah Hassan, Advanced Materials Research, 895, 29-34 (2014)

421. Determination of acceptor concentration, depletion width, donor level movement and sensitivity factor of ZnO on diamond heterojunction under UV illumination
K.G. Saw, S.S. Tneh, F.K. Yam, S.S. Ng, Z. Hassan, PLOS ONE, 9, 1-6 (2014)

422. Growth and characterization of silicon nanowires catalyzed by Zn metal via pulsed plasma-enhanced chemical vapor deposition
H. F. Al-Taay, M. A. Mahdi, D. Parlevliet, Z. Hassan, P. Jennings, Superlattices nad Microstructures, 68, 90-100 (2014)

423. Comparison of the structural and optical properties of porous $In_{0.08}Ga_{0.92}N$ thin films synthesized by electrochemical etching
Saleh H. Abud, Z. Hassan, F. K. Yam, A. J. Ghazai, Journal of Solid State Chemistry, 212, 242-248 (2014)

424. Antireflection coating increased the light trapping in solar cell
Khalid Omar, Khaldun A Salman, Asmiet Ramizy, Z. Hassan, The Journal of Physics. Photon, 108, 177-180 (2014)

425. Formation of tungsten oxide nanostructures prepared in hydrochloric acid
Y. Chai, I. K. Chin, F. K. Yam, Z. Hassan, Journal of The Electrochemical Society, 161, D202-D206 (2014)

426. Effect of annealing temperature on IR-detectors based on InN nanostructures
M. Amirhoseiny, Z. Hassan, S. S. Ng, G. Alahyarizadeh, Vacuum, 106, 46-48 (2014)

427. Polarized infrared reflectance study of free standing cubic GaN grown by molecular beam epitaxy
S. C. Lee, S. S. Ng, H. Abu Hassan, Z. Hassan, N. Zainal, S. V. Novikov, C. T. Foxon, A. J. Kent, Materials Chemistry and Physics, 146, Pages 121-128 (2014)

428. One-dimensional GaN nanostructures prepared via chemical vapor deposition: Substrate induced size and dimensionality

Q. N. Abdullah, F. K. Yam, N. K. Hassan, M. A. Qeed, K. Al-Heuseen, M. Bouodina, Z. Hassan, Ceramics International, 40, 9563-9569 (2014)

429. The role of alternating current on photo-assisted electrochemical porosification of GaN
Ainorkhilah Mahmood, Naser M. Ahmed, Ion Tiginyanu, Yushamdan Yusof, Yam Fong Kwong, Chuah Lee Siang, Zainuriah Hassan, Journal of Nanoelectronics and Optoelectronics, 9, 1-4 (2014)

430. Characteristics of Pt- and Ni/ Porous $In_{0.08}Ga_{0.92}N$ Schottky contacts
Saleh H. Abud, Z. Hassan, F. K. Yam, Naser M. Ahmed, Proceedings of International Symposium on Fundamental and Applied Sciences, 633-638 (2014)

431. Growth of rutile TiO_2 nanorods on Si substrates by CBD method at different concentrations of $TiCl_3$ solutions
Abbas M. Selman, Z. Hassan, M. Husham, Proceedings of International Symposium on Fundamental and Applied Sciences, 633-638 (2014)

432. Post-annealing effects on ITO thin films RF sputtered at different thicknesses on Si and glass
Ahmad Hadi Ali, Ahmad Shuhaimi, Siti Khadijah, Zainuriah Hassan, Advanced Materials Research, 925, 411-415 (2014)

433. Fabrication gallium nitride (GaN) nanowires by thermal chemical vapor deposition (TCVD) technique
Qahtan Nofan Abdullah, Fong Kwong Yam, Yushamdan Yusof, Zainuriah Hassan, Advanced Materials Research, 925, 450-454 (2014)

434. Fabrication of porous aluminum nitride films on silicon substrate for a better overgrown layer
YSM. Alvin, N. Zainal, Z. Hassan, Materials Research Innovations, 18, S6-375-S6-377 (2014)

435. Characteristics of porous GaN prepared by KOH photoelectrochemical etching
R. Radzali, N. Zainal, F. K. Yam, Z. Hassan, Materials Research Innovations, 18 (6), 412-416 (2014)

436. A high sensitivity, fast response, rapid recovery p-n heterojunction photodiode based on rutile TiO_2 nanorod array on p-Si(1110
Abbas M. Selman, Z. Hassan, M. Husham, Naser M. Ahmed, Applied Surface Science, 305, 445-452 (2014)

437. Optical properties of CdS micro/nanocrystalline structures prepared via a thermal evaporation method
M. A. Mahdi, J. J. Hassan, S. J. Kassim, S. S. Ng, Z. Hassan, Materials Science in Semiconductor Processing, 26, 87-92 (2014)

438. Solvothermal growth of single-crystal CdS nanowires
M. A. Mahdi, J. J. Hassan, S. J. Kasim, S. S. Ng, Z. Hassan, Bulletin of Materials Science, 37 (2), 337-345 (2014)

439. Improvement of porous GaAs (100) structure through electrochemical etching based on DMF solution
Muhammad Ikram Md Taib, Norzaini Zainal, Zainuriah Hassan, Journal of Nanomaterials, 294385, 7 pages (2014)

440. Effect of duration time on growth of rutile TiO_2 nanorods by chemical bath deposition method on Si substrate

Abbas M. Selman, Z. Hassan, Proceedings of International Symposium on Engineering and Natural Sciences, 295-302 (2014)

441. Effect of annealing treatment on growth of rutile TiO_2 nanorods by chemical bath deposition method on silicon substrate
Abbas M. Selman, Z. Hassan, Proceedings of International Conference on Manufacturing Science and Technology, 276-280 (2014)

442. Nanoporous InGaN prepared by KOH electrochemical etching with different light sources
R. Radzali, Z. Hassan, N. Zainal, F. K. Yam, Microelctronic Engineering, 126, 107-112 (2014)

443. Structural and photoluminescence studies of rutile TiO_2 nanorods prepared by chemical bath deposition method on Si substrates at different pH values
Abbas M. Selman, Z. Hassan, M. Husham, Maesurement, 56, 155-162 (2014)

444. Growth of rutile TiO_2 nanorods by chemical bath deposition method on silicon substrate at different annealing temperature
Abbas M. Selman, Z. Hassan, M. Husham, Applied Mechanics and Materials, 624, 129-133 (2014)

445. Fabrication of aluminium nitride heterostructures on Si (111) substrate by plasma-assisted MBE
M. Z. Mohd Yusoff, A. Mahyuddin, Z. Hassan, H. Abu Hassan, M. J. Abdullah, M. Rusop, Composite Interfaces, DOI: 10.1080/15685543.2014.943018 (2014)

446. Surface phonon polariton responses of hexagonal sapphire crystals with non-polar and semi-polar crystallographic planes
Sai Cheong Lee, Sha Shiong Ng, Haslan Abu Hassan, Zainuriah Hassan, Thomas Dumelow, Optics Letters, 39(18), 0146-9592/14/185467-04 (2014)

447. Characterization of ITO/Ag and ITO/Ni bi-Layer transparent conductive electrodes
Ahmad Hadi Ali, Ahmad Shuhaimi, Mohd Anas Ahmad, Zainuriah Hassan, Advanced Materials Research, 1024, 75-78 (2014)

448. Porous GaN for gas sensing application
N. H. Mohd Noor, Z. Hassan, F. K. Yam, Advanced Materials Research, 1043, 50-56 (2014)

449. Crystal orientation dependence of polarized infrared reflectance response of hexagonal sapphire cystal
S. C. Lee, S. S. Ng, H. Abu Hassan, Z. Hassan, T. Dumelow, Optical Materials, 37, 773-779 (2014)

450. Hydrogen gas sensing performance of GaN nanowires-based sensor at low operating temperature
Q. N. Abdullah, F. K. Yam, Z. Hassan, M. Bouodina, Sensors and Actuators B, 204, 497-506 (2014)

451. Effects of nitridation durations on the synthesis of wurtzite GaN thin films by spin coating method
C. Y. Fong, S. S. Ng, F. K. Yam, H. Abu Hassan, Z. Hassan, Journal of Sol-Gel Science and Technology, 71, 329-332 (2014)

452. Low fraction of hexagonal inclusions in thick and bulk cubic GaN
S.N. Waheeda, N. Zainal, Z. Hassan, S.V. Novikov, A.V. Akimov, A.J. Kent, Applied Surface Science, 317, 1010-1014 (2014)

453.Room-temperature synthesis of nanocrystalline titanium dioxide via electrochemical anodization
Y.L. Cheong, F.K. Yam, Y.W. Ooi, Z. Hassan, Materials Science in Semiconductor Processing, 26, 130-136 (2014)

454.Improvement of performance characteristics of deep violet InGaN DQW lasers using a strip DQW active region
Gh. Alahyarizadeh, Z. Hassan, S.M. Thahab, F.K. Yam, Optik - International Journal for Light and Electron Optics, 125, 4911-4915 (2014)

455.Controlled porosity of GaN using different pore size of Si (1 0 0) substrates
M.E.A. Samsudin, N. Zainal, Z. Hassan, Superlattices and Microstructures, 73, 54-59 (2014)

456.Synthesis, characterization, and effect of concentration variation on metal oxide nanostructures
L.S. Chuah, E. Kuang, S.S. Tneh, Z. Hassan, Composite Interfaces, 21, 217–232 (2014)

457.Effects of nitridation temperatures on gallium nitride thin films formed on silicon substrates
Chee Yong Fong, Sha Shiong Ng, Fong Kwong Yam, Haslan Abu Hassan, Zainuriah Hassan, Advanced Materials Research, 895, 57-62 (2014)

458.Characteristics of cuprous oxide thin films deposited on glass and polyethylene terephthalate substrates
Poh Kok Ooi, Chin Guan Ching, Sha Shiong Ng, Mat Johar Abdullah, Haslan Abu Hassan, Zainuriah Hassan, Advanced Materials Research, 895, 29-34 (2014)

459.Formation and optical studies of porous GaN thin films via UV-assisted electrochemical etching approach
Sook Fong Cheah, Sha Shiong Ng, Fong Kwong Yam, Haslan Abu Hassan, Zainuriah Hassan, Advanced Materials Research, 895, 45-50 (2014)

460.Properties of Pt Schottky contact on porous In0.27Ga0.73N thin film revealed from I -V measurements
Saleh H. Abud, Z. Hassan, F.K. Yam, M.A. Ahmad, Advanced Materials Research, 895, 558-563 (2014)

461.Ultraviolet photoresponse properties of zinc oxide nanorods on heavily boron-doped diamond heterostructure
Kim Guan Saw, Sau Siong Tneh, Swee Yong Pung, Sha Shiong Ng, F.K. Yam, Z. Hassan, Advanced Materials Research, 832, 172-177 (2014)

462.Fabrication gallium nitride (GaN) nanowires by thermal chemical vapor deposition (TCVD) technique
Qahtan Nofan Abdullah, Fong Kwong Yam, Yushamdan Yusof, Zainuriah Hassan, Advanced Materials Research, 925, 450-454 (2014)

463.Electrical characterization of Al/Ag contacts on Al-Zn codoped SnO2 thin films deposited by solid-state chemical vapor deposition
Lee Siang Chuah, S.S. Tneh, Z. Hassan, Advanced Materials Research, 925, 433-435 (2014)

464.Electrochemical self-assembly of ZnO nanosheetlike structures
Lee Siang Chuah, S.Y. Chin, S.S. Tneh, M.A. Ahmad, S.K. Mohd Bakhori, Y. Yusuf, Z. Hassan, Applied Mechanics and Materials, 606, 3-7 (2014)

465.Effect of reagents molar concentration on CdS thin films properties grown by chemical bath deposition under microwave irradiation

M. Husham, Z. Hassan, M.A. Mahdi, Advanced Materials Research, 925, 263-267 (2014)

466. Characterization of ITO/Ag and ITO/Ni bi-layer transparent conductive electrodes
Ahmad Hadi Ali, Ahmad Shuhaimi, Mohd Anas Ahmad, Zainuriah Hassan, Advanced Materials Research, 1024, 75-78 (2014)

467. Fabrication of aluminum nitride heterostructures on Si (1 1 1) substrate by plasma-assisted MBE
M.Z. Mohd Yusoff, A. Mahyuddin, Z. Hassan, H. Abu Hassan, M.J. Abdullah and M. Rusop, Composite Interfaces, 21, 723-735 (2014)

468. The fabrication and characterization of UV sensor based on TiO_2 nanorods array on silicon substrate heterojunction
Abbas M. Selman, Z. Hassan, Proceedings of Science Plus International Conference, 1-7 (2014)

469. Characterization Methods for Ultrathin Wafer and Die Quality: A Review
Michael Raj Marks, Zainuriah Hassan, and Kuan Yew Cheong, IEEE Transactions on Components, Packaging, and Manufacturing Technology, 4, 2042-2057 (2014)

470. Improved optoelectronics properties of ITO-based transparent conductive electrodes with the insertion of Ag/Ni under-layer
Ahmad Hadi Ali, Ahmad Shuhaimi Abu Bakar, Zainuriah Hassan, Applied Surface Science, 315, 387-391 (2014)

471. Nanocrystalline CdS thin films growth on silicon substrates via microwave-assisted chemical bath deposition: Synthesis and characterization
M. Husham, Z. Hassan, M. A. Mahdi, Abbas M. Selman, International Journal of Technical Research and Applications, 2(6), 11-13 (2014)

472. Nanocoral PbS Films Schottky Solar Cell
A.S. Obaid, A. A. Dihe, B.M. Salih, Z. Hassan, Y. Al-Douri, M. Bououdina, Advanced Materials Research, 925, 605-609 (2014)

473. Structural and optical characteristics of porous InAlGaN prepared by photoelectrochemical etching
R. Radzali, Z. Hassan, N. Zainal, F.K. Yam, Journal of Alloys and Compounds, 622, 565-571 (2015)

474. Fabrication of low cost UV photo detector using ZnO nanorods grown onto nylon substrate
Sabah M. Mohammad, Z. Hassan, Naser M. Ahmed, N. H. Al-Hardan, M. Bououdina, J Mater Sci: Mater Electron, DOI 10.1007/s10854-014-2542-6, 26, 1322-1331 (2015)

475. Comparative study of porous anodic alumina: effects of aluminium deposition methods
I. K. Chin, F. K. Yam, Y. Chai, Z. Hassan, Materials Science and Technology, 31, 709-714 (2015)

476. Role of pre-annealing treatment in improving the porosity of gallium nitride on cubic silicon (100) substrate
S. N. Waheeda, N. Zainal, Z. Hassan, Materials Science in Semiconductor Processing, 30, 330–334 (2015)

477. AlN/GaN/AlN heterostructures grown on Si substrate by plasma-assisted MBE for MSM UV photodetector applications
M. Z. Mohd Yusoff, A. Mahyuddin, Z. Hassan, H. Abu Hassan, M. J. Abdullah, M. Rusop, S. M. Mohammad, Naser M. Ahmed, Materials Science in Semiconductor Processing, 29, 231–237 (2015)

478. Novel InGaN mesoporous grown by PA-MBE
Asmiet Ramizy, Saleh H. Abud, A.S. Hussein, Z. Hassan, F.K. Yam, C.W. Chin, Materials Science in Semiconductor Processing, 29, 102–105 (2015)

479. Spin coating deposition of c-oriented wurtzite gallium nitride thin film
Chee Yee Fong, Sha Shiong Ng, Fong Kwong Yam, Haslan Abu Hassan, Zainuriah Hassan, Applied Mechanics and Materials, 699, 70-75 (2015)

480. Highly sensitive fast-response UV photodiode fabricated from rutile TiO_2 nanorod array on silicon substrate
Abbas M. Selman, Z. Hassan, Sensors and Actuators A: Physical, 221, 15-21(2015)

481. Preparation and characterization of $Zn_xCd_{1-x}S$ ternary alloys micro/nanostructures grown by thermal evaporation
M. Mahdi, Z. Hassan, J. J. Hassan, S. S. Ng, S. Karim, Materials Research Express, 2, 016501 (2015)

482. Ni/Ag Schottky contacts on $Al_{0.11}Ga_{0.89}N$ grown on Si (1 1 1) substrate by plasma-assisted MBE
M.Z. Mohd Yusoff, Z. Hassan, H. Abu Hassan, M.J. Abdullah, Composite Interfaces, 22, 2, 127-135 (2015)

483. Hydrogen gas sensing performance of GaN nanowires-based sensor at low operating temperature
Q. N. Abdullah, F. K. Yam, Z. Hassan, M. Bououdina, Sensors and Actuators B: Chemical, 204, 497-506(2015)

484. Preparation of porous InAlGaN/Si(111) by photoelectrochemical etching for high performance hydrogen gas sensors at room temperature
R. Radzali, Z. Hassan, N. Zainal, F.K. Yam, Sensors and Actuators B: Chemical, 213, 276-284 (2015)

485. Luminescence evolution of porous GaN thin films prepared via UV-assisted electrochemical etching
S.F. Cheah, S.C. Lee, S.S. Ng, F.K. Yam, H. Abu Hassan, Z. Hassan, Journal of Luminescence, 159, 303-311 (2015)

486. Effects of variations in precursor concentration on the growth of rutile TiO_2 nanorods on Si substrate with fabricated fast-response metal-semiconductor-metal UV detector
Abbas M. Selman, Z. Hassan, Optical Materials, 44, 37-47 (2015)

487. $Al_xGa_{1-x}N$/GaN/AlN heterostructures grown on Si(111) by MBE for MSM UV photodetector applications
M. Z. Mohd Yusoff, Z. Hassan, H. Abu Hassan, M. J. Abdullah, M. Rusop, M. Z. Pakhuruddin, Materials Science in Semiconductor Processing, 34, 214–233 (2015)

488. The fabrication and characterization of UV sensor based on TiO_2 nanorods array on silicon substrate heterojunction
Abbas M. Selman, Z. Hassan, International Journal of Electrical, Electronics and Data Communication, 3(2), 46-52 (2015)

489. Effect of deposition conditions on properties of nitrogen rich- InN nanostructures grown on anisotropic Si(110)
M. Amirhoseiny, Z. Hassan, S. S. Ng, Materials Science in Semiconductor Processing, 35, 216-221 (2015)

490. Growth and characterization of rutile TiO_2 nanorods on various substrates with fabricated fast-response metal-semiconductor-metal UV detector based on Si substrate

Abbas M. Selman, Z. Hassan, Superlattices and Microstructures, 83, 549-564 (2015)

491. Ultrathin Wafer Pre-Assembly and Assembly Process Technologies: A Review
Michael Raj Marks, Zainuriah Hassan, and Kuan Yew Cheong, Critical Reviews in Solid State and Materials Sciences, 0:1-40, DOI: 10.1080/10408436.2014.992585 (2015)

492. Microwave-assisted chemical bath deposition of nanocrystalline CdS thin films with superior photodetection characteristics
M. Husham, Z. Hassan, Abbas M. Selman, Nageh K. Allam, Sensors and Actuators A: Physical, 230, 9-16 (2015)

493. Growth behaviors of platinum-assisted GaN nanostructures in vapor–liquid–solid mechanism
L.K. Tan, F.K. Yam, Z. Hassan, Materials Science in Semiconductor Processing, 39, 559-564 (2015)

494. Growth of GaN on sputtered GaN buffer layer via low cost and simplified sol–gel spin coating method
C.Y. Fong, S.S. Ng, F.K. Yam, H. Abu Hassan, Z. Hassan, Vacuum, 119, 119-122 (2015)

495. Effects of thermal treatment on the anodic growth of tungsten oxide films
Y. Chai, C.W. Tam, K.P. Beh, F.K. Yam, Z. Hassan, Thin Solid Films, 588, 44-49 (2015)

496. The effect of electron blocking layer on the performance of MQW oxide-confined intracavity-contacted InGaN-based vertical cavity surface emitting lasers
A. Zandi Goharrizi, Gh. Alahyarizadeh, Z. Hassan, Alaa J. Ghazai, H. Abu Hassan, Optik - International Journal for Light and Electron Optics, 126, 1377-1380 (2015)

497. Effects of nitridation temperature on characteristics of gallium nitride thin films prepared via two-step method
Chee Yong Fong, Sha Shiong Ng, Fong Kwong Yam, Haslan Abu Hassan, Zainuriah Hassan, Acta Metallurgica Sinica (English Letters), 28, 362-366 (2015)

498. Doping effects in p- and n-type layers of 390-nm InGaN DQW lasers
Gh. Alahyarizadeh, M. Amirhoseiny, Z. Hassan, Int. J. Mod. Phys. B, 29, 1550118 (2015)

499. Effect of QW thickness and numbers on performance characteristics of deep violet InGaN MQW lasers
Gh. Alahyarizadeh, M. Amirhoseiny, Z. Hassan, Int. J. Mod. Phys. B, 29, 1550081 (2015)

500. Attenuated total reflection studoes of honeycomb nanoporous GaN thin films
S. F. Cheah, S. C. Lee, S. S Ng, F. K. Yam, H. Abu Hassan, Z. Hassan, Advanced Materials Research, 1108, 9-14 (2015)

501. Influence of waveguide layers on deep violet InGaN DQW lasers performance
Gh. Alahyarizadeh, M. Amirhoseiny, and Z. Hassan, Surf. Rev. Lett. 22, 1550051 (2015)

502. Effect of using two-step thermal annealing with different ambient gas on Mg activation and crystalline quality in GaN
E. Azimah, N. Zainal, A. Shuhaimi, Z. Hassan, Superlattices and Microstructures, 82, 592–598 (2015)

503. Alteration of structural and optical properties in quaternary Al0.1In0.1Ga0.8N films using ultraviolet assisted photo-electrochemical etching route
Way Foong Lim, Hock Jin Quah, Zainuriah Hassan, Rosfariza Radzali, Norzaini Zainal, Fong Kwong Yam, Journal of Alloys and Compounds, 649, 337-347 (2015)

504. Stability of the anodic growth porous tungsten oxide in different solutions

Yingqi Chai, Fong Kwong Yam, Zainuriah Hassan, AIP Conference Proceedings, 1660, 070036 (2015)

505. Characteristics of titanium dioxide nanostructures synthesized via electrochemical anodization at different applied voltages
Y.L. Cheong, F.K Yam, Z. Hassan, AIP Conference Proceedings, 1660, 070033 (2015)

506. Fabrication of porous anodic alumina using normal anodization and pulse anodization
Ing Khang Chin, Fong Kwong Yam, Zainuriah Hassan, AIP Conference Proceedings, AIP Conf. Proc. 1660, 070020 (2015)

507. Synthesis of nanocrystalline CdS thin films via microwave-assisted chemical bath deposition for highly photosensitive and rapid response photodetectors
M. Husham and Z. Hassan, Journal of Nanoelectronics and Optoelectronics, 10, 1-7 (2015)

508. Pt-decorated GaN nanowires with significant improvement in H2 gas-sensing performance at room temperature
Q. N. Abdullah, F. K. Yam, Z. Hassan, M. Bououdina, Journal of Colloid and Interface Science, 135-145 (2015)

509. Structural and photoluminescence studies of rutile TiO_2 nanorods prepared by CBD method on Si substrates
Abbas M. Selman and Z. Hassan, American Journal of Materials Science, 5(3B), 16-20 (2015)

510. An investigation of sol-gel spin coating growth of wurtzite GaN thin film on 6H-SiC substrate
C.Y. Fong, S.S. Ng, F.K. Yam, H. Abu Hassan, Z. Hassan, Journal of Crystal Growth, 413, 1–4 (2015)

511. Quantitative analysis of morphological and photoluminescence properties of porous anodic alumina formed in sulfuric acid
I. K. Chin, F. K. Yam, Y. Chai, Z. Hassan, Journal of Porous Materials, 22, 1375-1382 (2015)

512. Effect of nanosecond laser dicing on the mechanical strength and fracture mechanism of ultrathin Si dies with Cu stabilization layer
Michael Raj Marks, Zainuriah Hassan, Kuan Yew Cheong, IEEE Transactions on Components, Packaging and Manufacturing Technology, 5(12), 1885-1897 (2015)

513. CuS p-type thin film characteristics for different copper to sulphur molar ratios for light emitting diode application
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Hiba S. Rasheed, Journal of Scientific Research and Development, 2(13), 95-99 (2015)

514. Formation of scandium nitride (ScN) layer on gallium arsenide (GaAs) substrate using a combined technique of e-beam evaporator and ammonia annealing treatment
Alvin Yong Shee Meng, Norzaini Zainal, Zainuriah Hassan, Kamarulazizi Ibrahim, Applied Surface Science, 359, 589-592 (2015)

515. Rapid formation of zinc oxide nanosheets on titanium dioxide nanotubes through electrochemical method
S. W. Ng, F. K. Yam, Z. Hassan, Source of the Document Optoelectronics and Advanced Materials, Rapid Communications, 9, 1429-1434 (2015)

516. Fabrication of titanium dioxide nanotubes in fluoride-free electrolyte via rapid breakdown anodization
Y. L. Cheong, F. K. Yam, S. W. Ng, Z. Hassan, S. S. Ng, I. M. Low, Journal of Porous Materials, 22, 1437-1444 (2015)

517. Fabrication and characterization of metal-semiconductor-metal ultraviolet photodetector based on rutile TiO_2 nanorod
Abbas M. Selman and Z. Hassan, Materials Research Bulletin, 73, 29-37 (2016)

518. Effect of different EBL structures on deep violet InGaN laser diodes performance
Gh. Alahyarizadeh, M. Amirhoseiny, Z. Hassan, Optics & Laser Technology, 76, 106-112 (2016)

519. Structural and optical investigation of porous quaternary $Al_{0.10}In_{0.10}Ga_{0.80}N$ films produced via ultraviolet assisted photo-electrochemical etching in acidic solutions
Hock Jin Quah, Way Foong Lim, Zainuriah Hassan, Fong Kwong Yam, Norzaini Zainal, Journal of Alloys and Compounds, 662, 32-43 (2016)

520. Solvothermal preparation and characterization of ternary alloy CdS_xSe_{1-x} nanowires
M. A. Mahdi, A. Hmood, A. Kadhim, J. J. Hassan, S. J. Kasim, Z. Hassan, Optik - International Journal for Light and Electron Optics, 127, 1962-1966 (2016)

521. Characterization of V_2O_5 naorods grown by spray pyrolysis technique
N. M. Abd-Alghafour, Naser M. Ahmed, Z. Hassan, Sabah M. Mohammad, M. Bououdina, M. K. M. Ali, J Mater Sci: Mater Electron, DOI 10.1007/s10854-016-4338-3 (2016)

522. Effects of rapid thermal annealing on structural, chemical, and electrical characteristics of atomic-layer deposited lanthanum doped zirconium dioxide thin film on 4H-SiC substrate
Way Foong Lim, Hock Jin Quah, Qifeng Lu, Yifei Mu, Wan Azli Wan Ismail, Bazura Abdul Rahim, Siti Rahmah Esa, Yee Kee Kee, Ce Zhou Zhao, Zainuriah Hassan, Kuan Yew Cheong, Applied Surface Science, 365, 296-305 (2016)

523. Broadband anti-reflective properties of grown ZnO nanopyramidal structure on Si substrate via low-temperature electrochemical deposition
Mahmoud Alimanesh, Jalal Rouhi, Z. Hassan, Ceramics International, 42, 5136-5140 (2016)

524. Growth, morphological, structural, electrical and optical properties of nitrogen doped zinc oxide thin film on porous gallium nitride template
R. Perumal, Z. Hassan, International Journal of Engineering Sciences & Research Technology, 5(2), 907-914 (2016)

525. Catalyst-free growth of ZnO nanowires on ITO seed layer/glass by thermal evaporation method: Effects of ITO seed layer laser annealing temperature
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Superlattices and Microstructures, 92, 68-79 (2016)

526. Dependence of output emission wavelength and LD performance on barriers material and thickness
Gh. Alahyarizadeh, M. Amirhoseiny, Z. Hassan, Optik - International Journal for Light and Electron Optics, 127, 4815-4818 (2016)

527. Nanoporous gallium nitride through anisotropic metal-assisted electroless photochemical wet etching technique
R. Perumal, Z. Hassan, Surface Review and Letters, 23, 1550106 (2016)

528. Effect of nitrogen doping on structural, morphological, optical and electrical properties of radio frequency magnetron sputtered zinx oxide thin films
R. Perumal, Z. Hassan, Physica B, 490, 16-20 (2016)

529. Large-scale uniform ZnO tetrapods on catalyst free glass substrate by thermal evaporation method
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Materials Research Bulletin, 79, 63-68 (2016)

530. Structural and optical studies of undoped porous GaN prepared by Pt-assisted electroless etching
Ainorkhilah Mahmood, Zainuriah Hassan, Naser Mahmoud Ahmed, Yam Fong Kwong, Chuah Lee Siang, marina Mokhtar, Nurul Huda Mohd Noor, Siti Azlina Rosli, Materials Science Forum, 846, 358-365 (2016)

531. Visible luminescence of nanoporous silicon using alternating current photo-assisted electrochemical etching for potential MSM photodetector
Ainorkhilah Mahmood, Zainuriah Hassan, Naser Mahmoud Ahmed, Allis Shahiri, Allan Farhanah Abd Rahim, Mohamad Syarizal Abdullah, Materials Science Forum, 846, 274-282 (2016)

532. Performance evaluation of titanium dioxide based dye-sensitized solar cells under the influence of anodization steps, nanotube length and ionic liquid-free redox electrolyte solvents
Y. L. Cheong, K. P. Beh, F. K. Yam, Z. Hassan, Superlattices and Microstructures, 94, 74-84 (2016)

533. Synthesis and characterization of nanocrystalline CdS thin films for highly photosensitive self-powered photodetector
Mohammed Husham, Zainuriah Hassan, Abass M. Selman, Eur. Phys. J. Appl. Phys. 74: 10101 DOI: 10.1051/epjap/2016150414 (2016)

534. Room Temperature Hydrogen Gas Sensing Characteristics of Porous Quaternary AlInGaN Film Prepared via UV-Assisted Photo-Electrochemical Etching
Hock Jin Quah, Naser Mahmoud Ahmed, Norzaini Zainal, Fong Kwong Yam, Zainuriah Hassan, Way Foong Lim, Superlattices and Microstructures, 95, 65-70 (2016)

535. Effects of annealing temperature on optical, morphological, and electrical characteristics of polyfluorene-derivative thin films on ITO glass substrate
Way Foong Lim, Hock Jin Quah, and Zainuriah Hassan, Applied Optics, 55, 1198-1205 (2016)

536. Porous Quaternary $Al_{0.1}In_{0.1}Ga_{0.8}N$ Film Formation via Photoelectrochemical Etching in HF:C2H5OH Electrolyte
Way Foong Lim, Hock Jin Quah, Zainuriah Hassan, Rosfariza Radzali, Norzaini Zainal, Fong Kwong Yam, Journal of the American Ceramic Society, 1-7 DOI: 10.1111/jace.14241 (2016)

537. Structural and optical properties of Si-doped $Al_{0.08}In_{0.08}Ga_{0.84}N$ thin films grown on different substrates for optoelectronic devices
Alaa Jabbar Ghazai, Haslan Abu Hassan, Zanuri Bint Hassan, Superlattices and Microstructures, 95, 95-107 (2016)

538. Fabrication of a highly flexible low-cost H_2 gas sensor using ZnO nanorods grown on an ultra-thin nylon substrate
Sabah M. Mohammad, Z. Hassan, Rawnaq A. Al-Yahya, Naser M. Ahmed, Mohammed A. Al-Azawi, Nabeel M. Abd-Alghafour, C. W. Chin, N. H. Al-Hardan, Journal of Materials Science: Materials in Electronics, DOI 10.1007/s10854-016-4993-4 (2016)

539. Structural, morphological and electrical properties of In-doped zinc oxide nanostructure thin films grown on p-type gallium nitride by simultaneous radio-frequency direct-current magnetron co-sputtering
R. Perumal, Z. Hassan, R. Saravanan, Chinese Physics Letters, 33, 066101-1 - 066101-4 (2016)

540. Surface alteration of planar p-type gallium nitride to porous structure using 50 Hz alternating current-assisted photoelectrochemical etching route
Way Foong Lim, Hock Jin Quah, Zainuriah Hassan, Naser Mahmoud Ahmed, Journal of The Electrochemical Society, 163, H642-H651 (2016)

541. Control growth of catalyst-free ZnO tetrapods on glass substrate by thermal evaporation method
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Ceramics International, 42, 13144-13150 (2016)

542. A high-sensitivity, fast-response, rapid-recovery UV photodetector fabricated based on catalyst-free growth of ZnO nanowire networks on glass substrate
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Optical Materials, 60, 30-37 (2016)

543. Free growth of one-dimensional β-Ga_2O_3 nanostructures including nanowires, nanobelts and nanosheets using a thermal evaporation method
Q. N. Abdullah, F. K. Yam, K. H. Mahmood, Z. Hassan, M. A. Qaeed, M. Buoudina, M. A. Almessiere, A. L. Alotiaibi, S. A. Abdulateef, Ceramics International, 42, 13343–13349 (2016)

544. Hydrothermal growth and characterization of vertically well-aligned and dense ZnO nanorods on glass and silicon using a simple optimizer system
Sabah M. Mohammad, Z. Hassan, Naser M. Ahmed, Rawnaq A. Talib, Nabeel M. Abd-Alghafour, A. F. Omar, AIP Conference Proceedings, 1733, 020032-1 – 020032-5; doi:10.1063/1.4948850 (2016)

545. CuS p-type thin film characterization deposited on Ti, ITO and glass substrates using spray pyrolysis deposition (SPD) for light emitting diode (LED) application
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Hiba S. Rasheed, Shrook A. Azzez, Nabeel Z. Al-Hazim, AIP Conference Proceedings, 1733, 020021-1 – 020021-5; doi:10.10633/1.4948839 (2016)

546. Characterization of ZnO/Cu/ZnO multilayers structure for solar cell devices
Hiba S. Rasheed, Z. Hassan, Naser M. Ahmed, Fayroz A. Sabah, Shrook A. Azzez, Nabeel Z. Al-Hazim, AIP Conference Proceedings, 1733, 020022-1 – 020022-5; doi:10.10633/1.4948840 (2016)

547. Simulation of optimum parameters for GaN MSM UV photodetector
Mohanad A. Alhelfi, Naser M. Ahmed, M. R. Hashim, Ali Amer Al-Rawi, Z. Hassan, AIP Conference Proceedings, 1733, 020028-1 – 020028-5; doi:10.10633/1.4948846 (2016)

548. Growth and characterization of V2O5 nanorods deposited by spray pyrolysis at low temperatures
N. M. Abd-Alghafour, Naser M. Ahmed, Zai. Hassan, Sabah M. Mohammad, AIP Conference Proceedings, 1733, 020026-1 – 020062-5; doi:10.10633/1.4948844 (2016)

549. Improved conductivity of indium-tin-oxide film through the introduction of intermediate layer
S. W. Ng, F. K. Yam, K. P. Beh, S. S. Tneh, Z. Hassan, Superlattices and Microstructures, 97, 202–211 (2016)

550. High figure of merit of the post-annealed Ti/Al/ITO transparent conductive contacts sputter deposited on n-GaN
Ahmad Hadi Ali, Zainuriah Hassan, Ahmad Shuhaimi, Journal of Alloys and Compounds, 681, 186-190 (2016)

551. Preparation of high quality Mg doped ZnO nanorod arrays with enhanced optical properties by MgO passivation

Shrook A. Azzez, Z. Hassan, J.J. Hassan, R. Perumal, Abbas M. Selman, M. Bououdina, Optik - International Journal for Light and Electron Optics, 127, 9250-9258 (2016)

552. Annealing effects on polycrystalline GaN using nitrogen and ammonia ambient
A. Ariff, N. Zainal, Z. Hassan, Superlattices and Microstructures, 97, 193-201 (2016)

553. Investigation of structural and optical properties of GaN on flat and porous silicon
Saleh H. Abud, Abbas M. Selman, Z. Hassan, Superlattices and Microstructures, 97, 586-590 (2016)

554. Characterization of V2O5 nanorods grown by spray pyrolysis technique
N. M. Abd-Alghafour, Naser M. Ahmed, Z. Hassan, Sabah M. Mohammad, M. Bououdina, M. K. M. Ali, Journal of Materials Science: Materials in Electronics, DOI 10.1007/s10854-016-4338-3 (2016)

555. Influence of solution deposition rate on properties of V2O5 thin films deposited by spray pyrolysis technique
N. M. Abd-Alghafour, Naser M. Ahmed, Zai. Hassan, Sabah M. Mohammad, AIP Conference Proceedings, 1756, 090010-1 – 090010-7; doi:10.10633/1.4958791 (2016)

556. Catalyst-free growth of ZnO nanowires on ITO seed/glass by thermal evaporation method: Effects of ITO seed layer thickness
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, AIP Conference Proceedings, 1756, 090004-1 – 090004-5; doi:10.10633/1.4958785 (2016)

557. High-performance p-n heterojunction photodetectors based on V_2O_5 nanorods by spray pyrolysis
N. M. Abd-Alghafour, Naser M. Ahmed, Z. Hassan, D. Abubakar, M. Bououdina, Applied Physics A, 122:817 DOI 10.1007/s00339-016-0346-7 (2016)

558. Influence of annealing duration on the growth of V_2O_5 nanorods synthesized by spray pyrolysis technique
N. M. Abd-Alghafour, Naser M. Ahmed, Z. Hassan, D. Abubakar, M. Bououdina, Surface Review and Letters, 23 (6), DOI 10.1142/S0218625X16500578 (2016)

559. Study effect of thin film thickness on the behavior of CuS egfet implemented as pH sensor
F. A. Sabah, N. M. Ahmed, Z. Hassan, M A. Almessiere, Digest Journal of Nanomaterials and Biostructures, 11(3), 1-8 (2016)

560. Rapid formation and evolution of anodized-Zn nanostructures in $NaHCO_3$ solution
C. F. Mah, K. P. Beh, F. K. Yam, Z. Hassan, ECS Journal of Solid State Science and Technology, 5(10), M105-M112 (2016)

561. Identification and characteristics of core-shell ZnO/ZnO:Mg nanorods synthesized by hydrothermal method
Shrook A. Azzez, Z. Hassan, J.J. Hassan, Journal of Materials Science: Materials in Electronics, DOI 10.1007/s10854-016-5394-4 (2016)

562. Sensitivity of CuS and CuS/ITO EGFETS implemented as pH sensors
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Naif H. Al-Hardan, Applied Physics A, 122:839 DOI 10.1007/s00339-016-0362-7 (2016)

563. Low-power UV photodetection characteristics of ZnO tetrapods grown on catalyst-free glass substrate
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Sensors and Actuators A: Physical, 250, 187-194 (2016)

564. High sensitivity extended gate effect transistor based on V_2O_5 nanorods

N. M. Abd-Alghafour, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, M. Bououdina, Naif H. Al-Hardan, Journal of Materials Science: Materials in Electronics, DOI 10.1007/s10854-016-5669-9 (2016)

565. Fabrication and characterization of V_2O_5 nanorods based metal-semiconductor-metal photodetector
N. M. Abd-Alghafour, Naser M. Ahmed, Z. Hassan, Sensors and Actuators A: Physical, 250, 250-257 (2016)

566. Effect of light on the sensitivity of CuS Thin Film EGFET implemented as pH sensor
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, International Journal of Electrochemical Science, 11, 4380-4388 (2016)

567. High performance CuS p-type thin film as a hydrogen gas sensor
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Hiba S. Rasheed, Sensors and Actuators A: Physical, 249, 68-76 (2016)

568. Behavior of etching process on formation of porous polycrystalline GaN layer through electroless etching
M. Ikram Md Taib, N. Zainal, Z. Hassan and M. Abu Bakar, ECS Journal of Solid State Science and Technology, 5, P584-P589 (2016)

569. A comparative study of violet InGaN double quantum well lasers with 1.89 and 0.80 eV InN bandgap energies
G. Alahyarizadeh, M. Amirhoseiny, R. Rahmani and Z. Hassan, Lasers in Engineering 34,183-199 (2016)

570. Effects of concentration and substrate type on structure and conductivity of p-type CuS thin films grown by spray pyrolysis deposition
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Journal of Electronic Materials, DOI: 10.1007/s11664-016-4896-4 (2016)

571. Effect of annealing on the electrical properties of Cu_xS thin films
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Hiba S. Rasheed, Procedia Chemistry, 19, 15-20 (2016)

572. Investigation and characterization of ZnO nanostructures synthesized by electrochemical deposition
C. F. Mah, F. K. Yam, Z. Hassan, Procedia Chemistry, 19, 83-90 (2016)

573. Fabrication of tungsten oxide nanostructure by sol-gel method
Y. Chai, F. Y. Ha, F. K. Yam, Z. Hassan, Procedia Chemistry, 19, 83-90 (2016)

574. Catalytic growth of one-dimensional single-crystalline ZnO nanostructures on glass substrate by vapor transport
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Ceramics International, 43, 610-616 (2017)

575. Using deionized water with ethanol as a solvent of CuS EGFET as pH sensor
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, Materials Science Forum, 886, 37-41 (2017)

576. Deposition of a polycrystalline GaN layer on a porous Si/Si substrate by an electron beam evaporator with a successive ammonia annealing treatment
M.E.A. Samsudin, N. Zainal, Z. Hassan, Journal of Alloys and Compounds, 690, 397-402 (2017)

577. Effects of ammonia-ambient annealing on physical and electrical characteristics of rare earth CeO_2 as passivation film on silicon
Way Foong Lim, Hock Jin Quah, Zainuriah Hassan, Yam Fong Kwong, Naser Mahmoud Ahmed, Journal of Alloys and Compounds, 695, 3104-3115 (2017)

578. Influences of substrate type on the pH sensitivity of CuS thin films EGFET prepared by spray pyrolysis deposition
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, Materials Science in Semiconductor Processing, 63, 269-278 (2017)

579. Growth mechanism of seed/catalyst-free zinc oxide nanowire balls using intermittently pumped carrier gas: Synthesis, characterization and applications
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Husnen R. Abd, Optical Materials, 67, 70-77 (2017)

580. Laser-induced solution combustion of nano-$Y_{2.96}Al_5O_{12}$:0.04Ce phosphors and their fluorescent properties for white light conversion
Husnen R. Abd, Z. Hassan, Naser M. Ahmed, A. F. Omar, Forat H. Alsultany, Y.Yusof, Journal of Alloys and Compounds, 711, 42-50 (2017)

581. Sensitivity of CuS membrane pH sensor with and without MOSFET
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, Naif H. Al-Hardan, The Journal of The Minerals, Metals & Materials Society (JOM), 69 (7), DOI: 10.1007/s11837-016-2165-x (2017)

582. Electrochemical growth of controlled tip shapes of ZnO nanorod arrays on silicon substrate and enhanced photoluminescence emission from nanopyramid arrays compared with flat-head nanorods
Mahmoud Alimanesh, Z. Hassan, Norzaini Zainal, Optical Materials, 72, 276-282 (2017)

583. A comparative study of InN growth on quartz, silicon, c-sapphire and bulk GaN substrates by RF magnetron sputtering
Umar Bashir Ganie, Zainuriah Hassan, Naser M. Ahmed, Journal of Materials Science: Materials in Electronics, 28:9228-9236, DOI: 10.1007/s10854-017-6657-4 (2017)

584. A novel CuS thin film deposition method by laser-assisted spray photolysis deposition and its application to EGFET
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere Sensors and Actuators B: Chemical, 247, 197-215 (2017)

585. Effect of ferrocene catalyst particle size on structural and morphological characteristics of carbon nanotubes grown by microwave oven
Natheer Ali Algadri, K. Ibrahim, Z. Hassan, M. Bououdina, Journal of Materials Science, 52, 12772-12782 (2017)

586. Cost-effective single-step carbon nanotube synthesis using microwave oven
Natheer Ali Algadri, K. Ibrahim, Z. Hassan, M. Bououdina, Materials Research Express, 4 (8), 085602 (2017)

587. Effect of temperature on hydrothermally grown high-quality single-crystals Mg-doped ZnO nanorods for Light-Emitting Diode Application.
Shrook. A. Azzez, Z. Hassan, J.J. Hassan, Mukhlif M. S., Mohamed S. Mahdi, M. Bououdina, Journal of Luminescence, 192, 634-643 (2017)

588. Sputtered growth of high mobility InN thin films on different substrates using Cu-ZnO buffer layer
Umar Bashir, Zainuriah Hassan, Naser M. Ahmed, Ammar Oglat, A. S. Yusof, Materials Science in Semiconductor Processing, 71, 166-173 (2017)

589. Fabrication of Cu_2O nanocrystalline thin films photosensor prepared by RF sputtering technique
Abbas M. Selman, M. A. Mahdi, Z. Hassan, Physica E, 94, 132-138 (2017)

590. Influences of elevated thermal decomposition of ammonia gas on indium nitride grown by sol-gel spin coating method
Zhi Yin Lee, Sha Shiong Ng, Fong Kwong Yam, Zainuriah Hassan, Materials Research Bulletin, DOI: 96, 258-261 (2017)

591. The effect of ecthing duration on structural properties of porous Si fabricated by a new two-steps alternating current photo-assisted electrochemical etching (ACPEC) technique for MSM photodetector
Rosfariza Radzali, Muhammad Zulhilmi Zakariah, Ainorkhilah Mahmood, Alhan Farhanah Abd Rahim, Zainuriah Hassan, Yushamdan Yusof, AIP Conference Proceedings, 1875, 020003 (2017)

592. Fabrication and characterization of AlN metal–insulator–semiconductor grown Si substrate
A. Mahyuddin, A. Azrina, M. Z. Mohd Yusoff, Z. Hassan, Modern Physics Letters B, 1750313 (2017)

593. Influence of CuS membrane annealing time on the sensitivity of EGFET pH sensor
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, Materials Science in Semiconductor Processing, 71, 217-225 (2017)

594. High sensitivity extended gate effect transistor based on V2O5 nanorods
N. M. Abd-Alghafour, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, M. Bououdina, Naif H. Al-Hardan, Journal of Materials Science: Materials in Electronics, 28 (2), 1364-1369 (2017)

595. Effect of deposition time on the characteristics of chemically bath deposited nanocrystalline CdS thin films and photodetection properties
M. Husham, Mohd Nizar Hamidon, Z Hassan, Ahmad A. Al-Dulaimi, Journal of Nanoelectronics and Optoelectronics, 12, 1-9 (2017)

596. Photo-electrochemicaly synthesized light emitting nanoporous silicon based UV photodetector: Influence of current density
Asad A Thahe, Noriah Bidin, Z Hassan, Hazri Bakhtiar, M. A. Qaeed, Mohamed Bououdina, Naser M. Ahmed, Zainal A Talib, Mohammed A Al-Azawi, Hasan Alqaraghuli, M B Uday, Omar Hamad Ahmed, Materials Research Express, 4, 116203 (2017)

597. Nano-crystalline lead sulphide thin films using the chemical bath deposition: Synthesis and characterization
M. Husham, Z. Hassan, Ahmed A. Al-Dulaimi, Science Letters 11(2), 11-14 (2017)

598. Effects of coating cycles on spin-coated indium nitride films
Zhi Yin Lee, Sha Shiong Ng, Fong Kwong Yam, Zainuriah Hassan, Surface Engineering, DOI: 10.1080/02670844.2017.1376832, 34 (7), 554-561 (2018)

599. Effects of ZnO seed layer thickness on catalyst-free growth of ZnO nanostructures for enhanced UV photoresponse
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Nezar G Elafadill, Hassnen R. Abd, Optics and Laser Technology, 98, 344-353 (2018)

600. Fabrication and characterization of copper doped zinc oxide by using co-sputtering technique

Ahmad Sauffi Yusof, Zainuriah Hassan, Norzaini Zainal, Materials Research Bulletin, 97, 314-318 (2018)

601. Effect of annealing time of YAG: Ce^{+3} phosphor on white light chromaticity values
Husnen R. Abd, Z. Hassan, Naser M. Ahmed, Munirah Abdullah Almessiere, A. F. Omar, Forat H. Alsultany, Fayroz A. Sabah, Ummu Shuhada Osman, Journal of Electronic Materials, DOI 10.1007/s11664-017-5968-9, 47 (2), 1638-1646 (2018)

602. An improved three-point bending test method for the investigation of nanosecond laser dicing of ultrathin Si dies with Cu stabilization layer
Michael Raj Marks, Kuan Yew Cheong, Zainuriah Hassan, Materials Characterization, 136, 29-40 (2018)

603. Enhancement of optical transmittance and electrical resistivity of post-annealed ITO thin films RF sputtered on Si
Ahmad Hadi Ali, Zainuriah Hassan, Ahmad Suhaimi, Applied Surface Science, 443, 544-547 (2018)

604. High performance nanoporous silicon-based UV photodetectors
Asad A. Thahe, Hazri Bakhtiar, Noriah Bidin, Z Hassan, M. A. Qaeed, Asmiet Ramizy, Zainal A. Talib, Naser M. Ahmed, Khalid Omar, Hasan Alqaraghuli, M. Husham, Nageh K. Allam, Optik – International Journal for Light and Electron Optics, 168, 424-431 (2018)

605. Influence of ammonia flow rate for improving properties of polycrystalline GaN
A. Ariff, M. A. Ahmad, Z. Hassan, N. Zainal, Superlattices and Microstructures, 118, 130-136 (2018)

606. Good optical quality $In_xGa_{1-x}N$ thin films grown on Si(111) by plasma-assisted molecular beam epitaxy
A. Ramizy, M. G. Hammed, M. H. Al-Jumaili, Z. Hassan, Journal of Non-Oxide Glasses, 10(2), 43-48 (2018)

607. Growth and characterization of GaN nanostructures under various ammoniating time with fabricated Schottky gas sensor based on Si substrate
Q. N. Abdullah, A. R. Ahmed, A. M. Ali, F. K. Yam, Z. Hassan, M. Bououdina, M. A. Almessiere, Superlattices and Microstructures, 117, 92-104 (2018)

608. Photoelectrochemical ultraviolet photodetector by anodic titanium dioxide nanotube layers
Siowwoon Ng, Fong Kwong Yam, Siti Nurfarhana Sohimee, Khi Poay Beh, Sau Siong Tneh, Yuit Ling Cheong, Zainuriah Hassan, Sensors and Actuators A, 279, 263-271 (2018)

609. Porous formation in p-type gallium nitride films via 50 Hz operating alternating current-assisted photo-electrochemical etching in methanol-sulfuric acid solution
Way Foong Lim, Zainuriah Hassan, Naser Mahmoud Ahmed, Hock Jin Quah, Journal of The Electrochemical Society, 165 (10), H620-H628 (2018)

610. Structural, electrical and optical properties of sputtered-grown InN films on ZnO buffered silicon, bulk GaN, quartz, and sapphire substrates
Umar Bashir Ganie, Zainuriah Hassan, Naser M. Ahmed, Naveed Afzal, Journal of Electronic Materials, 47 (8), 4875-4881 (2018)

611. Photophysical performance of radio frequency sputtered Pt/n-PSi/ZnO NCs/Pt photovoltaic photodetectors
Asad A. Thahe, Hazri Bakhtiar, Basant Ali, Z Hassan, Nroiah Bidin, Mohamed Bououdina, M. A. Qaeed, Asmiet Ramizy, Zainal A. Talib, Mohammed A. Al-Azawi, Hasan Alqaraghuli, M. B. Uday, Asmiet Ramizy, M. S. Al-Ghamdi, Dauda Abubakar, Nageh K. Allam, Optical Materials, 84, 830-842 (2018)

612. Influence of growth temperature and duration on different properties of ultra-long ZnO nanorods grown by modified chemical bath deposition method
Sabah M. Mohammad, Nabeel M. Abd-Alghafour, Rawnaq Talib, Zainuriah Hassan, Naser M. Ahmed, A Abuelsamen, Naveed Afzal, Materials Research Express, 5, 095020 (2018)

613. A high sensitivity hydrogen gas sensor based on carbon nanotubes fabricated on glsass substrate
Natheer A. Algadri, Z. Hassan, K. Ibrahim, Ahmad M. Al-Diabat, Journal of Electronic Materials, 47(11), 6671-6680 (2018)

614. Effect of annealing temperature on growth particles of YAG: Ce+3 phosphor and white light chromaticity values
H. R. Abd, Z. Hassan, N. M Ahmed, A. F. Omar, F. H. Alsultany, IOP Conf. Series: Journal of Physics, 1083, 012021 (2018)

615. Seed/Catalyst-Free Growth of ZnO Nanoleaves on ZnO Seed Layer/Glass by Thermal Evaporation Method
F. H. Alsultany, Z. Hassan, N. M. Ahmed, H. R. Abd, IOP Conf. Series: Journal of Physics, 1083, 12037 (2018)

616. Fabrication and characterization of Cu-doped ZnO films using RF reactive magnetron sputtering
A. S. Yusof, Z. Hassan, IOP Conf. Series: Journal of Physics, 1083, 12062 (2018)

617. Effect of different UV light intensity on porous silicon fabricated by using alternating current photo-assisted electrochemical etching (ACPEC) technique
Siti Nurfarhana Sohimee, Zainuriah Hassan, Naser Mahmoud Ahmed, Lim Way Foong, Quah Hock Jin, IOP Conf. Series: Journal of Physics, 1083, 12034 (2018)

618. Optical Properties and UV Sensing Response of Nitrogen-doped TiO2 Thin Film by CVD
Siowwoon Ng, Sau Siong Tneh, Fong Kwong Yam, Zainuriah Hassan, IOP Conf. Series: Journal of Physics, 1083, 12025 (2018)

619. pH Sensing Characteristics of CuS/ZnO Thin Film Implemented as EGFET
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, IOP Conf. Series: Journal of Physics, 1083, 12055 (2018)

620. Hydrothermal Synthesis and Structural Properties of V2O5 Nanoflowers at Low Temperatures
N.M. Abd-Alghafour, Naser. M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, IOP Conf. Series: Journal of Physics, 1083, 12036 (2018)

621. Optical and structural properties of curcuminoids extracted from Curcuma longa L. for hybrid white light diode
M. Al Shafouri, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, Maadh Jumaah, Eur. Phys. J. Appl. Phys., 84, 10501 (2018)

622. The effect of the wavelength of the LED used to pump phosphor curcuminoids dye extracted from turmeric (Curcuma Longa L.) to produce white light
M. Al Shafouri, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, IOP Conf. Series: Materials Science and Engineering, 454, 012048 (2018)

623. Sol-gel-derived gallium nitride thin films for ultraviolet photodetection

Chee Yong Fong, Sha Shiong Ng, Nurfahana Mohd Amin, Fong Kwong Yam, Zainuriah Hassan, Microelectronics International, DOI: 10.1180/MI-12-2017-0074 (2019)

624. Effect grinding of graphite on structural and morphological haracteristics of carbon nanotubes grown by microwave oven
Natheer A. Algadri, Zainuriah Hassan, Kamarulazizi Ibrahim, Mohamed Bououdina, Solid State Phenomena, 290, 122-126 (2019)

625. Aluminum nitride thin films grown by sol-gel spin coating technique

Nurul Atikah Mohd Isa, Sha Shiong Ng, Zainuriah Hassan, Solid State Phenomena, 290, 137-141 (2019)

626. Fabrication of $In_xGa_{1-x}N$/GaN multi-quantum well structure for green light emitting diode on patterned sapphire substrate by metal organic chemical vapour deposition
Shamsul Amir Abdul Rais, Hayatun Najihah, Zainuriah Hassan, Ahmad Shuhaimi, Solid State Phenomena, 290, 147-152 (2019)

627. Growth temperature dependence of sol-gel spin coated indium nitride thin films
Zhi Yin Lee, Sha Shiong Ng, Fong Kwong Yam, Zainuriah Hassan, Solid State Phenomena, 290, 153-159 (2019)

628. Chromaticity study of curcumin dye extracted from Curcuma longa L. using for UV Light down conversion for white light emitting diode
Mahmood Al Shafouri, Naser Mahmoud Ahmed, Zainuriah Hassan, Munirah Abdullah Almessiere, Solid State Phenomena, 290, 183-189 (2019)

629. A two-step growth route of ternary aluminium doped zirconium oxide film on silicon
Hock Jin Quah, Zainuriah Hassan, Way Foong Lim, Journal of Alloys and Compounds, 777, 736-748 (2019)

630. Structural and optical properties of AlN/GaN and AlN/AlGaN/GaN thin films on silicon substrate prepared by plasma assisted molecular beam epitaxy (MBE)
Ho Xin Jing, Che Azurahanim Che Abdullah, Mohd Zaki Mohd Yusoff, Azafeerah Mahyuddin, Zainuriah Hassan, Results in Physics, 12, 1177-1181 (2019)

631. Ce-doped YAG phosphor powder synthesized via microwave combustion and its application for white LED
Husnen R. Abd, Zainuriah Hassan, Naser M Ahmed, Forat H. Alsultany, Ahmad F. Omar, Opt. Eng. 58(2), 027110, doi: 10.1117/1.OE.58.2.027110 (2019)

632. Investigation of sintering temperature and Ce^{3+} concentration in YAG:Ce phosphor powder prepared by microwave combustion for white-light-emitting diode luminance applications
Z. Hassan, Husnen R. Abd, Forat H. Alsultany, A. F. Omar, Naser M. Ahmed, Materials Chemistry and Physics, 229, 22-31 (2019)

633. Catalytic growth of 1D ZnO nanoneedles on glass substrates through vapor transport
Forat H. Alsultany, Hasan Sh. Majdi, Husnen R. Abd, Z. Hassan, Naser M. Ahmed, Journal of Electronic Materials, doi.org/10.1007/s11664-018-06853-5 (2019)

634. Fracture strength and microstructural study of ultrathin Si die with Cu backside layer diced with picosecond laser
Michael Raj Marks, Kuan Yew Cheong, Zainuriah Hassan, Materials Science & Engineering A, 759, 785-796 (2019)

635. Improving polycrystalline GaN by controlling annealing temperature of ScN interlayer
Y. S. M. Alvin, M. E. A. Samsudin, M. Ikram Md Taib, Z. Hassan, N. Zainal, Materials Research Express, 6, 066403 (2019)

636. Structural, morphological, optical, and gas sensing characteristics of ultraviolet-assisted photoelectrochemical etching derived AlInGaN nano-spikes
Way Foong Lim, Zainuriah Hassan, Hock Jin Quah, Journal of Materials Research and Technology, 8(3), 2767-2776 (2019)

637. Optimization of precursor concentration for the fabrication of V_2O_5 nanorods and their MSM photodetector on silicon substrate
N. M. Abd-Alghafour, Sabah M. Mohammed, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, Naveed Afzal, M. Bououdina, Journal of Electronic Materials, doi.org: 10.1007/s11664-019-07390-5 (2019)

638. Passivation of silicon substrate using two-step grown ternary aluminium doped zirconium oxide
Hock Jin Quah, Zainuriah Hassan, Way Foong Lim, Applied Surface Science, 493, 411-422 (2019)

639. Study of efficient semipolar (11-22) InGaN gren micro-light-emitting-diodes on high-quality (11-22) GaN/sapphire template
Hongjian Li, Matthew S. Wong, Michel Khoury, Bastien Bonef, Haojum Zhang, Yichao Chow, Panpan Li, Jared Kearns, Aidan A. Taylor, Philippe De Mierry, Zainuriah Hassan, Shuji Nakamura, Steven P. Denbaars, Optics Express, 27 (17), 24154-24160 (2019)

640. A novel porous silicon multi-ions selective electrode based extended gate field effect transistor for sodium, potassium, calcium, and magnesium sensor
E. A. Kabaa, S. A. Abdulateef, Naser M. Ahmed, Z. Hassan, Fayroz A. Sabah, Applied Physics A, doi.org: 10.1007/s00339-019-3056-0 (2019)

641. Fabrication of AlN/GaN MSM photodetector with platinum as schottky contacts
Mohd Zaki Mod Yusoff, Azzafeerah Mahyuddin, Zainuriah Hassan, Materials Research Express, 6 (11), 115913 (2019)

642. Development of novel thin film solar cells: Design and Numerical Optimisation
Sidi Ould Saad Hamady, Nicolas Fressengeas, Christtyves Chevallier, Queny Kieffer, Zainuriah Hassan, Mohd Anas Ahmad, Way Foong Lim, Sha Shiong Ng, Journal of Physical Science, 30(2), 199-205 (2019)

643. Effects of Ultraviolet-Assisted Electrochemical Etching Current Densities on Structural and Optical Characteristics of Porous Quaternary AlInGaN Alloys
Hock Jin Quah, Way Foong Lim, Zainuriah Hassan, Rosfariza Radzali, Norzaini Zainal, Fong Kwong Yam, Arabian Journal of Chemistry, 12, 3417-3430 (2019)

644. Metal oxide-based heterojunction thin films for solar cell applications
Z. Hassan, M. S. M. Saheed and A. S. Yusof, 2019 International Energy and Sustainability Conference (IESC), Farmingdale, NY, USA, 1-5, DOI: 10/1109/IESC47067.2019.8976643 (2019)

645. Enhanced white light luminescence of Ce3+-activated Y3Al5O12 phosphors powder synthesized via continuous wave (CW) CO2 laser-assisted combustion
Z. Hassan, H. R. Abd and N. M. Ahmed, 2019 International Energy and Sustainability Conference (IESC), Farmingdale, NY, USA, 1-7, DOI: 10/1109/IESC47067.2019.8976584 (2019)

646. Synthesis of architectural-cubic porous silicon by electroless stain etching in V_2O_5 and HF solution
L. H. Slewa, T. A. Abbas, N. M. Ahmed, Z. Hassan, Silicon, 12 (7), 1761-1768, doi.org/10.1007/s12633-019-00265-8 (2020)

647. Simultaneous two-step assisted growth of aluminium zirconium oxide from Al-Zr films
Hock Jin Quah, Zainuriah Hassan, Way Foong Lim, Ceramics International, 46, 297-306 (2020)

648. High temperature growth of aluminium doped zirconium oxide via post-sputter oxidation of Al-Zr films with different composition
Way Foong Lim, Zainuriah Hassan, Hock Jin Quah, Journal of Alloys and Compounds, 813, 152206 (2020)

649. Performance of polycrystalline GaN based metal-semiconductor-metal (MSM) photodetector with different contact
N. Zainal, M. A. Ahmad, W. Maryam, M. E. A. Samsudin, S. N. Waheeda, M. Ikram Md Taib, Z. Hassan, Superlattices and Microstructures, 138, 106369 (2020)

650. Effect of substrates on structural, morphological, optical and electrical characteristics on poly (9,9-di-n-octylfluorenyl-2,7-diyl) (PFO) thin films
Suvindraj a/l Rajamanickam, Sabah M. Mohammad, Z. Hassan, ECS Journal of Solid State Science and Technology, 9, 026002 (2020)

651. Mechanism study of SiO_2 layer formation and separation at the Si die sidewall during nanosecond laser dicing of ultrathin Si Wafers with Cu backside layer
Michael Raj Marks, Foo Khong Yong, Kuan Yew Cheong, Zainuriah Hassan, Applied Physics A, 26:138, doi.org/10.1007/s00339-020-3322-1 (2020)

652. Assessment of structural, morphological and optical properties of ZnO thin films grown by physical and chemical techniques
R. Perumal, S. Thanikaikarasan, Z. Hassan, V. Vijayan, Materials Today: Proceedings, 21, 1022-1025 (2020)

653. The effect of needle diameter on optical properties and morphological structure of La_2O_3-PVA phosphor nanofibers prepared by electrospinning method
Hasma A. Wahab, Z. Hassan, Naser M. Ahmed, Solid State Phenomena, 3011, 18-26 (2020)

654. Morphological and structural properties of sol-gel derived ZnO thin films spin-coated on different substrates
Nabihah Kasim, Zainuriah Hassan, Way Foong Lim, Sabah M. Mohammad, Hock Jin Quah, Solid State Phenomena, 3011, 35-42 (2020)

655. Study of the effect of injection currents on white light emission of Ce-doped YAG phosphor powder prepared by microwave combustion
Husnen R. Abd, Z. Hassan, Naser M. Ahmed, A. F. Omar, Khai Shenn Lau, Forat H. Alsultany, Solid State Phenomena, 3011, 60-68 (2020)

656. Synthesis and characterization of YAG:Ce phosphor by microwave induced combustion synthesis with different fuel sources
Khai Shenn Lau, Zainuriah Hassan, Way Foong Lim, Hock Jin Quah, Naser M Ahmed, Husnen R. Abd, Solid State Phenomena, 3011, 69-76 (2020)

657. Chromaticity properties of curcuminoids dye nanofibers prepared by electrospiing for white light down-conversion
M. Al Shafouri, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, Solid State Phenomena, 3011, 77-84 (2020)

658. Effect of microwave time on the structural and luminescence properties of YAG:Ce prepared by microwave solution combustion (MSC) synthesis
Khai Shenn Lau, Zainuriah Hassan, Way Foong Lim, Sabah M. Mohammad, Hock Jin Quah, Optik, 212, 164437 (2020)

659. Dual step grown ternary aluminium zirconium oxide and its characteristics for metal-oxide-semiconductor capacitor
Way Foong Lim, Zainuriah Hassan, Hock Jin Quah, Ceramics International, 46, 10416-10424 (2020)

660. Effect of annealing temperature on physical and electrical properties of solution-processed polycrystalline $In_2Ga_2ZnO_7$ thin film
Nabihah Kasim, Zainuriah Hassan, Way Foong Lim, Hock Jin Quah, Journal of Materials Science: Materials in Electronics, doi.org/10.1007/s10854-020—03516-2 (2020)

661. Surface passivation via two-step grown ternary nitrogen infused oxidation derived quaternary $Al_xZr_{1-x}O_yN_z$
Hock Jin Quah, Way Foong Lim, Zainuriah Hassan, Materials Letters, 276, 128175 (2020)

662. Enhancing performance of porous Si-doped GaN based MSM photodetector using 50 Hz ACPEC
Ainorkhilah Mahmood, Zainuriah Hassan, Alhan Farhanah Abd Rahim, Rosfariza Radzali, Mahayatun Dayana Johan Ooi, Naser Mahmoud Ahmed, Journal of Physics: Conference Series, 1535, 012006 (2020)

663. Fabrication and characterization of light emitting diode based on n-ZnO nanorods grown via a low-temperature
Sabah M. Mohammad, Nabeel M. Abd-Alghafour, Zainuriah Hassan, Naser M. Ahmed, Amal Mohamed Ahmed Ali, Raed Abdalrheem, Mundzir Abdullah, Journal of Physics: Conference Series, 1535, 012009 (2020)

664. On the investigations of chip-on-board ultra-violet sensor by screen printing of GaN powder
Khi Poay Beh, Nurul Liyana Kamarulakmal, Nabihah Rasiman, Raed Abdalrheem, Muttakkha Umar, Fong Kwong Yam, Hwee San Lim, Zainuriah Hassan, Journal of Physics: Conference Series, 1535, 012015 (2020)

665. Fabrication of deep green light emitting diode on bulk gallium nitride substrate
Shamsul Amir bin Abdul Rais, Zainuriah Hassan, Ahmad Shuhaimi bin Abu Bakar, Muhammad Nazri bin Abdul Rahman, Yusnizam bin Yusuf, Muhamad Ikram bin Md Taib, Abdullah Fadil bin Sulaiman, Hayatun Najihah binti Hussin, Mohd Fairus bin Ahmad, Journal of Physics: Conference Series, 1535, 012016 (2020)

666. Reactive sputtering growth of indium nitride thin films on flexible substrate on flexible substrate under different substrate temperatures
S.A. Osman, S.S. Ng, Z. Hassan, Journal of Physics: Conference Series, 1535, 012029 (2020)

667. High-k $La_xCe_yO_z$ for passivation of Si substrate
Hock Jin Quah, Kuan Yew Cheong, Zainovia Lockman, Zainuriah Hassan, Way Foong Lim, Journal of Physics: Conference Series, 1535, 012030 (2020)

668. Effects of post-deposition annealing time in forming gas ambient on Y2O3 films deposited on silicon substrate
Way Foong Lim, Kuan Yew Cheong, Zainuriah Hassan, Hock Jin Quah, Journal of Physics: Conference Series, 1535, 012031 (2020)

669. Role of RF magnetron sputtering power on optical and electrical properties of ITO films on soda-lime glass substrates
R.I.M. Asri, N.A. Hamzah, M.A. Ahmad, M. Ikram Md Taib, S.M.S. Sahil, Z. Hassan, Journal of Physics: Conference Series, 1535, 012035 (2020)

670. Effect of post-annealing in oxygen environment on ITO thin films deposited using RF magnetron sputtering
N.A. Hamzah, R.I.M. Asri, M.A. Ahmad, M.A.A.Z. Md Sahar, S.N. Waheeda, Z. Hassan, Journal of Physics: Conference Series, 1535, 012036 (2020)

671. The growth of AlN single layer on sapphire at low pressure using metalorganic chemical vapor deposition (MOCVD)
Mohd Ann Amirul Zulffiqal Md Sahar, Zainuriah Hassan, Way Foong Lim, M.E.A. Samsudin, A.M. Hanafiah, Yusnizam Yusuf, M.A. Ahmad, Nur Atiqah Hamzah, Rahil Izzati Mohd Asri, Journal of Physics: Conference Series, 1535, 012042 (2020)

672. Comparative studies between porous silicon and porous p-type gallium nitride prepared using alternating current photo-assisted electrochemical etching technique
S.N. Sohimee, Z. Hassan, Naser M. Ahmed, R. Radzali, H.J. Quah, W.F. Lim, Journal of Physics: Conference Series, 1535, 012044 (2020)

673. Effect of varying thermal annealing temperatures on the surface and electrical properties of Mg-doped GaN
Noor Afifa Mohd Hanafiah, Zainuriah Hassan, Way Foong Lim, Norasmida Ibrahim, Ezzah Azimah Alias, Mohd Anas Ahmad, Nur Atiqah Hamzah, Rahil Izzati Mohd Asri, Journal of Physics: Conference Series, 1535, 012045 (2020)

674. Characteristics of Cu-doped ZnO films prepared using magnetron co-sputtering
A.S. Yusof, Z. Hassan, Journal of Physics: Conference Series, 1535, 012047 (2020)

675. Luminescence characteristics of hybridized polyfluorene
Farah Hayati Ahmad, Zainuriah Hassan, Hock Jin Quah, Way Foong Lim, Journal of Physics: Conference Series, 1535, 012055 (2020)

676. Ultraviolet luminescence from flowers-like n-ZnO nanorods/p-GaN light-emitting diode fabricated by modified chemical bath deposition
Sabah M. Mohammad, Z. Hassan, Nabeel M. Abd-Alghafour, Amal Mohamed Ahmed Ali, Naser M. Ahmed, Amal Mohamed Ahmed Ali, Raed Abdalrheem, F. K. Yam, Naveed Afzal, Journal of Luminesence, 226, 117510 (2020)

677. Ce-doped YAG single crystals prepared by continuous (CW)-CO_2 laser combustion technique with attractive characteristics and moderate white LED performance
Husnen R. Abd, Z. Hassan, Naser M. Ahmed, S. M. Thahab, Forat H. Alsultany, A. F. Omar, Optics and Laser Technology, 132, 106506 (2020)

678. Effect of zinc acetate dihydrate concentration on morphology of ZnO seed layer and ZnO nanorods grown by hydrothermal method
Suvindraj Rajamanickam, Sabah M. Mohammad, Z. Hassan, Colloid and Interface Science Communications, 38, 100312 (2020)

679. Laser annealing enhanced the photophysical performance of Pt/n-Psi/ZnO/Pt-based photodetectors
Asad A. Thahe, Basant A. Ali, Hazri Bakhtiar, M. B. Uday, Z. Hassan, MB Uday, Mundzir Abdullah, M.A. Qaeed, Hasan Alqaraghuli, Hussein Abd Zaidan, Nageh K. Allam, Solid State Electronics, 171, 107821 (2020)

680. Preparation and characterization of aluminium zirconium oxide for metal-oxide-semiconductor capacitor
Hock Jin Quah, Zainuriah Hassan, Way Foong Lim, International Journal of Energy Research, doi.org/10.1002/er.5693 (2020)

681. Structural and optical properties of nanofibers prepared with electrospinning by using PMMA integrated with curcuminoids to produce white LED
M. Al Shafouri, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere, Fibers and Polymers, 21(8), 1733-1742 (2020)

682. Growth evolution and customized attributes of catalyst-free ZnO nanowires: role of varied Ar/O_2 flow rate
H. I. Abdulgafour, Naser M. Ahmed, Z. Hassan, F. K. Yam, A. Sulieman, J Mater Sci: Mater Electron, doi.org/10.1007/s10854-020-04298-3 (2020)

683. Comparative study of oxidizing ambient infused with varying nitrogen flow rates for fabrication of ternary nitride AlZrO based MOS capacitor
Hock Jin Quah, Zainuriah Hassan, Way Foong Lim, International Journal of Energy Research, doi.org/10.1002/er.6037 (2020)

684. Growth and characterization of ternary nitride $Hf_xTa_yO_z$ films via nitrogen-infused wet oxidation
N. M. Nashaain, S. Falina, Y. Kitabayashi, D. Matsumasa, A. A. Manaf, Z. Hassan, M. Syamsul, H. Kawarada, 4th IEEE Electron Devices Technology & Manufacturing Conference (EDTM), DOI:10.1009/EDTM47692.2020.9117897 (2020)

685. Reliability of 2 DEG diamond FET by harsh-continuous stress voltage approach
Hock Jin Quah, Farah Hayati Ahmad, Way Foong Lim, Zainuriah Hassan, ACS Omega, 5, 226347-26356 (2020)

686. Effect of etching time onto structural, morphological, and optical characteristics of quaternary AlInGaN films on Si substrate
Hock Jin Quah, Zainuriah Hassan, Way Foong Lim, Materials Science and Engineering B, 263, 114911 (2021)

687. Rapid synthesis of Ce^{3+}:YAG via CO_2 laser irradiation combustion method: Influence of Ce doping and thickness of phosphor ceramic on the performance of a white LED device
Husnen R. Abd, Z. Hassan, Naser M. Ahmed, A. F. Omar, S. M. Thahab, Khai Shenn Lau, Journal of Solid State Chemistry, 294, 121866 (2021)

688. Femtosecond laser dicing of ultra thin Si wafers with Cu backside layer – A fracture strength abd nicrostructural study

Michael Raj Marks, Kuan Yew Cheong, Zainuriah Hassan, Journal of Manufacturing Processes, 62, 859-872 (2021)

689. The dependence of indium incorporation on specified temperatures in growing InGaN/GaN heterostructure using MOCVD technique
A.S. Yusof, Z. Hassan, S. S. Ng, M. A. Ahmad, M. A. A. Z. Md Sahar, S. O. S. Hamady, C. Chevallier, Materials Research Bulletin, 137, 111176 (2021)

690. Novel SnO_2-coated β-Ga_2O_3 nanostructures for room temperature hydrogen gas sensor
Q. N. Abdullah, A. R. Ahmed, A. M. Ali, F. K. Yam, Z. Hassan, M. Bououdina, International Journal of Hydrogen Energy, 46, 7000-7010 (2021)

691. Tailoring $In_2Ga_2ZnO_7$ thin film properties by annealing time effect
Nabihah Kasim, Zainuriah Hassan, Way Foong Lim, Hock Jin Quah, Materials Chemistry and Physics, 262, 124281 (2021)

692. Effect of indium pre-flow on wavelength shift and crystal structure of deep green light emitting diodes
Shamsul Amir Abdul Rais, Zainuriah Hassan, Ahmad Shuhaimi Abu Bakar, Mohd Nazri Abd Rahman, Yusnizam Yusuf, Muhamad Ikram Md Taib, Abdullah Fadil Sulaiman, Hayatun Najiha Hussin, Mohd Fairus Ahmad, Mohd Natashah Norizan, Keiji Nagai, Yuka Akimoto, Dai Shoji, Optical Materials Express, 11(3), 926-935 (2021)

693. Effects of post-deposition annealing temperature in nitrogen/oxygen/nitrogen ambient on polycrystalline gallium oxide films
Puteri Haslinda Megat Abdul Hedei, Zainuriah Hassan, Hock Jin Quah, Applied Surface Science, 550, 149340 (2021)

694. Development of EGFET-based ITO pH sensors using epoxy free membrane
Naser M. Ahmed, Fayroz A. Sabah, Naif H. Al-Hardan, Munkrah A. ALmesserie, Sabah M. Mohammad, Way Foong Lim, Maadh Jumaah, A. K. M. Shafiqul Islam, Z. Hassan, Hock Jin Quah, Naveed Afzal, Semiconductor Science and Technology, 36(4), 045027 (2021)

695. Investigation on structural, morphological, optical, and current-voltage characteristics of polyfluorene with dissimilar composition spin coated on ITO
Farah Hayati Ahmad, Zainuriah Hassan, Way Foong Lim, Optik, 242, 167034 (2021)

696. Comparative studies of metal-organic decomposed $Ga_xCe_yO_z$ and CeO_2 based functional MOS capacitor
Kar Yeow Tan, Puteri Haslinda Megat Abdul Hedei, Ainita Rozati Mohd Zabidi, Farah Hayati Ahmad, Kammuttty Musliyarakath Abdul Shekker, Khai Shenn Lau, Way Foong Lim, Zainuriah Hassan, Hock Jin Quah, International Journal of Energy Research, 1-5, https://doi.org/10.1002/er.6952 (2021)

697. High conversion and quantum efficiency indium-rich p-InGaN/p-InGaN/n-InGaN solar cell
H. U. Manzoor, M. A. Md Zawawi, M. Z. Pakhuruddin, S. S. Ng, Z. Hassan, Physica B: Physics of Condensed Matter, 242, 413339 (2021)

698. Self-powered UV photodetector performance optimization based on Ag nanoparticles-encapsulated-ZnO nanorods by photo-deposition method

Sabah M. Mohammad, Suvindraj Rajamanickam, Z. Hassan, Mundzir Abdullah, A. R. Shafiqa, Abdulsalam Abuelsamen, Sensors and Actuators: A. Physical, 331, 113032 (2021)

699. Effects of V/III ratio of InGaN quantum well at high growth temperature for near ultraviolet light emitting diodes
Mohd Ann Amirul Zulffiqal Md Sahar, Zainuriah Hassan, Sha Shiong Ng, Way Foong Lim, Khai Shenn Lau, Ezzah Azimah Alias, Mohd Anas Ahmad, Nur Atiqah Hamzah, Rahil Izzati Mohd Asri, Microelectronics International, 38 (3), 119-126 (2021)

700. Effects of three-step magnesium doping in p-GaN layer on the properties of InGaN-based light-emitting diode
Nur Atiqah Hamzah, Mohd Anas Ahmad, Rahil Izzati Mohd Asri, Ezzah Azimah Alias, Mohd Ann Amirul Zulffiqal Md Sahar, Ng Sha Shiong, Zainuriah Hassan, Microelectronics International, 38(3), 127-134 (2021)

701. The role of growth temperature on the indium incorporation process for the MOCVD growth of InGaN/GaN heterostructures
Ahmad Sauffi Yusof, Zainuriah Hassan, Sidi Ould Saad Hamady, Sha Shiong Ng, Mohd Anas Ahmad, Way Foong Lim, Muhd Azi Che Seliman, Christyves Chevallier, Nicolas Fressengeas, Microelectronics International, 38(3), 105-112 (2021)

702. The effect of medium inhomogeneity in modeling underwater optical wireless communication
Safiey Sabril, Faezah Jasman, Wan Hafiza Wan Hassan, Zaiton A. Mutalip, Rosmiwati Mohd-Mokhtar, Zainuriah Hassan, Journal of Communications, 16(9), 386-393 (2021)

703. Fabrication of ultra-violet photodetector with enhanced optoelectronic parameters using low-cost F-doped ZnO nanostructures
A. Muhammad, Z. Hassan, Sabah M. Mohammad, Suvindraj Rajamanickam, Ibrahim Garba Shitu, Sensors and Actuators: A. Physical, 332, 113092 (2021)

704. High quality aluminum nitride layer grown with a combined step nitridation and trimethylaluminum preflow
Y. Yusuf, M. E. A. Samsudin, M. A. A. Z. Md Sahar, Ng Sha Shiong, Z. Hassan, W. Maryam, N. Zainal, Thin Solid Films, 736, 138915 (2021)

705. A review of laser ablation and dicing of Si wafers
Michael Raj Marks, Kuan Yew Cheong, Zainuriah Hassan, Precision Engineering, 73, 377-408 (2021)

706. Investigations into Ag nanoparticles-carbon-poly(9,9-di-n-octylfluorenyl-2,7-diyl) (PFO) composite: morphological, stuructural, optical, and electrical characterization
Suvindraj Rajamanickam, Sabah M. Mohammad, Z. Hassan, Ahmad Fairuz Omar, Aminu Muhammad, Polymer Bulletin, https://doi.org/10.1007/s00289-021-03938-w (2021)

707. Improvement of porous GaN-based UV photodetector with graphene cladding
Furqan Khairi Mohammed, KHI Poay Beh, Asmiet Ranizy, Naser M. Ahmed, Fong Kwong Yam, Zainuriah Hassan, Applied Sciences, 11, 10833 (2021)

708. Enhanced sensitivity of low-cost fabricated fluorine doped ZnO metal semiconductor metal photodetector

A. Muhammad, Z. Hassan, Sabah M. Mohammad, Suvindraj Rajamanickam, Optical Materials, 122, 111771 (2021)

709. Effect of dry oxidation and thermal annealing on AlN/GaN/AlN/Si(111) and evaluation of its electrical characteristics
Mohd Zaki Mohd Yusoff, Azzafeerah Mahyuddin, Zainuriah Hassan, Muhammad Syarifuddin Yahya, Makara Journal of Science, 25 (4), 203-209 (2021) DOI: 10.7454/mss.v25i4.1249

710. Growth of polycrystalline gallium oxide films in stagnant oxygen stream ambient
Puteri Haslinda Megat Abdul Hedei, Zainuriah Hassan, Hock Jin Quah, Journal of Materials Research and Technology, 16, 139-151 (2022)

711. Synergetic effects of monoethanolamine (MEA) and post-deposition calcination on biosynthesized CeO2 nanostructures spin-coated on silicon substrate
Saad Milad Ali Nsar, Zainuriah Hassan, Kuan Yew Cheong, Way Foong Lim, Materials Chemistry and Physics, 278, 125656 (2022)

712. Realization of UV-C absorption in ZnO nanostructures using fluorine and silver co-doping
A. Muhammad, Z. Hassan, Sabah M. Mohammad, Suvindraj Rajamanickam, Shireen Mohammed Abed, M. G. B. Ashiq, Colloid and Interface Science Communications, 47, 100588 (2022)

713. Recent advances and challenges in the MOCVD growth of indium gallium nitride: A brief review
A. K. Tan, N. A. Hamzah, M. A. Ahmad, S. S. Ng, Z. Hassan, Materials Science in Semiconductor Processing, 143, 106545 (2022)

714. An insight into growth transition in AlN epitaxial films produced by metal-organic chemical vapour deposition at different growth temperatures
M.A.A.Z. Md Sahar, Z. Hassan, S.S. Ng, N.A. Hamzah, Y. Yusuf, N. N. Novikova, V.A. Yakovlev, S.A. Klimin, Superlattices and Microstructures, 161, 107095 (2022)

715. Analysis using a two-layer model of the transport properties of InGaN epilayers grown on GaN template substrate
Ahmad Sauffi Yusof, Sidi Ould Saad Hamady, Christyves Chevallier, Nicolas Fressengeas, Zainuriah Hassan, Sha Shiong Ng, Mohd Anas Ahmad, Way Foong Lim, Muhd Azi Che Seliman, Materials Science in Semiconductor Processing, 144, 106614 (2022)

716. Effect of trisodium citrate on morphological, structural, and optical properties of fluorine-doped ZnO nanostructures
A. Muhammad, Z. Hassan, Sabah M. Mohammad, Suvindraj Rajamanickam, Ibrahim Garba Shitu
In press - Ceramics International (2022)

B. National

1. Structural, optical and electrical properties of GaN grown on sapphire from different gallium sources.
Z. Hassan, M. E. Kordesch, Jurnal Fizik Malaysia, 20, 67-73 (1999).

2. Properties of GaN heteroepitaxial films grown by metalorganic chemical vapor deposition
Z. Hassan, M. E. Kordesch, J. Sol. St. Sci. Technol. Letters, Vol. 6, No. 2 (Suppl), 55 (1999).

3. Surface morphology and structural characterization of amorphous and microcrystalline GaN
Z. Hassan, C. T. Chuah, M. J. Abdullah, K. Ibrahim, M. E. Kordesch, W. Halverson, P. C. Colter, MicroSom: Bulletin of The Electron Microsopy Society of Malaysia, 3 (2), 16-17 (2000).

4. Scanning electron microscopy and XRD studies of cobalt silicide films.
N. Abdul Hamid, N. F. I. Muhammad, Z. Hassan, Z. Jamal, A. Abdul Aziz, K. Ibrahim, M. R. Hashim, MicroSom: Bulletin of The Electron Microsopy Society of Malaysia, 3 (3), 8-9 (2000).

5. Study of the growth kinetics of nickel silicide films.
Z. Jamal, K. Ibrahim, A. Mahmood, C. Abdul Hamid, N. Abdul Hamid, A. Abdul Aziz, Z. Hassan, M. R. Hashim, Proceedings of National Physics Seminar, 313-317 (2000)

6. Properties of GaN heteroepitaxial films grown by metalorganic chemical vapor deposition
Z. Hassan, M. E. Kordesch, Solid State Science and Technology, 8, 100-106 (2000).

7. Cobalt silicides ohmic contact: Microscopic and resistivity investigations.
A. Abdul Aziz, Z. Hassan, Z. Jamal, N. Abdul Hamid, Proceedings of National Seminar on Advanced Materials Development in Malaysia, 139-141 (2001)

8. Characteristics of GaN epilayers grown on GaN and AlN buffer layers.
Z. Hassan, M. E. Kordesch, Journal of Physical Science, 12, 23-32 (2001).

9. Microcrystalline GaN films for electronic applications
Z. Hassan, M. J. Abdullah, C. T. Chuah, K. Ibrahim, M. E. Kordesch, W. Halverson, P. C. Colter, Journal of Solid State Science and Technogy Letter, Vol. 8, No.2 (Suppl), 61 (2001)

10. Overview of structural defects in gallium nitride films.
F. K. Yam, Z. Jamal, Z. Hassan, A. Abdul Aziz, Journal of Physical Science, 13, 33-52 (2002).

11. The effect of growth parameters on GaN film properties.
Z. Hassan, M. E. Kordesch, Journal of Physical Science, 13, 89-98 (2002).

12. Microcrystalline GaN films for electronic applications.
Z. Hassan, M. J. Abdullah, C. T. Chuah, K. Ibrahim, M. E. Kordesch, W. Halverson, P. C. Colter, Solid State Science and Technology, 10, 84-89 (2002).

13. Polarized infrared study of GaN epilayer on Si substrate.
S. S. Ng, Z. Hassan, M. R. Hashim, M. E. Kordesch, Proceedings of the National Conference on Physics (PERFIK 2002), 224-226 (2002)

14. Raman and photoluminescence studies of hexagonal GaN films on sapphire grown by MOCVD.
F. K. Yam, Z. Hassan, H. Abu Hassan, M. E. Kordesch, Proceedings of the National Conference on Physics (PERFIK 2002), 227-229 (2002)

15. Study of titanium cap cobalt silicide and a thin titanium interlayer-titanium cap cobalt silicide.
C. O. Lim, Z. Jamal, A. Abdul Aziz, Z. Hassan, Proceedings of the National Conference on Physics (PERFIK 2002), 230-232 (2002)

16. Characteristics of GaN epilayers: The influence of the structural properties on the carrier mobility.
F. K. Yam, Z. Hassan, A. Abdul Aziz, M. E. Kordesch, Proceedings of Advanced Technology Congress – Conference on Advanced Materials (ATC 2003-CAM 2003), 1-5 (2003) – on CD

17. Low temperature infrared optical properties of gallium nitride epilayer on silicon substrate.

S. S, Ng, W. Z. Wan Mat Zin, M. S. Samsudin, Z. Hassan, M. R. Hashim, M. E. Kordesch, Proceedings of Advanced Technology Congress - Conference on Advanced Materials (ATC 2003-CAM 2003), 1-6 (2003) – on CD

18. Gallium nitride-based materials for optical and electronic device applications.
Z. Hassan, K. Ibrahim, A. Abdul Aziz, M. R. Hashim, M. J. Abdullah, H. Abu Hassan, Proceedings of National Symposium on Science and Technology, 1-4 (2003) – on CD

19. Electrical characterization of MSM photodiodes based on GaN grown on silicon.

Y. C. Lee, F. K. Yam, Z. Hassan, M. J. Abdullah, M. E. Kordesch, Proceedings of 2003 IEEE National Symposium on Microelectronics, 141-145 (2003).

20. Ti and Ag-based Schottky contacts on p-type GaN
F. K. Yam, Z. Hassan, Z. J. Yap, K. Ibrahim, J. Solid State Science and Technology Letters, 10 (2) (Suppl.), 87 (2003)

21. Investigation of AlGaN film grown on Al_2O_3
S. Tajudin, F. K. Yam, Z. Hassan, H. Abu Hassan, J. Solid State Science and Technology Letters, 10 (2) (Suppl.), 86 (2003)

22. Metal-oxide-semiconductor (MOS) capacitor based on GaN grown on silicon
K. A. Abdullah, C. T. Chuah, Z. Hassan, M. J. Abdullah, J. Solid State Science and Technology Letters, 10 (2) (Suppl.), 68 (2003)

23. Ellipsometric determination of optical constants and thickness of GaN layer grown on sapphire
N. M. Ahmed, M. R. Hashim, Z. Hassan, J. Solid State Science and Technology Letters, 10 (2) (Suppl.), 54 (2003)

24. Correlation between the structural properties and the optical properties of GaN/Al_2O_3 films
S. A. Oh, S. S. Ng, M. R. Hashim, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin, Proceedings of the National Conference on Physics (PERFIK 2003), 1-8 (2003) – on CD

25. Structural analysis of GaN film grown on sapphire by plasma assisted metalorganic chemical vapor deposition
F. K. Yam, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin, Proceedings of the National Conference on Physics (PERFIK 2003), 1-8 (2003) – on CD

26. Photoluminescence, Raman and x-ray diffraction studies of GaN films on sapphire substrates
S. Tajudin, F. K. Yam, H. Abu Hassan, Z. Hassan, Proceedings of the National Conference on Physics (PERFIK 2003), 1-8 (2003) – on CD

27. Characteristics of GaN films grown on Si by MOCVD
S. S. Ng, Z. Hassan, G. L. Chew, M. R. Hashim, M. E. Kordesch, Journal of Physical Science, 15, 97-106 (2004)

28. Investigation of AlGaN film grown on Al_2O_3
S. Tajudin, F. K. Yam, Z. Hassan, H. Abu Hassan, J. Solid St. Sci. and Technol. Letters, 11 (1), 52-56 (2004)

29. Metal-oxide-semiconductor (MOS) capacitor based on GaN grown on silicon
K. A. Abdullah, C. T. Chuah, Z. Hassan, M. J. Abdullah, J. Solid St. Sci. and Technol. Letters, 11 (1), 168-173 (2004)

30. Ti and Ag-based Schottky contacts on p-type GaN

F. K. Yam, Z. Hassan, Z. J. Yap, K. Ibrahim, J. Solid St. Sci. and Technol. Letters, 11 (1), 113-118 (2004)

31. Infrared optical properties of GaN on sapphire substrate
S. S. Ng, S. A. Oh, Z. Hassan, M. R. Hashim, Jurnal Fizik Malaysia, 25 (3 & 4), 55-58 (2004)

32. Gas sensitive Al membrane on n-type GaN Schottky diode
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, Proceedings of The National Seminar of Science Technology and Social Sciences, 177-181 (2004)

33. Electrical properties and morphology microscopy of palladium (Pd) Schottky contact on p-type GaN
C. K. Tan, F. K. Yam, C. W. Lim, A. A. Aziz, Z. Hassan, Proceedings of The National Seminar of Science Technology and Social Sciences, 239-244 (2004)

34. Ohmic contacts properties of Pd/Ag metallization scheme on p-type GaN
C. W. Lim, F. K. Yam, C. K. Tan, A. A. Aziz, Z. Hassan, Proceedings of The National Seminar of Science Technology and Social Sciences, 245-249 (2004)

35. High temperature sensitive N_2 gas sensors based on Al/p-Si diode
A. Y. Hudeish, Z. Hassan, A. Abdul Aziz, Technical Journal, 10, 38-40 (2004)

36. Metal-oxide-semiconductor (MOS) capacitor based on low temperature grown a-GaN
K. A. Abdullah, Z. Hassan, M. J. Abdullah, Technical Journal, 10, 41-43 (2004)

37. Light emitting Schottky diodes based on p-GaN
F. K. Yam, Z. Hassan, A. Abdul Aziz, J. Solid State Science and Technology Letters, 11 (2) (Suppl.), 39 (2004)

38. Investigation of the absorption coefficient, refractive index, energy bandgap, film thickness for $Al_{0.11}Ga_{0.89}N$, $Al_{0.03}Ga_{0.97}N$ and GaN by optical transmission method
N. M. Ahmed, M. R. Hashim, Z..Hassan, J. Solid State Science and Technology Letters, 11 (2) (Suppl.), 38 (2004)

39. Atomic force microscopy study of GaN thin films for gas sensor
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, J. Solid State Science and Technology Letters, 11 (2) (Suppl.), 42 (2004)

40. Characteristics of Ni/Pd/Ag contact on p-type GaN
C. W. Lim, C. K. Tan, A. Abdul Aziz, Z. Hassan, J. Solid State Science and Technology Letters, 11 (2) (Suppl.), 43 (2004)

41. Simulation of single and double layer antireflection coating for GaN-MSM Schottky detector
N. M. Ahmed, M. R. Hashim, Z. Hassan, J. Solid State Science and Technology Letters, 11 (2) (Suppl.), 91 (2004)

42. Electrical and structural properties of Pd/Si/Pd Schottky contacts on p-GaN
C. K. Tan, C. W. Lim, A. Abdul Aziz, Z. Hassan, F. K. Yam, J. Solid State Science and Technology Letters, 11 (2) (Suppl.), 118 (2004)

43. Fabrication and characterization of Ni/GaAs Schottky as hydrogen gas sensor
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, J. Solid State Science and Technology Letters, 11 (2) (Suppl.), 118 (2004)

44. Infrared characterization of gallium nitride films grown by plasma-assisted MOCVD on Si and sapphire substrates

S. A. Oh, M. D. R. Hashim, S. S. Ng, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin, J. Solid State Science and Technology Letters, 11 (2) (Suppl.), 119 (2004)

45. The effects of annealing treatment to GaN-based UV photodetectors
Y. C. Lee, Z. Hassan, M. R. Hashim, K. Ibrahim, J. Solid State Science and Technology Letters, 11 (2) (Suppl.), 120 (2004)

46. Ni/GaN diodes as gas sensor for detection of different hydrogen concentration
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, Proceedings of National Conference on Physics (PERFIK 2004), 121-125 (2004)

47. Ohmic contact to n-type $Al_{0.11}Ga_{0.89}N$
S. Othman, F. K. Yam, Z. Hassan, K. A. Abdullah, M. J. Abdullah, Proceedings of National Conference on Physics (PERFIK 2004), 139-142 (2004)

48. Optimization of optical and electrical behavior of GaN-based diode
N. Zainal, M. R. Hashim, H. A. Hassan, Z. Hassan, Proceedings of National Conference on Physics (PERFIK 2004), 133-138 (2004)

49. The applications of nitride semiconductor materials
Yam Fong Kwong, Zul Azhar Zahid Jamal, Zainuriah Hassan
MYKUKUM, VIII ed., 14 – 15 (2004)

50. The effects of annealing treatments on GaN-based UV photodetectors
Y. C. Lee, Z. Hassan, M. R. Hashim, K. Ibrahim, Solid State Science and Technology, 13, 1&2, 72-79 (2005)

51. Light emitting Schottky diodes based on p-GaN
F. K. Yam, Z. Hassan, A. Abdul Aziz, J. Solid St. Sci. and Technol. Letters, 12, 1&2, 276-281 (2005)

52. Characteristics of GaN/Si heterojunction grown by MOCVD
S. S. Ng, Z. Hassan, G. L. Chew, M. R. Hashim, M. E. Kordesch, J. Solid St. Sci. and Technol. Letters, 12, 1&2, 374-379 (2005)

53. Optical characteristics of GaN epilayer grown on silicon substrate by Raman and PL spectroscopy
S. S. Ng, Z. Hassan, H. Abu Hassan, J. Solid State Science and Technology Letters, 12 (1) (Suppl.), 75 (2005)

54. Surface and composition reactivity of Schottky barriers n-GaN gas sensor
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, H. Abu Hassan, K. Ibrahim
J. Solid State Science and Technology Letters, 12 (1) (Suppl.), 109 (2005)

55. High resolution x-ray diffraction (HRXRD) study of Pt, Pd, and Ni on n-GaN based hydrogen gas sensor
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, H. Abu Hassan, K. Ibrahim
J. Solid State Science and Technology Letters, 12 (1) (Suppl.), 156 (2005)

56. Effects of Ni/Ag as ohmic contacts on p-type GaN annealed in vacuum
C. W. Lim, A. Abdul Aziz, Z. Hassan, F. K. Yam
J. Solid State Science and Technology Letters, 12 (1) (Suppl.), 109 (2005)

57. Ni/GaN diodes as gas sensor for detection of different hydrogen concentration
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, Jurnal Fizik Malaysia, 26 (2), 89-93 (2005)

58. Comparative study of the performance of various LED structures by simulation method

N. Zainal, Z. Hassan, H. Abu Hassan, M. R. Hashim, Proceedings of Laser & Electro-optics Seminar LEOS 2006, 67-73 (2006)

59. Optical characteristics of $Al_{0.35}Ga_{0.85}N$/GaN grown on Al_2O_3
L. S. Chuah, Z. Hassan, S. S. Ng, H. Abu Hassan, Proceedings of Laser & Electro-optics Seminar LEOS 2006, 96-100 (2006)

60. Structural and optical characteristics of porous GaN prepared by platinum assisted electroless chemical etching
F. K. Yam, C. W. Chin, Z. Hassan, Proceedings of CAS 2006, Volume 1, 95-100 (2006)

61. High resolution x-ray diffraction study of AlGaN/GaN
L. S. Chuah, S. S. Ng, Z. Hassan, H. Abu Hassan, Proceedings of CAS 2006, Volume 1, 105-109 (2006)

62. The influence of coated-silver nanoparticles on luminescence in the GaN/sapphire film
N. M. Ahmed, R. Hashim, Z. Hassan, Proceedings of CAS 2006, Volume 1, 159-161 (2006)

63. Effects of $Al_{0.15}Ga_{0.85}N$ interlayer on the electrical properties of contacts on n-type GaN
S. M. Thahab, H. Abu Hassan, Z. Hassan, Proceedings of CAS 2006, Volume 1, 219-223 (2006)

64. Sructural and optical characterization of GaN thin films growth on 6H-SiC
S. S. Ng, L. S. Chuah, Z. Hassan, H. Abu Hassan, Proceedings of CAS 2006, Volume 1, 255-258 (2006)

65. Kramer's Kronig analysis of infrared reflectance spectra with a single resonance
S. S. Ng, Z. Hassan, H. Abu Hassan, Jurnal Teknologi, 44(C), 67-75 (2006)

66. Effects of Si, Al_2O_3 and SiC substrates on the characteristics of DBRs structure for GaN based laser
N. M. Ahmed, M. R. Hashim, Z. Hassan, Journal of Physical Science, 17(2), 151-159 (2006)

67. Optical study of p-GaN on sapphire grown by RF plasma-assisted molecular beam epitaxy
C. W. Chin, Z. Hassan, F. K. Yam, L. S. Chuah, Proceedings of MAMIP 2007, 14-16 (2007)

68. InGaN/GaN heterostructure for photodetector applications
L. S. Chuah, Z. Hassan, H. Abu Hassan, C. W. Chin, Proceedings of MAMIP 2007, 43-44 (2007)

69. High quality $Al_{0.09}Ga_{0.91}N$ film on Si(111) by radio-frequency molecular beam epitaxy
L. S. Chuah, Z. Hassan, H. Abu Hassan, M. Hussein, F. K. Yam, N. Zainal, Proceedings of MAMIP 2007, 157-159 (2007)

70. Photoelectrochemical etching of GaN using aqueous KOH solutions
C. W. Chin, Z. Hassan, F. K. Yam, L. S. Chuah, Proceedings of MAMIP 2007, 181-182 (2007)

71. Pt Scottky contact on n-type GaN for hydrogen gas sensors
C. W. Chin, Z. Hassan, F. K. Yam, J. Solid State Science and Technology Letters, 14 (2) (Suppl.), 113 (2007)

72. Schottky diodes based on p-type GaN grown by radio-frequency molecular beam epitaxy
L. S. Chuah, Z. Hassan, C. W. Chin, F. K. Yam, H. Abu Hassan, J. Solid State Science and Technology Letters, 14 (2) (Suppl.), 112 (2007)

73. The performance of InGaN laser diodes consisting of separate confinement heterostructures with a multiple quantum well active region

S. M. Thahab, H. Abu Hassan, Z. Hassan, J. Solid State Science and Technology Letters, 14 (2) (Suppl.), 71 (2007)

74. Influence of thick n-AlGaN contact layer on the performance of InGaN laser diode with modulation doped strain-layer superlattices
S. M. Thahab, H. Abu Hassan, Z. Hassan, J. Solid State Science and Technology Letters, 14 (2) (Suppl.), 72 (2007)

75. Growth and characterization of Si-doped n-GaN by RF plasma-assisted molecular beam epitaxy
C. W. Chin, Z. Hassan, F. K. Yam, L. S. Chuah, Proceedings of IEEE Regional Symposium on Microelectronics, 168-171 (2007)

76. Electrical characteristics of Pt Schottky contact on InGaN
C. W. Chin, Z. Hassan, F. K. Yam, Proceedings of IEEE Regional Symposium on Microelectronics, 523-526 (2007)

77. Investigation on thermal stability of Pd Schottky contacts to p-type GaN/Si(111)
L. S. Chuah, Z. Hassan, C. W. Chin, F. K. Yam, H. Abu Hassan, Proceedings of IEEE Regional Symposium on Microelectronics, 146-149 (2007)

78. Photoelectrical performances of photodiode based on p-GaN/n-Si structure
L. S. Chuah, Z. Hassan, C. W. Chin, F. K. Yam, H. Abu Hassan, Proceedings of IEEE Regional Symposium on Microelectronics, 491-495 (2007)

79. Structural and optical characterization of GaN thin films grown on 6H-SiC
S. S. Ng, L. S. Chuah, Z. Hassan, H. Abu Hassan, Science Letters, 4(1), 135-142 (2007)

80. Structural and optical characteristics of porous GaN prepared by platinum-assisted electroless-chemical etching
F. K. Yam, C. W. Chin, Z. Hassan, Science Letters, 4(1), 181-187 (2007)

81. Nanoporous GaN film generated by electro chemical etching
F. K. Yam, Z. Hassan, K. M. Omar, Sains Malaysiana, 37(3), 285-288 (2008)

82. The performance of InGaN laser diode consisting of a separate confinement heterostructure with a multiple quantum well active region
S. M. Thahab, H. Abu Hassan, Z. Hassan, Solid State Science and Technology, 16 (1) 130-138 (2008)

83. Growth and properties of AlN/GaN/AlN film on Si substrates
A. Mahyuddin, Z. Hassan, C. W. Chin, K. Y. Cheong, Proceedings of 2nd International Conference on Science and Technology, 1644-1649 (2008)

84. Structural quality of AlGaN/GaN/AlN on Si substrate grown by plasma-assisted molecular beam epitaxy
M. Z. Mohd Yusoff, Z. Hassan, C. W. Chin, S. M. Thahab, H. Abu Hassan, Proceedings of 2nd International Conference on Science and Technology, 1889-1894 (2008)

85. Optic vibrational property of AlN on Si(111) substrate grown by RF-PAMBE
N. H. Abd. Raof, S. S. Ng, H. Abu Hassan, Z. Hassan, Proceedings of 2nd International Conference on Science and Technology, 1799-1803 (2008)

86. Surface phonon-polariton characteristics of $In_{0.47}Ga_{0.53}N$/GaN on Si(111) substrate grown by RF-PAMBE
S. S. Ng, L. S. Chuah, Z. Hassan, H. Abu Hassan, Proceedings of 2nd International Conference on Science and Technology, 1826-1630 (2008)

87. Morphology and luminescence properties of porous $Al_{0.09}Ga_{0.91}N$ generated via Pt-assisted electroless etching
L. S. Chuah, Z. Hassan, H. Abu Hassan, Jurnal Fizik Malaysia, 29 (3 & 4), 55-58 (2008)

88. Optical characteristics of poly[(9,9-dioctylfluorenyl-2,7-diyl)-co-(1,4-phylene)]-(F8P) on ITO coated glass
S. S. Tneh, H. Omar, H. Abu Hassan, Z. Hassan, Jurnal Fizik Malaysia, 29 (3 & 4), 75-76 (2008)

89. Effects of annealing temperature on cerium oxide thin film deposited on silicon via metal-organic decomposition
F. A. Jasni, K.Y. Cheong, Z. Lockman, Z. Hassan, Malaysian Journal of Microscopy, 4, 180-185 (2008)

90. Structural and morphological evolution of cerium oxide thin film on silcon prepared by metal-organic decomposition route
Farah Anis jasni, Kuan Yew Cheong, Zainovia Lockman, Zainuriah Hassan, Journal of Nuclear and Related Technologies, 6(1), 183-189 (2009)

91. Study on the effect of underlayer Ti on metal slab with repect to the variation of RF biasing power
Leow Mun Tyng, Lee Kok Eng, Zainuriah Hassan, Siew Eng Thye, Chan Chee Foong, Chuah Ze Min, Ghazali Omar, Lim Siew Ping, Infineon Technical Symposium, 1-6 (2009)

92. Structural properties studies of GaN on 6H-SiC by means of x-ray diffraction technique
C. G. Ching, S. S. Ng, Z. Hassan, H. Abu Hassan, Proceedings of International Conference on X-rays and Related Techniques in Research and Industry 2010, 55-57 (2010)

93. XRD analyses of $In_xGa_{1-x}N$ ($0.20 \leq x \leq 0.80$) ternary alloys
Y. Yusof, M. A. Abid, S. S. Ng, H. Abu Hassan, Z. Hassan, Proceedings of International Conference on X-rays and Related Techniques in Research and Industry 2010, 341-343 (2010)

94. The structural study of titanium dioxide nanotubes prepared by anodic process
S. W. Ng, F. K. Yam, K. P. Beh, S. S. Tneh, Z. Hassan, Proceedings of National Seminar on Science and Mathematics Applications 2010, 129-135 (2010)

95. Theoretical and experimental studies of polarized infrared reflectance of bulk wurtzite ZnO semiconductor
S. C. Lee, S. S. Ng, Z. Hassan, H. Abu Hassan, Sains Malaysiana, 40(1), 35-37 (2011)

96. Effects of the nitric acid concentrations on the etching process, structural and optical properties of porous zinc oxide thin films
C.G. Ching, Leonard Lu, C.I. Ang, P.K. Ooi, S.S. Ng, Z. Hassan, H. Abu Hassan, Sains Malaysiana, 42 (9), 1327-1332 (2013)

97. Preparation of porous Si (100) for overgrown cubic layer: Morphological investigation
M.E.A. Samsudin, M. Ikram Md Taib, N. Zainal, R. Radzali, S. Yaakob, Z. Hassan, Sains Malaysiana, 42 (9), 1333-1337 (2013)

98. Structural properties of zinc oxide thin films deposited on various substrates
C.G. Ching, P.K. Ooi, S.S. Ng, Z. Hassan, H. Abu Hassan, M. J. Abdullah, Sains Malaysiana, 43 (6), 923-927 (2014)

99. Titanium dioxide nanotubes in chloride based electrolyte: An alternative to fluoride based electrolyte
S. W. Ng, F. K. Yam, K. P. Beh and Z. Hassan, Sains Malaysiana, 43 (6), 947-951 (2014)

100. Fabrication of porous ZnO thin films via ammonium hydroxide: Effects of etching time and oxidizer on surface morphology and surface roughness
S.S. Ng, P. K. Ooi, S. Yaakob, M. J. Abdullah, H. Abu. Hassan, Z. Hassan, Sains Malaysiana, 43 (7), 1077-1082 (2014)

101. Characterizations of cupric oxide thin films on glass and silicon substrates by radio frequency magnetron sputtering
P. K. Ooi, C. G. Ching, M. A. Ahmad, S. S. Ng, M. J. Abdullah, H. Abu, Hassan and Z. Hassan, Sains Malaysiana, 43 (4), 617-621 (2014)

102. Simulation on the roles of the number of quantum well and doping in $In_xGa_{1-x}N$ multiple quantum wells LEDs
N. Zainal, E. Azimah, Z. Hassan, H. Abu Hassan, M. R. Hashim, Sains Malaysiana, 43 (10), 1557-1564 (2014)

103. Growth of gallium nitride thin film with the aid of polymethyl methacrylate
C. Y. Fong, S. S. Ng, F. K. Yam, H. Abu Hassan, Z. Hassan, Sains Malaysiana, 43 (12), 1943-1949 (2014)

104. Thermal annealing effects on the properties of MBE-GaN p-n junction
Ezzah Azimah Alias, Norzaini Zainal, Ahmad Shuhaimi and Zainuriah Hassan, Journal of Physical Science, 26(1), 35–42 (2015)

105. Effects of ammonia flow rate on the synthesis of AlGaN thin films prepared via spin coating approach
Nurul Atikah Mohd Isa, Sha Shiong Ng, Zainuriah Hassan, Proceedings of 3rd Meeting of Malaysia Nitrides Research Group (MNRG 2016), 9-12 (2016)

106. Sol concentration effects of sol-gel spin coated indium nitride thin films
Zhi Yin Lee, Sha Shiong Ng, Fong Kwong Yam, Zainuriah Hassan, Proceedings of 3rd Meeting of Malaysia Nitrides Research Group (MNRG 2016), 21-24 (2016)

107. Fabrication and characterization of copper doped zinc oxide on p-type and n-type gallium nitride by sputtering
Ahmad Sauffi Yusof, Zainuriah Hassan, Norzaini Zainal, Proceedings of 3rd Meeting of Malaysia Nitrides Research Group (MNRG 2016), 35-40 (2016)

108. Phosphors for white LED conversion
Husnen R. Abd, Z. Hassan, Naser M. Ahmed, C. W. Chin, Ahmad Sauffi Yusof, Nabeel Z. Al-Hazeem, Proceedings of 3rd Meeting of Malaysia Nitrides Research Group (MNRG 2016), 46-50 (2016)

109. Catalyst-free growth of ZnO tetrapods: Effects of growth temperature
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Buletin Optik, 3, 17-21, (2016)

110. Catalyst-free growth of ZnO nanowire balls on ITO seeds/glass by thermal evaporation
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed, Buletin Optik, 2, 42-47, (2016)

111. Morphology and luminescence of photo-electrochemicall synthesized porous silicon: Influence of current density
Asad A. Thahe, Noriah Bidin, Z. Hassan, Hazri Bakhtiar, N. G. Elfadill, Zainal A. Talib, Dauda Abubakar, Malaysian Journal of Fundamental and Applied Sciences, 13 (4), 708-710 (2017)

112. Growth and characterization of AlGaN thin films via sol-gel spin coating method
Nurul Atikah Mohd Isa, Sha Shiong Ng, Zainuriah Hassan, Solid State Science and Technology, 25 (2), 1-7 (2017)

113. Smart lighting via innovative led technology
Zainuriah Hassan, MRUN Buletin, 7, (2018)

114. Carrier density and thickness optimization of $In_xGa_{1-x}N$ layer by SCAPS simulation for high efficiency III-V solar cell
Habib Ullah Manzoor, Tan Aik Kwan, Ng Sha Shiong, Zainuriah Hassan
- Accepted for publication in Sains Malaysiana (2021)

Research Books/Chapters in Research Books/Special Issue

1. Characterisation of III-V nitrides for Optoelectronic Devices
Zainuriah Hassan, Haslan Abu Hassan, Chapter 8, 72-81 (2005)
Chapter in a book entitled "Research at Universiti Sains Malaysia, Volume 5, Materials: From Fundamentals to Applications"
ISBN 983-3391-10-9

2. "Peranti Elektronik Keadaan Pepejal – Ed. ke-5"
Zainuriah Hasssan, Azlan Abdul Aziz (Penerbit Universiti Sains Malaysia, 2010)

- Translation (to Malay language) of a book entitled "Solid State Electronic Devices (5^{th} edition)" by Ben G. Streetman and Sanjay Banerjee (Prentice Hall Inc., New Jersey, 2000)
ISBN 978-983-861-423-8

3. Growth and Characterization of $In_xGa_{1-x}N$ Nanostructures
Zainuriah Hassan, Haslan Abu Hassan, Yam Fong Kwong, pages 43-48 (2010)
Directory of Research Project – Fundamental Research Grant Scheme (FRGS) Phase 1/2007
ISBN 978-983-3663-76-7

4. Bahan Semikonduktor III-nitrida: Aplikasi bagi Peranti Optoelektronik dan Elektronik
Zainuriah Hassan (Penerbit Universiti Sains Malaysia, 2011)
ISBN 978-983-861-514-3

5. GaN-based Photodiodes on Silicon Substrates
L. S. Chuah, **Z. Hassan**, Chapter 16, 331-348 (2011)
Chapter in a book entitled "Advances in Photodiodes"
ISBN 978-953-307-163-3

6. Light Extraction Methods from GaN Material: GaN Microcavity and UV Light Enhancement
Naser Mahmoud, **Zainuriah Hassan** (Lambert Academic Publishing, 2011)
ISBN 978-3-8443-2691-6-8

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Che Woei Chin, **Zainuriah Hassan**, Fong Kwong Yam ((Lambert Academic Publishing, 2011)
ISBN 978-3-8443-9267-8

8. Gallium Nitride: An Overview of Structural Defects

Fong Kwong Yam, Li Li Low, Sue Ann Oh, **Zainuriah Hassan**, Chapter 4, 99-136 (2011)
Chapter in a book entitled "Optoelectronics – Materials and Techniques"
ISBN 978-953-307-276-0

9. Optical Insights into Enhancement of Solar Cell Performance Based on Porous Silicon Surfaces
Asmiet Ramizy, Y. Al-Douri, Khalid Omar, **Z. Hassan**, Chapter 9, 179-200 (2011)
Chapter in a book entitled "Solar Cells – Silicon Wafer-Based Technologies"
ISBN 978-953-307-747-5

10. Design of Metal-Semiconductor-Metal Photodetector: Porous Silicon Photodetector
Naser Mahmoud, **Zainuriah Hassan,** Husnen R. Abd (Lambert Academic Publishing, 2012)
ISBN 978-3-659-22235-1

11. UV Sensor based on Titanium Dioxide (TiO_2) Nanotubes
Yam Fong Kwong, Ng Siow, Beh Khi Poay, Tneh Sau Siong, **Zainuriah Hassan**, page 329 (2013)
Innovations at Malaysian Higher Education Institutions 2011/2012
ISBN 978-967-0334-59-2

12. 1st Meeting of Malaysia Nitrides Research Group (MNRG) Abstract Book (2014)
Editors: **Professor Dr. Zainuriah Hassan**, Dr. Norzaini Zainal, Mohd Nor Isman Ismail

13. 2nd Meeting of Malaysia Nitrides Research Group (MNRG 2015) Abstract Book
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16. Using Deionized Water with Ethanol as a Solvent of CuS EGFET as pH Sensor
F. A. Sabah, N. M. Ahmed, **Z. Hassan**, M. A. Almessiere, Chapter 2, 37-41 (2017)
Article in Chapter in a book entitled "Nano Engineering and Materials Technologies"
Editors: Hao Gong, Kazuo Umemura, Ching-Fuh Lin (TRANS TECH PUBLICATIONS)
ISBN 978-3-0357-1104-2

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Zainuriah **Hassan** (Penerbit Universiti Sains Malaysia, 2019)
Article in a book entitled "50 Years of Leading Knowledge for Change/Universiti Sains Malaysia Commemorative Book"
ISBN 978-967-461-445-4

18. 5-Year Report (2014-2018)
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19. Solid State Phenomena
Semiconductor Materials and Technology, Volume 301 (2020)
Publisher: Scientific.Net
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N. M. Abd-Alghafour, Naser M. Ahmed, **Z. Hassan**, Chapter 8, 187-195 (2020)
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ISBN 978-3-030-39245-1
ISBN 978-3-030-39246-8 (eBook)
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Microelectronics International: Volume 38 Issue 3
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Guest Editorial: Hock Jin Quah, Sha Shiong Ng, Way Foong Lim, **Zainuriah Hassan**
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Conference/ Seminar/ Colloquium

1. Ohio University – Department of Physics and Astronomy Colloquium (Feb. 2, 1996), U.S.A2

Blue-green LEDs and lasers demonstrated in wide band gap semiconductor materials
Zainuriah Hassan

2. Ohio Section American Physical Society (APS) Fall 1996 Meeting (Nov. 2, 1996), U.S.A

Metalorganic Chemical Vapor Deposition (MOCVD) Growth Technique for III-V Nitrides (CP.03)
M. E. Kordesch, Zainuriah Hassan

3. Condensed Matter and Surface Sciences Poster Seminar- Ohio University (May 27, 1998), U.S.A

GaN heteroepitaxial films grown by metalorganic chemical vapor deposition
Z. Hassan, M. E. Kordesch, R. Higgins, Y. Chen, D. A. Gulino

4. Materials Research Society (MRS) Fall 98 Meeting (Nov. 30 – Dec. 4, 1998), U.S.A

Low Temperature ECR-plasma assisted MOCVD microcrystalline and amorphous GaN deposition and characterization for electronic devices
Z. Hassan, M. E. Kordesch, W. M. Jadwisienzak, H. J. Lozykowski, W. Halverson, P. C. Colter

5. 16th Regional Coference on Solid State Science and Technology (Nov. 29 – Dec. 4, 1999)

Properties of GaN heteroepitaxial films grown by metalorganic chemical vapor deposition
Z. Hassan, M. E. Kordesch

6. Universiti Sains Malaysia- School of Physics Colloquium (Aug. 26, 2000)

Processing and Technology Issues in Wide Band Gap III-V Nitride Semiconductors
Zainuriah Hassan

7. National Physics Seminar 2000 (Nov. 6 – 9, 2000)

Study of the growth kinetics of nickel silicide films
Z. Jamal, K. Ibrahim, A. Mahmood, C. Abdul Hamid, N. Abdul Hamid, A. Abdul Aziz, Z. Hassan, M. R. Hashim

8. Electron Microscopy Society Malaysia- 9th Scientific Conference (Nov. 12 – 14, 2000)

Scanning electron microscopy and XRD studies of cobalt silicide films
N. Abdul Hamid, N. F. I. Muhammad, Z. Hassan, Z. Jamal, A. Abdul Aziz, K. Ibrahim, M. R. Hashim

9. National Seminar on Advanced Materials Development in Malaysia (May 15 - 16, 2001)

Cobalt silicides ohmic contact: Microscopic and resistivity investigations
A. Abdul Aziz, Z. Hassan, Z. Jamal, N. Abdul Hamid

10. International Conference on Materials for Advanced Technologies (July 1 – 6, 2001) – MRS (Singapore)

Properties of amorphous GaN grown on silicon
(F 7-25)
Z. Hassan, K. Ibrahim, M. E. Kordesch, W. Halverson, P. C. Colter

11. The XVIII Regional Conference on Solid State Science and Technology (Sept. 7 – 9, 2001)

Microcrystalline GaN films for electronic applications
Z. Hassan, M. J. Abdullah, C. T. Chuah, K. Ibrahim, M. E. Kordesch, W. Halverson, P. C. Colter

12. Eighth International Conference on New Diamond Science and Technology (July 22 – 26, 2002), Australia

Investigations of GaN films grown at low temperatures for electronic applications
(P2.01.2, p. 166 (Abstracts))
Z. Hassan, F. K. Yam, M. J. Abdullah, C. T. Chuah, Z. Jamal, K. Ibrahim, M. E. Kordesch, W. Halverson, P. C. Colter

13. The XIX Regional Conference on Solid State Science and Technology (Oct. 30 – Nov. 1, 2002)

Characteristics of GaN/Si hetrojunction grown by MOCVD
S. S. Ng, Z. Hassan, G. L. Chew, M. R. Hashim, M. E. Kordesch

14. 2002 International Conference on Semiconductor Electronics (Dec. 19 – 21, 2002)

(i) Infrared characterization of GaN/Si grown at different temperatures by MOCVD
S. S. Ng, Z. Hassan, M. R. Hashim, M. E. Kordesch, W. Halverson, P. C. Colter

(ii) Comparison between a Ti cap cobalt silicide to a flashed Ti-Ti cap cobalt silicide
C. O. Lim, Z. Jamal, A. Abdul Aziz, Z. Hassan

(iii) A comparative study of the characteristics of GaN films grown by MOCVD
F. K. Yam, Z. Hassan, Z. Jamal, A. Abdul Aziz, M. E. Kordesch

15. National Physics Conference PERFIK 2002 (Dec. 21 – 22, 2002)

(i) Polarized Infrared study of GaN epilayer on Si substrate
S. S. Ng, Z. Hassan, M. R. Hashim, M. E. Kordesch

(ii) Raman and photoluminescence studies of hexagonal GaN films on sapphire grown by MOCVD.
F. K. Yam, Z. Hassan, H. Abu Hassan, M. E. Kordesch

(iii) Study of titanium cap cobalt silicide and a thin titanium interlayer- titanium cap cobalt silicide
C. O. Lim, Z. Jamal, A. Abdul Aziz, Z. Hassan

16. Advanced Technology Congress 2003 – Conference on Advanced Materials ATC 2003 – CAM 2003 (May 20 – 21, 2003)

(i) Characteristics of GaN epilayers: The influence of the structural properties on the carrier mobility.
F. K. Yam, Z. Hassan, A. Abdul Aziz, M. E. Kordesch

(ii) Low temperature infrared optical properties of gallium nitride epilayer on silicon substrate.
S. S, Ng, W. Z. Wan Mat Zin, M. S. Samsudin, Z. Hassan, M. R. Hashim, M. E. Kordesch

17. National Symposium on Science and Technology (July 28 – 30, 2003)

Gallium nitride-based materials for optical and electronic device applications
Z. Hassan, K. Ibrahim, A. Abdul Aziz, M. R. Hashim, M. J. Abdullah, H. Abu Hassan

18. National Physics Conference 2003 (PERFIK 2003) (Aug. 15 – 17, 2003)

(i) Correlation between the structural properties and the optical properties of GaN/Al_2O_3 films (PT A03, p. 11 (Abstracts))
S. A. Oh, S. S. Ng, M. R. Hashim, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin

(ii) Infrared optical properties of GaN on sapphire substrate
(G2B06, p. 16 (Abstracts))
S. S. Ng, S. A. Oh, Z. Hassan, M. R. Hashim

(iii) Structural analysis of GaN film grown on sapphire by plasma assisted metalorganic chemical vapor deposition
(G5B01, p. 16 (Abstracts))
F. K. Yam, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin

(iv) Photoluminescence, Raman and x-ray diffraction studies of GaN films on sapphire substrates
(G2B01, p. 37 (Abstracts))
S. Tajudin, F. K. Yam, H. Abu Hassan, Z. Hassan

19. 2003 IEEE National Symposium on Microelectronics (Sept. 9 - 10, 2003)

Electrical characterization of MSM photodiodes based on GaN grown on silicon.
Y. C. Lee, F. K. Yam, Z. Hassan, M. J. Abdullah, M. E. Kordesch

20. 1 st International Meeting on Applied Physics (Oct. 13 - 18, 2003), Spain

(i) $CoSi_2$ formation with a thin interlayer-Ti capping layer and Ti capping layer
(p. 701 (Abstracts))
A. Abdul Aziz, C. O. Lim, Z. Hassan, Z. Jamal

(ii) Growth and properties of GaN/Si heterojunction
(p. 782 (Abstracts))
Z. Hassan, S. S. Ng, G. L. Chew, F. K. Yam, M. J. Abdullah, M. R. Hashim, K. Ibrahim, M. E. Kordesch

(iii) Characteristics of Ni-based bi-layer contacts on GaN
(p. 783 (Abstracts))
Z. Hassan, F. K. Yam, W. C. Lim, A. Abdul Aziz, K. Ibrahim

(iv) Optical properties of GaN on Si substrate using plasma-assisted-MOCVD technique in the far infrared region
(p. 863 (Abstracts))
M. D. R. Hashim, S. A. Oh, S. S. Ng, Z. Hassan, M. Barmawi, Sugianto, M. Budiman, P. Arifin

21. International Conference on Materials for Advanced Technologies ICMAT 2003 and IUMRS-ICA 2003 International Conference in Asia (Dec. 7 - 12, 2003), Singapore

(i) Characteristics of low-temperature-grown GaN films on Si(111) substrates
(p. 347-348 (Abstracts))
Z. Hassan, G. L. Chew, F. K. Yam, K. Ibrahim, M. E. Kordesch, W. Halverson, P. C. Colter

(ii) A comparative study of the electrical characteristics of metal-semiconductor-metal (MSM) photodiodes based on GaN grown on silicon
(p. 351 (Abstracts))
Y. C. Lee, Z. Hassan, F. K. Yam, M. J. Abdullah, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin

(iii) Structural and optical analysis of GaN films grown by low-pressure metalorganic chemical vapor deposition
(p. 342 (Abstracts))
F. K. Yam, Z. Hassan, H. Abu Hassan, M. E. Kordesch

(iv) Properties of gallium nitride epilayers grown on sapphire by plasma-enhanced metalorganic chemical vapor deposition

(p. 346 (Abstracts))
F. K. Yam, Z. Hassan, K. Ibrahim, A. Abdul Aziz, M. Barmawi, Sugianto, M. Budiman, P. Arifin

(v) Crystallinity studies of GaN/Si films grown at different temperatures by x-ray diffraction and infrared reflectance spectroscopy
(p. 342 (Abstracts))
S. S. Ng, Z. Hassan, M. R. Hashim, M. E. Kordesch, W. Halverson, P. C. Colter

(vi) Effects of cobalt silicidation with the presence of a thin titanium interlayer
(p. 535 (Abstracts))
C. O. Lim, Z. Jamal, A. Abdul Aziz, Z. Hassan

22. The XX Regional Conference on Solid State Science and Technology (Dec. 12 - 14, 2003)

(i) Ti and Ag-based Schottky contacts on p-type GaN
F. K. Yam, Z. Hassan, Z. J. Yap, K. Ibrahim

(ii) Investigation of AlGaN film grown on Al_2O_3
S. Tajudin, F. K. Yam, Z. Hassan, H. Abu Hassan

(iii) Metal-oxide-semiconductor (MOS) capacitor based on GaN grown on silicon
K. A. Abdullah, C. T. Chuah, Z. Hassan, M. J. Abdullah

(iv) Ellipsometry studies of GaN-based layers
N. M. Ahmed, M. R. Hashim, Z. Hassan

23. SPIE's Integrated Optoelectronic Devices 2004 Symposium, Photonics 2004 (Jan. 24 – 29, 2004), U.S.A

Thermal stability of contacts on AlGaN-based UV photodetectors
K. Ibrahim, A. A. Aljubouri, Y.C. Lee, Z. Hassan, M. R. Hashim

24. The 5th International Symposium on Blue Laser and Light Emitting Diodes (March 15 – 19, 2004), Korea

Thermal stability of Ni/Ag contacts on p-type GaN
Z. Hassan, Y.C. Lee, F. K. Yam, Z. J. Yap, N. Zainal, H. Abu Hassan, K. Ibrahim

25. The National Seminar of Science Technology and Social Sciences (May 31 – Jun 1, 2004)

(i) Gas sensitive Al membrane on n-type GaN Schottky diode
(p. 54 (Abstracts))
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan

(ii) Electrical properties and morphology microscopy of palladium (Pd) Schottky contact on p-type GaN
(p. 56 (Abstracts))
C. K. Tan, F. K. Yam, C. W. Lim, A. A. Aziz, Z. Hassan

(iii) Ohmic contacts properties of Pd/Ag metallization scheme on p-type GaN
(p. 57 (Abstracts))
C. W. Lim, F. K. Yam, C. K. Tan, A. A. Aziz, Z. Hassan

26. Nano and Giga Challenges in Microelectronics (Sep. 13 – 17, 2004), Poland

(i) Dark current characteristics of thermally treated contacts on GaN-based ultraviolet photodetectors
(p. 117 (Abstracts))
Y. C. Lee, Z. Hassan, M. J. Abdullah, M. R. Hashim, K. Ibrahim

(ii) Low applied bias for p-GaN electroluminescent devices
(p. 118 (Abstracts))
F. K. Yam, Z. Hassan, C. K. Tan, C. W. Lim, A. Abdul Aziz, K. Ibrahim

(iii) Electrical characteristics of GaN-based metal-oxide-semiconductor (MOS) structures
(p. 38 (Abstracts))
K. A. Abdullah, M. J. Abdullah, F. K. Yam, Z. Hassan

(iv) Barrier height enhancement of AlGaN Schottky diodes
(p. 39 (Abstracts))
Y. C. Lee, H. Abu Hassan, F. K. Yam, N. Zainal, S. Othman, Z. Hassan

(v) Reversible barrier height changes in hydrogen-sensitive Pd/GaN and Ni/GaN diodes
(p. 37 (Abstracts))
Abdo Yahya Hudeish, Azlan Abdul Aziz, Zainuriah Hassan

27. PERFIK 2004 and Malaysian Science and Technology Congress 2004 (MSTC 2004) (Oct. 5 – 7, 2004)

(i) Ohmic contact to n-type $Al_{0.11}Ga_{0.89}N$
(p. 39 (Abstracts))
S. Othman, F. K. Yam, Z. Hassan, K. A. Abdullah, M. J. Abdullah

(ii) Optimization of optical and electrical behavior of GaN-based diode
(p. 38 (Abstracts))
N. Zainal, M. R. Hashim, H. A. Hassan, Z. Hassan

(iii) Ni/GaN diodes as gas sensor for detection of different hydrogen concentration
(p. 34 (Abstracts))
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan

28. National Postgraduate Colloquium on Materials, Minerals and Polymer 2004 - MAMIP 2004 (Oct 7 –8, 2004)

(i) Fabrication and characterization of Ni/GaN thin film gas sensor
(p. 19 (Abstracts))
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan

(ii) A hydrogen sensitive Pd/GaN Schottky diode sensor
(p. 42 (Abstracts))
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan

29. Science Conference 2004 (Oct. 11 – 13, 2004), Yemen

Method of producing a stable high temperature Ni Schottky diode gas sensor on AlGaN
(p. 152 (Abstracts))
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan

30. The XXI Regional Conference and Workshop on Solid State Science & Technology – RCWSST 2004 (Oct. 10 – 13, 2004)

(i) The effects of annealing treatment to GaN-based UV photodetectors
Y. C. Lee, Z. Hassan, M. R. Hashim, K. Ibrahim

(ii) Light emitting Schottky diodes based on p-GaN
F. K. Yam, Z. Hassan, A. Abdul Aziz

(iii) Fabrication and characterization of Ni/GaAs Schottky diode as hydrogen gas sensor
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan

(iv) Atomic force microscopy study of GaN thin films for gas sensor
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan

(v) Electrical and structural properties of Pd/Si/Pd Schottky contacts on p-GaN
C. K. Tan, C. W. Lim, A. Abdul Aziz, Z. Hassan, F. K. Yam

(vi) Characteristics of Ni/Pd/Ag ohmic contact on p-type GaN
C. W. Lim, F. K. Yam, C. K. Tan, A. A. Aziz, Z. Hassan

(vii) Infrared characterization of gallium nitride films grown by plasma-assisted-MOCVD on Si and sapphire substrates
S. A. Oh, M. D. R. Hashim, S. S. Ng, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin

(viii) Simulation of single and double layer antireflection coating for GaN-MSM Schottky detector
N. M. Ahmed, M. R. Hashim, Z. Hassan

(ix) Investigation of the absorption coefficient, refractive index, energy bandgap, film thickness for $Al_{0.11}Ga_{0.89}N$, $Al_{0.03}Ga_{0.97}N$ and GaN by optical transmission method
N. M. Ahmed, M. R. Hashim, Z.Hassan

31. 6th International Conference on Electronic Materials and Packaging - EMAP 2004 (Dec. 5 – 7, 2004)

(i) Overview of thin film hydrogen gas sensors
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan

(ii) High temperature structural and electrical behaviour of metal contacts on n-type GaN
F. K. Yam, P. A. Teoh, Z. Hassan

32. 2004 IEEE International Conference on Semiconductor Electronics- ICSE 2004 (Dec. 7 – 9, 2004)

(i) Optimization of optical and electrical behavior of quantum well GaN-based LED
N. Zainal, M. R. Hashim, H. Abu. Hassan, Z. Hassan

(ii) Hydrogen sensitive Pt Schottky diode sensor based on GaN
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, K. Ibrahim

(iii) Multi layer metalization scheme (Ni/Pd/Ag) ohmic contact on p-type GaN
C. W. Lim, F. K. Yam, C. K. Tan, A. A. Aziz, Z. Hassan

(iv) Optical properties of GaN on sapphire substrates grown by plasma-assisted MOCVD in the infrared and UV-visible regions
S. A. Oh, M. D. R. Hashim, S. S. Ng, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin

(v) Electrical properties of Ti/Ag contacts to n-type $Al_{0.1}Ga_{0.9}N$
S. Othman, F. K. Yam, Z. Hassan

(vi) High temperature Pd Schottky diode gas sensor on p-type GaN
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, K. Ibrahim

33. SPIE's Optoelectronics 2005, Photonics West (Jan. 22 – 27, 2005), U.S.A

(i) Effects of annealing treatments on the characteristics of ohmic contacts on n-type AlGaN
(p. 190 (Abstracts))
Z. Hassan, F. K. Yam, Y. C. Lee, S. Othman

(ii) Simulation of high performance quantum well GaN-based LED
(p. 149 (Abstracts))
Z. Hassan, N. Zainal, M. R. Hashim, H. Abu Hassan

34. International Conference on Recent Advances in Mechanical & Materials Engineering ICRAMME 2005 (May 30 – 31, 2005)

Effects of substrate type on the characteristics of DBRs structure for GaN based VCSEL
(p. 50 (Abstracts))
N. M. Ahmed, M. R. Hashim, Z. Hassan

35. International Conference on Functional Materials and Devices – ICFMD2005 (June 6 – 8, 2005)

(i) Optimization of InGaN based light emitting diodes
(p. 44 (Abstracts))
N. Zainal, M. R. Hashim, H. Abu Hassan, Z. Hassan

(ii) XRD crystalline studies of GaN/Si films grown by MOCVD at various substrate temperatures
(p. 25 (Abstracts))
S. S. Ng, Z. Hassan, Haslan Abu Hassan, M. E. Kordesch

(iii) Investigation on Ag/Ti ohmic contacts to Si-doped n-type $Al_{0.27}Ga_{0.73}N$ and the effect of post annealing treatments
(p. 26 (Abstracts))
S. Othman, F. K. Yam, H. Abu Hassan, Z. Hassan

(iv) Epitaxial GaN film grown at low temperature by hydrogen plasma-assisted MOCVD
(p. 73 (Abstracts))
F. K. Yam, Z. Hassan, K. Ibrahim, M. Barmawi, Sugianto, M. Budiman, P. Arifin

(v) The structural and optical characteristics of GaN films grown by low-pressure metalorganic chemical vapor deposition
(p. 48 (Abstracts))
F. K. Yam, Z. Hassan, H. Abu Hassan, M. E. Kordesch

(vi) A chemical sensor based on AlGaN
(p. 71 (Abstracts))

A. Y. Hudeish, C. K. Tan, A. Abdul Aziz, Z. Hassan

(vii) Hydrogen response mechanism of Pd-GaN Schottky diodes comparative to Pd-Si gas sensors
(p. 45 (Abstracts))
A. Y. Hudeish, C. K. Tan, A. Abdul Aziz, Z. Hassan

(viii) Design of DBR mirrors for GaN vertical surface emitting laser
(p. 31 (Abstracts))
N. M. Ahmed, M. R. Hashim, Z. Hassan

(ix) Effects of layer thickness and incident angle variation on semiconductor DBR reflectivity
(p. 71 (Abstracts))
N. M. Ahmed, M. R. Hashim, Z. Hassan

(x) The study of thermal treatment on electrical properties at Cr/p-GaN
(p. 72 (Abstracts))
C. K. Tan, A. Abdul Aziz, Z. Hassan, F. K. Yam, C. W. Lim, A. Y. Hudeish

(xi) Pinning Fermi level of p-GaN due to three different (Zr, Ti, and Cr) metal contacts
C. K. Tan, A. Abdul Aziz, Z. Hassan, F. K. Yam, C. W. Lim, A. Y. Hudeish

(xii) Effect of thermal treatment for Pd and PdSi Schottky contacts on p-GaN
(p. 37 (Abstracts))
C. K. Tan, A. Abdul Aziz, F. K. Yam, C. W. Lim, Z. Hassan, A. Y. Hudeish

36. International Conference on Materials for Advanced Technologies ICMAT 2005 and 9th International Conference on Advanced Materials ICAM 2005 (July 3 - 8, 2005), Singapore

(i) Effects of layer thickness and incident angle variations on dielectric DBR reflectivity
(J-12-OR42 (Abstracts))
N. M. Ahmed, M. R. Hashim, Z. Hassan

(ii) Resonant cavity-enhanced GaN-MSM photodetector using omni directional reflector
(J-4-P034 (Abstracts))
Roslan Hashim, Naser Mahmoud, Zainuriah Hassan

37. 6th International Conference on Nitride Semiconductors – ICNS6 (Aug. 28 – Sept. 2, 2005), Germany

(i) AlGaN metal-semiconductor-metal structure for pressure sensing applications
Z. Hassan, Y. C. Lee, S. S. Ng, F. K. Yam, Y. Liu, Z. Rang, M. Z. Kauser, P. P Ruden, M. I. Nathan

(ii) Electrical characteristics and thermal stability of Ti contact to p-GaN
C. K. Tan, A. Abdul Aziz, Z. Hassan, F. K. Yam, A. Y. Hudeish

(iii) The effect of Al-mole fraction on energy band gap and quality of $Al_xGa_{1-x}N$ ($x \leq 0.11$) grown on sapphire
S. S.Ng, S. Othman, Z. Hassan, H. Abu Hassan

(iv) Large enhancement of GaN UV light emission using silver mirror resonator
N. M. Ahmed, M. R. Hashim, Z. Hassan

38. Asian Conference on Sensors – AsiaSense2005 (Sept. 5 – 7, 2005)

(i) A methane sensitive Ni/n-GaN Schottky barrier sensor
(p. 30 (Abstracts))
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, C. K. Tan, H. Abu Hassan, K. Ibrahim

(ii) High-temperature Pt Schottky barrier gas sensor on p-type GaN
(p. 43 (Abstracts))
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, C. K. Tan, H. Abu Hassan, K. Ibrahim

(iii) Investigations of surface roughness of GaN based gas sensor using atomic force microscope
(p. 54 (Abstracts))
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, C. K. Tan, H. Abu Hassan, K. Ibrahim

39. The XXII Regional Conference and Workshop on Solid State Science & Technology – RCSST 2005 (Dec. 18 – 21, 2005)

(i) Optical characteristics of GaN epilayer grown on silicon substrate by Raman and PL spectroscopy
S. S. Ng, Z. Hassan, H. Abu Hassan

(ii) Surface and composition reactivity of Schottky barriers n-GaN gas sensor
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, H. Abu Hassan, K. Ibrahim

(iii) High resolution x-ray diffraction (HRXRD) study of Pt, Pd, and Ni on n-GaN based hydrogen gas sensor
A. Y. Hudeish, A. Abdul Aziz, Z. Hassan, H. Abu Hassan, K. Ibrahim

(iv) Effects of Ni/Ag as ohmic contacts on p-type GaN annealed in vacuum
C. W. Lim, A. Abdul Aziz, Z. Hassan, F. K. Yam

40. Young Researchers Conference on Applied Sciences – CAS 2006 (June 13-14, 2006)

(i) Structural and optical characteristics of porous GaN prepared by platinum assisted electroless chemical etching
F. K. Yam, C. W. Chin, Z. Hassan

(ii) High resolution x-ray diffraction study of AlGaN/GaN
L. S. Chuah, S. S. Ng, Z. Hassan, H. Abu Hassan

(iii) The influence of coated-silver nanoparticles on luminescence in the GaN/sapphire film
N. M. Ahmed, R. Hashim, Z. Hassan

(iv) Effects of $Al_{0.15}Ga_{0.85}N$ interlayer on the electrical properties of contacts on n-type GaN
S. M. Thahab, H. Abu Hassan, Z. Hassan

(v) Structural and optical characterization of GaN thin films growth on 6H-SiC
S. S. Ng, L. S. Chuah, Z. Hassan, H. Abu Hassan

41. Laser and Electro-Optics Seminar – LEOS 2006 (June 28-29, 2006)

(i) Comparative study of the performance of various LED structures by simulation method
(p. 16 (Abstracts))
N. Zainal, Z. Hassan, H. Abu Hassan, M. R. Hashim

(ii) Optical characteristics of $Al_{0.35}Ga_{0.85}N$/GaN grown on Al_2O_3
(p. 19 (Abstracts))
L. S. Chuah, Z. Hassan, S. S. Ng, H. Abu Hassan

42. 6th International Conference on Numerical Simulation of Optoelectronic Devices – NUSOD '06 (Sept. 11-14, 2006), Singapore

Optical Performance of InGaN/AlGaN Double Heterostructure Light Emitting Diodes
S. M. Thahab, H. Abu Hassan, Z. Hassan

43. European Workshop on III-Nitrides Semiconductor Materials and Devices – EW3NS (Sept. 18-20, 2006)

(i) Investigation of structural and optical properties of nanoporous GaN films
(p. 49-50 (Extended Abstracts))
F. K. Yam, Z. Hassan, L. S. Chuah, Y. P. Ali

(ii) Simulation of GaN-based junction field effect transistor
(p. 53-54 (Extended Abstracts))
S. M. Thahab, H. Abu Hassan, Z. Hassan

(iii) Schottky diode based on porous GaN for gas sensing applications
(p. 55-56 (Extended Abstracts))
L. S. Chuah, S. S. Ng, Z. Hassan, H. Abu Hassan

(iv) Comparative study of the performance of single and multiple quantum wells $In_{0.13}Ga_{0.87}N$ by simulation method
(p. 61-62 (Extended Abstracts))
N. Zainal, Z. Hassan, H. Abu Hassan, M. R. Hashim

(v) Polarized IR reflectance study of GaN thin films: The effects of incidence angles on the optical phonon modes
(p. 67-68 (Extended Abstracts))
S. S. Ng, Z. Hassan, H. Abu Hassan

(vi) The influences of the alloy composition, x, on surface phonon polariton mode of the $Al_xGa_{1-x}N$ semiconductors
(p. 69-70 (Extended Abstracts))
S. S. Ng, H. Abu Hassan C. Y. Lo, Z. Hassan

44. 2006 IEEE International Conference on Semiconductor Electronics- ICSE 2006 (Nov. 29-Dec. 1, 2006)

(i) Effect of post annealing treatments on the characteristics of ohmic contacts to n-type InN
L. S. Chuah, Z. Hassan, H. Abu Hassan

(ii) Nanoporous InN films synthesized using photoelectrochemical (PEC) wet etching
L. S. Chuah, Z. Hassan, F. K. Yam, H. Abu Hassan

(iii) Characteristics of thermally treated contacts on porous silicon based metal-semiconductor-metal (MSM) photodetector structures
L. S. Chuah, C. W. Chin, Z. Hassan, H. Abu Hassan

(iv) Porous silicon dioxide synthesized using photoelectrochemical (PEC) wet etching
L. S. Chuah, C. W. Chin, Z. Hassan, H. Abu Hassan

(v) The study of Pt/porous GaN Schottky contact for hydrogen sensing
F. K. Yam, Y. P. Ali, Z. Hassan, N. H. Mohd. Noor, C. W. Chin

(vi) The growth of III-V nitrides heterostructure on Si substrate by plasma-assisted molecular beam epitaxy
F. K. Yam, Z. Hassan, L. S. Chuah, N. Zainal, C. W. Chin, S. M. Thahab, M. Hussein

(vii) The energy band gap of $Al_xGa_{1-x}N$ thin films as a function of Al-mole fraction
S. S. Ng, F. K. Yam, Z. Hassan, H. Abu Hassan

(viii) Simulation of InGaN multiple quantum wells (MQWs) light emitting diodes
S. M. Thahab, H. Abu Hassan, Z. Hassan

(ix) Effects of metal work function and operating temperatures on the electrical properties of contacts to n-type GaN
S. M. Thahab, H. Abu Hassan, Z. Hassan

45. 3rd Colloquium on Postgraduate Research – Colloquium on Materials, Minerals and Polymers - MAMIP 2007 (Apr. 10-11, 2007)

(i) Optical study of p-GaN on sapphire grown by RF plasma-assisted molecular beam epitaxy
C. W. Chin, Z. Hassan, F. K. Yam, L. S. Chuah

(ii) InGaN/GaN heterostructure for photodetector applications
L. S. Chuah, Z. Hassan, H. Abu Hassan, C. W. Chin

(iii) High quality $Al_{0.09}Ga_{0.91}N$ film on Si(111) by radio-frequency molecular beam epitaxy
L. S. Chuah, Z. Hassan, H. Abu Hassan, M. Hussein, F. K. Yam, N. Zainal, C. W. Chin, S. M. Thahab

(iv) Photoelectrochemical etching of GaN using aqueous KOH solutions
C. W. Chin, Z. Hassan, F. K. Yam, L. S. Chuah

46. International Conference on Advancement of Materials and Nanotechnology - ICAMN '07 (May 29- June1, 2007)

(i) UV photodetector based on high quality GaN grown on Si(111) by RF-MBE
(p. 75 (Abstracts))
L. S. Chuah, Z. Hassan, H. Abu Hassan, C. W. Chin

(ii) Growth of high quality $In_{0.47}Ga_{0.53}N$/GaN heterostructure on Si(111) via RF-MBE and its application to MSM photodiode
(p. 196 (Abstracts))
L. S. Chuah, Z. Hassan, H. Abu Hassan

(iii) Surface morphology of porous Si, prepared by laser-induced etching
(p. 189-190 (Abstracts))
N. K. Ali, Khalid M. Omar, Z. Hassan, Md R. Hashim, H. Abu Hassan, N. M. Ahmed

47. International Conference on Nanoscience and Technology (June 4–6, 2007), China

Growth of ZnO nanostructures from catalyst-free d.c. magnetron sputtering
K. G. Saw, Y. T. Lim, K. Ibrahim, Z. Hassan

48. ISESCO International Workshop and Conference on Nanotechnology - IWCN 2007 (June 12-15, 2007)

(i) Series resistance in thin film n-GaN/AlN/n-Si(111) heterostructure
(p. 41 (Abstracts))
C. W. Chin, Z. Hassan, F. K. Yam, L. S. Chuah

(ii) Photoluminescence studies of nanoporous GaN prepared by electroless wet chemical etching
(p. 42 (Abstracts))
L. S. Chuah, Z. Hassan, H. Abu Hassan

(iii) Dark current reduction in MSM photodetector based on nanoporous GaN
(p. 51 (Abstracts))
F. K. Yam, Z. Hassan, K. M. Omar

(iv) Studies of nanoporous GaN film generated by electroless chemical etching
(p. 38 (Abstracts))
F. K. Yam, Z. Hassan, K. M. Omar

49. International Conference on Materials for Advanced Technologies - ICMAT 2007 (July 1 – 7, 2007), Singapore

(i) High quality $Al_{0.09}Ga_{0.91}N$ on Si(111) by RF-MBE and its application to MSM photodiode
(p. 69-70 (Abstracts))
L. S. Chuah, Z. Hassan, H. Abu Hassan, F. K. Yam, S. M. Thahab, C. W. Chin, N. M. Ahmed

(ii) Enhanced UV photodetector responsivity in porous GaN/Si(111) by metal-assisted electroless etching
L. S. Chuah, Z. Hassan, H. Abu Hassan

50. Malaysia-Japan International Symposium on Advanced Technology 2007 - MJSIT 2007 (Nov. 12-15, 2007)

(i) The growth of highly doped p-GaN on sapphire by RF plasma-assisted molecular beam epitaxy
C. W. Chin, Z. Hassan, F. K. Yam

(ii) Effects of thermal annealing of Pt Schottky contacts on n-GaN
C. W. Chin, Z. Hassan, F. K. Yam

(iii) Red emission of thin film electroluminescent device based on p-GaN
L. S. Chuah, Z. Hassan, H. Abu Hassan

(iv) Optical characterization of GaN thin film grown on Si(111) by radiofrequency plasma-assisted molecular beam epitaxy
L. S. Chuah, Z. Hassan, H. Abu Hassan

(v) InGaN double heterostructure (DH) laser diode performance and optimization
S. M. Thahab, H. Abu Hassan, Z. Hassan

(vi) $Al_{0.15}Ga_{0.85}N$/GaN heterostructure field effect transistors (HFET) device structure optimization and thermal effects
S. M. Thahab, H. Abu Hassan, Z. Hassan

51. 6th Asean Microscopy Conference (Dec. 10-12, 2007)

(i) Effects of annealing temperature on cerium oxide thin filmd deposited on silicon via metalorganic decomposition
F. A. Jasni, K. Y. Cheong, Z. Lochman, Z. Hassan

(ii) Properties of ZrO_2 high-k gate oxide thin films grown via anodic oxidation process
N. R. Z. Abidin, K. Y. Cheong, Z. Lochman, Z. Hassan

52. 23rd Regional Conference on Solid State Science and Technology - RCSST 2007 (Nov. 27-29, 2007)

(i) Pt Scottky contact on n-type GaN for hydrogen gas sensors
C. W. Chin, Z. Hassan, F. K. Yam

(ii) Schottky diodes based on p-type GaN grown by radio-frequency molecular beam epitaxy
L. S. Chuah, Z. Hassan, C. W. Chin, F. K. Yam, H. Abu Hassan

(iii) The performance of InGaN laser diodes consists of a separate confinement heterostructure with a multiple quantum well active region
S. M. Thahab, H. Abu Hassan, Z. Hassan

(iv) Influence of thick n-AlGaN contact layer on the performance of InGaN laser diode with modulation doped strain-layer superlattices
S. M. Thahab, H. Abu Hassan, Z. Hassan

53. 2007 IEEE Regional Symposium on Microelectronics - RSM 2007 (Dec. 3-6, 2007)

(i) Growth and characterization of Si-doped n-GaN by RF plasma-assisted molecular beam epitaxy
C. W. Chin, Z. Hassan, F. K. Yam, L. S. Chuah

(ii) Electrical characteristics of Pt Schottky contact on InGaN
C. W. Chin, Z. Hassan, F. K. Yam

(iii) Investigation on thermal stability of Pd Schottky contacts to p-type GaN/Si(111)
L. S. Chuah, Z. Hassan, C. W. Chin, F. K. Yam, H. Abu Hassan

(iv) Photoelectrical performances of photodiode based on p-GaN/n-Si structure
L. S. Chuah, Z. Hassan, C. W. Chin, F. K. Yam, H. Abu Hassan

54. National Physics Conference 2007 - PERFIK 2007 (Dec. 26-28, 2007)

(i) Characteristics of thermally treated contacts on nanoporous GaN based MSM photodetector (p. 77 (Abstracts))
L. S. Chuah, Z. Hassan, H. Abu Hassan

(ii) Morphology and luminescence properties of porous $Al_{0.09}Ga_{0.91}N$ generated via Pt-assisted electroless etching
(p. 23 (Abstracts))
L. S. Chuah, Z. Hassan, H. Abu Hassan

(iii) Structural, optical and electrical properties of n-type GaN on Si(111) grown by RF plasma-assisted molecular beam epitaxy

(p. 56 (Abstracts))
C. W. Chin, Z. Hassan, F. K. Yam

(iv) Effect of varying quantum well thickness on the performance of InGaN/GaN single quantum well laser diode
(p. 28 (Abstracts))
S. M. Thahab, H. Abu Hassan, Z. Hassan

(v) Ridge geometry InGaN multi quantum structure laser diode
(p. 79 (Abstracts))
S. M. Thahab, H. Abu Hassan, Z. Hassan

(vi) The methodology effects on surface morphology pattern of porous semiconductors
(p. 121 (Abstracts))
Khalid M. Omar, N. K. Ali, Z. Hassan, Md. R. Hashim

(vii) Optical characteristics of poly[(9,9-dioctylfluorenyl-2,7-diyl)-co-(1,4-phylene)]-(F8P) on ITO coated glass
(p. 121-122 (Abstracts))
S. S. Tneh, H. Omar, H. Abu Hassan, Z. Hassan

55. The OSA Topical Conference on Nanophotonics 2008 - NANO2008 (May 26-29, 2008), China

(i) Nanocrystalline InN film grown on porous silicon/Si(111) substrate
(p. 83 (Abstracts))
L. S. Chuah, Z. Hassan, S. S. Ng, H. Abu Hassan

(ii) GaN Schottky barrier photodiode with thin AlN cap layer
(p. 120 (Abstracts))
L. S. Chuah, Z. Hassan, H. Abu Hassan, N. M. Ahmed

(iii) RF-MBE growth of GaN on sapphire for gas sensing application
(p. 99 (Abstracts))
C. W. Chin, Z. Hassan, F. K. Yam

(iv) Improvement of carrier confinement using AlGaN/GaN multiquantum barrier layers in InGaN laser diode
(p. 77 (Abstracts))
S. M. Thahab, H. Abu Hassan, Z. Hassan

(v) Quantum well number effect and characterization of InGaN/GaN laser diode
(p. 92 (Abstracts))
S. M. Thahab, H. Abu Hassan, Z. Hassan

(vi) Composition dependence of the surface phonon-polariton mode in wurtzite $In_xGa_{1-x}N$ $(0\leq x\leq 1)$ ternary alloy
(p. 61 (Abstracts))
S. S. Ng, Z. Hassan, H. Abu Hassan

(vii) Surface phonon-polariton characteristics of bulk wurtzite InN
(p. 81 (Abstracts))
S. S. Ng, Z. Hassan, H. Abu Hassan

56. 2nd International Conference on Functional Materials and Devices – ICFMD 2008 (June 16-19, 2008)

(i) Optical absorption of poly[(9,9-dioctylfluorenyl-2,7-diyl)-co-(1,4-phylene)]-(F8P) on transparent substrates
(A-212 (Abstracts))
S. S. Tneh, H. Abu Hassan, Z. Hassan

(ii) Growth of self-assembled InGaN quantum dots on Si(111) at reduced temperature by RF plasma-assisted molecular beam epitaxy
(A-296 (Abstracts))
C. W. Chin, Z. Hassan, F. K. Yam

(iii) FTIR spectroscopy and high resolution x-ray diffraction investigation of thin films of AlN on Si substrates by MBE
(A-297 (Abstracts))
S. C. Teoh, C. W. Chin, Z. Hassan, S. S. Ng, L. S. Chuah, M. Hussein Mourad, F. K. Yam, K. Ibrahim

(iv) Plasma-assisted molecular beam epitaxy growth of hexagonal crack free $In_{0.26}Ga_{0.74}N$ thin film on Si(111)
(A-298 (Abstracts))
L. S. Chuah, Z. Hassan, S. S. Ng, H. Abu Hassan

(v) Electrical characterization of Ni Schottky contacts on GaN/ Si(111) with thin AlN cap layer
(A-299 (Abstracts))
L. S. Chuah, Z. Hassan, H. Abu Hassan

(vi) The effects of strained single-quantum-well on the performance of InGaN laser diodes
(A-300 (Abstracts))
S. M. Thahab, H. Abu Hassan, Z. Hassan

(vii) Influences of AlGaN/GaN strained layer superlattices on the performance of InGaN DQWs laser diodes
(A-301 (Abstracts))
S. M. Thahab, H. Abu Hassan, Z. Hassan

57. International Conference on Nanoscience and Nanotechnology 2008 – NANO-SciTech 2008 (November 18-21, 2008)

(i) Metal-insulator-semiconductor (MIS) structure with AlN dielectric
(P-181 (Abstracts))
A. Mahyuddin, Z. Hassan, K. Y. Cheong

(ii) The size effect in small aperture confined vertical cavity surface emitting laser
(O-038 (Abstracts))
Farah Z. Jasim, Khalid Omar, Z. Hassan

(iii) The studies of doping concentration effects on VCSEL laser
(P-089 (Abstracts))
Farah Z. Jasim, Khalid Omar, Z. Hassan

(iv) The study of energy bandgap of $In_xAl_yGa_{1-x-y}N$ quarternary alloys using UV-VIS spectroscopy
(P071 (Abstracts))
N. H. Abd. Raof, S. S. Ng, H. Abu Hassan, Z. Hassan

58. 2nd International Conference on Science and Technology – ICSTIE 2008 (December 12-13, 2008)

(i) Growth and properties of AlN/GaN/AlN film on Si substrates
(p. 95 (Abstracts))
A. Mahyuddin, Z. Hassan, C. W. Chin, K. Y. Cheong

(ii) Structural quality of AlGaN/GaN/AlN on Si substrate grown by plasma-assisted molecular beam epitaxy
(p. 98 (Abstracts))
M. Z. Mohd Yusoff, Z. Hassan, C. W. Chin, S. M. Thahab, H. Abu Hassan

(iii) Optic vibrational property of AlN on Si(111) substrate grown by RF-PAMBE
(p. 100 (Abstracts))
N. H. Abd. Raof, S. S. Ng, H. Abu Hassan, Z. Hassan

(iv) Surface phonon-polariton characteristics of $In_{0.47}Ga_{0.53}N$/GaN on Si(111) substrate grown by RF-PAMBE
(p. 102 (Abstracts))
S. S. Ng, L. S. Chuah, Z. Hassan, H. Abu Hassan

59. 4th International Conference on Recent Advances in Materials, Minerals and Environment and 2nd Asian Symposium on Materials and Processing –RAMM & ASMP '09 (June 1-3, 2009)

(i) Photoluminescence characterization of quaternary $In_xAl_yGa_{1-x-y}N$
(p. 133 (Abstracts))
S. K. Mohd Bakhori, S. S. Ng, H. Abu Hassan, Z. Hassan, K. Ibrahim

(ii) Surface phonon polariton modes of wurtzite structure III-nitride semiconductors
(p. 133 (Abstracts))
S. S. Ng, H. Abu Hassan, Z. Hassan

(iii)XRD characterization of $In_xAl_yGa_{1-x-y}N$ quaternary alloys
(p. 212 (Abstracts))
N. H. Abd. Raof, S. S. Ng, H. Abu Hassan, Z. Hassan

(iv) The effects of surface roughness on the broadening of surface phonon-polariton peak of $Al_xGa_{1-x}N$ thin films
(p. 214 (Abstracts))
S. S. Ng, Z. Hassan, H. Abu Hassan

(v) Study of radius size effects on vertical cavity surface emitting laser performance
(p. 218 (Abstracts))
Farah Z. Jasim, Khalid Omar, Z. Hassan

(vi) Effect of annealing on the electrical properties of metal-insulator-semiconductor (MIS) structure with AlN dielectric
(p. 222 (Abstracts))
A. Mahyuddin, Z. Hassan, K. Y. Cheong

60. Second International Conference and Workshops on Basic and Applied Sciences & Regional Annual Fundamental Science seminar 2009 (June 2-4, 2009)

The investigation of Pd Schottky contact on porous GaN for hydrogen gas detection
(p. 33 (Abstracts))
M. L. Oh, F. K. Yam, S. S. Tneh, Z. Hassan

61. International Conference on Materials for Advanced Technologies - ICMAT 2009 (June 28 – July 3, 2009), Singapore

Electrical properties of AlGaN/GaN heterostructure field effect transistors (HFETs) with and without Mg-doped carrier confinement layer
(A02641-04537 (Abstracts))
Assad Hussein, Z. Hassan, H. Abu Hassan, S. Thahab

62. International Conference on Applied Physics 2009 – ICAP 2009 (July 29-31, 2009), Norway

(i) Surface morphology and formation of nanostructured porous GaN by UV-assisted electrochemical etching
L. S. Chuah, Z. Hassan, C. W. Chin, H. Abu Hassan

(ii) Performance of InGaN/GaN laser diode based on quaternary alloys stopper and superlattice layers
S. M. Thahab, H. Abu Hassan, Z. Hassan

(iii) Surface phonon polariton in InAlGaN quaternary alloys
S. S. Ng, Z. Hassan, H. Abu Hassan

(iv) InAlGaN quaternary multi-quantum wells UV laser diode performance and characterization
S. M. Thahab, H. Abu Hassan, Z. Hassan

(v) Structural and optical properties of $In_xAl_yGa_{1-x-y}N$ quaternary alloys
*N. H. Abd. Raof, H. Abu Hassan, S. K. Mohd Bakhori, S. S. Ng, Z. Hass*an

63. International Advanced Technology Congress 2009 (November 3-5, 2009)

(i) Infrared properties of bulk ZnO semiconductor
(p. 50 (Abstracts))
M. A. Ahmad, S. K. Mohd Bakhori, S. S. Ng, Z. Hassan, H. Abu Hassan

(ii) Photoluminescence and XRD crystalline studies of $In_xAl_yGa_{1-x-y}N$ quaternary alloys
(p. 51 (Abstracts))
S. K. Mohd Bakhori, N. H. Abd. Raof, S. S. Ng , H. Abu Hassan, Z. Hassan

64. International Conference on Electronics, Materials and Packaging – EMAP 2009 (December 1-3, 2009)

(i) Growth of high quality ZnO nanowires without the presence of catalyst
(p. 46 (Abstracts))
H. I. Abdulgafour, Z. Hassan, F. K. Yam, N. Al-Hardan

(ii) Effects of traps and polarization charges on devices performance of AlGaN/GaN high electron mobility transistors
(p. 46 (Abstracts))
A. SH. Hussein, Z. Hassan, H. Abu Hassan, S. M. Thahab

(iii) Structural and optical characterization of AlN on Si(111) grown by RF-PAMBE
(p. 55 (Abstracts))
N. H. Abd. Raof, S. S. Ng, H. Abu Hassan, Z. Hassan

(iv) Energy band gap studies of $In_xAl_yGa_{1-x-y}N$ quaternary alloys using photoluminescence spectroscopy
(p. 56 (Abstracts))
S. K. Mohd Bakhori, S. S. Ng , H. Abu Hassan, Z. Hassan, K. Ibrahim

(v) Characterization of sputtered Ti/TiN on SiO_2/Si(100) with the application of substrate power
(p. 56 (Abstracts))
M. T. Leow, K. E. Lee, Z. Hassan, G. Omar, H. C. Lim, C. F. Chan, E. T. Siew, Z. M. Chuah

(vi) Optical phonon modes of AlGaN ternary alloys
(p. 76 (Abstracts))
S. S. Ng, Z. Hassan, H. Abu Hassan

(vii) Surface phonon polariton characteristics of bulk wurtzite zinc oxide semiconductors
(p. 76 (Abstracts))
S. C. Lee, S. S. Ng, Z. Hassan, H. Abu Hassan

(viii) Growth and characterization of $Al_{0.11}Ga_{0.89}N$ epilayers grown on Si(111) by RF-plasma assisted MBE
(p. 77 (Abstracts))
M. Z. M. Yusoff, Z. Hassan, H. Abu Hassan, Y. Yusof

(ix) Surface morphology of porous silicon prepared by laser-induced etching
(p. 83 (Abstracts))
Asmiet Ramizy, Khalid Omar, Z. Hassan

65. National Conference on Physics – PERFIK 2009 (December 7-9, 2009)

(i) Thermal annealing behavior of Pt on p-GaN ohmic contacs
(p. 10 (Abstracts))
S. G. Teo, Z. Hassan, F. K. Yam

(ii) Characterization of AlGaN/GaN heterostructure field effect ransistors (HFETs) with variable thickness channel and substrate type
(p. 11 (Abstracts))
A. SH. Hussein, Z. Hassan, H. Abu Hassan, S. M. Thahab

(iii) Single and double quantum well effects on GaN-based VCSELs performance
(p. 17 (Abstracts))
A. Zandi, Farah Z. Jasim, Z. Hassan, H. Abu Hassan

(iv) Theoretical and experimental studies of the polarized infrared reflectance spectra of bulk wurtzite zinc oxide semiconductor
(p. 17 (Abstracts))
S. C. Lee, S. S. Ng, Z. Hassan, H. Abu Hassan

(v) Electrical characteristics and interface properties of III nitride-based metal-insulator-semiconductor structure
(p. 19 (Abstracts))
A. Mahyuddin, Z. Hassan, Y. Yusof, K. Y. Cheong

(vi) Polarized infrared reflectance study of InGaN semiconductor
(p. 20 (Abstracts))
M. A. Ahmad, S. C. Lee, S. K. Mohd Bakhori, S. S. Ng, Z. Hassan, H. Abu Hassan

(vii) Aperture oxide confinement effects in vertical cavity surface emitting laser
(p. 27 (Abstracts))
Farah Z. Jasim, Khalid Omar, Z. Hassan

(viii) The influence of geometrical structure of InAlGaN double quantum well (DQWs) UV diode laser on its performance and operating parameters
(p. 28 (Abstracts))
A. J. Ghazai, H. Abu Hassan, Z. Hassan

(ix) Well-aligned zinc oxide nanoflowers prepared without catalyst
(p. 98 (Abstracts))
H. I. Abdulgafour, Z. Hassan, F. K. Yam, N. Al-Hardan

(x) Visible light emission due to quantum size effects in porous crystalline silicon
(p. 101 (Abstracts))
L. S. Chuah, Z. Hassan, H. Abu Hassan

(xi) Study of porous silicon fabricated by photoelectrochemical (PEC) wet etching of n-Si(100)
(p. 102 (Abstracts))
L. S. Chuah, A. Mahmood, Z. Hassan, H. Abu Hassan, S. K. Mohd Bakhori

(xii) The study of energy band gaps of $Al_xIn_yGa_{1-x-y}N$ quaternary alloys using UV-VIS spectroscopy
(p. 110 (Abstracts))
M. A. Abid, H. Abu Hassan, Z. Hassan, S. S. Ng, N. H. Abd. Raof, S. K. Mohd Bakhori

(xiii) XRD analyses of $In_{0.10}Al_xGa_{0.90-x}N$ ($0 \leq x \leq 0.20$) quaternary alloys
(p. 111 (Abstracts))
Y. Yusof, M. A. Abid, N. H. Abd Raof, S. S. Ng, H. Abu Hassan, Z. Hassan

(xiv) Kramers-Kronig analysis of infrared reflectance spectra of quaternary $In_xAl_yGa_{1-x-y}N$ alloys
(p. 116 (Abstracts))
N. H. Abd. Raof, S. S. Ng, H. Abu Hassan, Z. Hassan

(xv) Determination of the Al composition of $Al_xGa_{1-x}N$ thin films by means of EDX and XRD techniques
(p. 124 (Abstracts))
S. S. Ng, Z. Hassan, H. Abu Hassan

(xvi) Thermal degradation of single crystal zinc oxide and the growth of nanostructures
(p. 152 (Abstracts))
K. G. Saw, G. L. Tan, Z. Hassan, F. K. Yam, S. S. Ng

(xvii) Study on the properties of ionized metal plasma methodology on titanium
(p. 164 (Abstracts))
M. T. Leow, K. E. Lee, Z. Hassan, C. F. Chan, E. T. Siew, Z. M. Chuah

66. 9th National Symposium on Polymeric Materials – NSPM 2009 (December 14-16, 2009)

Effect of annealing temperature and concentration of poly [(9,9-dioctylfluorenyl-2,7-diyl)-co-(1,4-phenylene0] on photoluminescence intensity of polymer light emitting materials
Siti Nur Sarah Ridhuwan, Haslan Abu Hassan, Zainuriah Hassan

67. International Conference on Nanotechnology Research and Commercialization – ICONT 2009 (December 14-17, 2009)

(i) Photoluminescence of $Al_xIn_yGa_{1-x-y}N$ quaternary alloys grown on sapphire substrates by molecular beam epitaxy
(p. 61 (Abstracts))
Muslim A. Abid, H. Abu Hassan, Z. Hassan, S. S. Ng, S. K. Mohd Bakhori, N. H. Abd. Raof

(ii) Thermal effects on performance in vertical cavity surface emitting lasers
(p. 68 (Abstracts))
Farah Z. Jasim, Khalid Omar, Z. Hassan

(iii) Effect of electrochemical anodization parameters towards the properties of the silicon nanostructures
(p. 100 (Abstracts))
Asmiet Ramizy, Wisam J. Aziz, Khalid Omar, Z. Hassan, K. Ibrahim

68. 25th Regional Conference on Solid State Science and Technology 2009 – RCSSST 2009 (December 21-23, 2009)

(i) GaN-based wide band gap semiconductors grown on silicon by PA-MBE for ultraviolet photodetection – Invited speaker
(p. 37 (Abstracts))
L. S. Chuah, Z. Hassan

(ii) Theoretical and experimental studies of polarized infrared reflectance spectra of bulk wurtzite 6H-SiC semiconductors
(p. 94 (Abstracts))
S. C. Lee, K. T. Hor, S. S. Ng, H. Abu Hassan, Z. Hassan,

69. The 2nd ISESCO International Workshop and Conference on Nanotechnology – IWCN 2010 (January 25-27, 2010)

(i) Structural and optical studies of GaN pn-junction with AlN buffer layer grown on Si(111) by RF plasma enhanced MBE
(p. 55 (Abstracts))
M. Z. Mohd Yusoff, C. W. Chin, Z. Hassan, H. Abu Hassan

(ii) The doping effect of porous silicon on solar cells performance
(p. 59 (Abstracts))
Khalid Omar, Asmiet Ramizy, Wisam J. Aziz, Z. Hassan, K. Ibrahim

(iii) The theoretical study of optical phonon modes of $A_xGa_{1-x}N$ alloys
(p. 75 (Abstracts))

Z. Barkatullah, H. Abu Hassan, S. S. Ng, Z. Hassan

(iv) Characterization of Mg-doped AlGaN thin film grown by RF plasma-assisted molecular beam epitaxy
(p. 85 (Abstracts))
A. SH. Hussein, Z. Hassan, H. Abu Hassan,C. W. Chin, M. A. Ahmad

(v) Study of undoped porous GaN prepared by UV assisted electrochemical etching
(p. 90 (Abstracts))
A. Mahmood, Z. Hassan, F. K. Yam

70. 4th Colloquium on Postgraduate Research: National Postgraduate Colloquium on Materials, Minerals and Polymers 2010 – MAMIP 2010 (January 27-28, 2010)

Structural characteristics of $Al_xGa_{1-x}N$ epilayers grown on Si(111) substrate
(p. 30 (Abstracts))
M. Z. Mohd Yusoff, Z. Hassan C. W. Chin, S. M. Thahab, H. Abu Hassan

71. World Academy of Science, Engineering and Technology -– WASET 2010 (February 24-26, 2010) Penang, Malaysia

III-nitride semiconductor materials technology and applications
Zainuriah Hassan (Plenary Speaker)

72. The 8th International Symposium on Semiconductor light Emitting Devices – ISSLED 2010 (May 16-21, 2010)

(i) Enhancement in efficiency of silicon solar cell based on porous surfaces
(p. 26 (Abstracts))
Asmiet Ramizy, Z. Hassan, Khalid Omar

(ii) A study of operating parameters and barrier thickness of $Al_{0.08}In_{0.08}Ga_{0.84}N/Al_xIn_yGa_{1-x-y}N$ multi-quantum wells laser diodes
(p. 33 (Abstracts))
A. J. Ghazai, S. M. Thahab, H. Abu Hassan, Z. Hassan

(iii) Laser-induced etching parameters impact on optical properties of the silicon nanostructures
(p. 60 (Abstracts))
Asmiet Ramizy, Z. Hassan, Khalid Omar

73. Regional Annual Fundamental Science Symposium 2010 – RAFSS 2010 (June 8-9, 2010)

(i) Energy band gap studies of $In_xAl_yGa_{1-x-y}N$ quaternary alloys using photoluminescence spectroscopy
(p. 69 (Abstracts))
S. K. Mohd Bakhori, S. S. Ng, H. Abu Hassan, Z. Hassan

(ii) Polarized infrared reflectance study of ZnO film semiconductor
(p. 45 (Abstracts))

M A. Ahmad, P. K. Ooi, S. S. Ng, Z. Hassan

74. International Conference on X-rays and Related Techniques in Research and Industry 2010 – ICXRI 2010 (June 9-10, 2010)

(i) High resolution x-ray diffraction analysis of III-nitride semiconductors
Zainuriah Hassan – Invited speaker

(ii)Structural properties studies of GaN on 6H-SiC by menas of x-ray diffraction technique
C. G. Ching, S. S. Ng, Z. Hassan, H. Abu Hassan

(iii) XRD analyses of $In_xGa_{1-x}N$ (0.20≤x≤0.80) ternary alloys
Y. Yusof, M. A. Abid, S. S. Ng, H. Abu Hassan, Z. Hassan

75. 18th International Vacuum Congress - IVC-18 (August 23-27, 2010)

The Growth of Heavily Mg Doped GaN thin film on Si substrate by Molecular Beam Epitaxy
C.W. Chin, F.K. Yam, Z. Hassan, M. A. Ahmad. Y. Yusof, S. K. Mohd Bakhori

76. 3rd International Conference on Functional Materials and Devices 2010 – ICFMD 2010 (June 14-17, 2010)

Characteristics of undoped porous GaN prepared by UV assisted electrochemical etching
(p. 27 (Abstracts))
A. Mahmood, Z. Hassan, F. K. Yam, L. S. Chuah

77. 2010 National Conference on Physics – PERFIK 2010 (October 27-30, 2010)

Structural properties studies of zinc oxide thin film grown on silicon carbide by means of x-ray diffraction technique
C. G. Ching, P. K. Ooi, S. S. Ng, Z. Hassan,H. Abu Hassan, N. H. Al-Hardan, M. J. Abdullah
(p. 85 (Abstracts))

78. International Conference on the Advancement of Materials and Nanotechnology 2010– ICAMN II 2010 (November 29 - December 1, 2010)

(i) Fabrication and characterization of GaN nanowires grown using thermal evaporation
K. Omar, L. Shekari, H. Abu Hassan, A. Ramizy, Z. Hassan,
(p. 62 (Abstracts))

(ii) Fabrication and structural characterization of GaN nanowires and nanoribbons grown using thermal evaporation
L. Shekari, H. Abu Hassan, Z. Hassan,
(p. 50 (Abstracts))

(iii) Reactive sputtering growth and characterization of InN on Si substrates
M. Amirhoseiny, Z. Hassan, S. S. Ng, M. A. Ahmad

(p. 85 (Abstracts))

79. 2010 International Conference on Enabling Science and Nanotechnology – Escinano 2010 (December 1-3, 2010)

(i) Growth of ZnO nanowires without catalyst on porous silicon
H. I. Abdulgafour, Z. Hassan, F. K. Yam, M. J. Jawad, N. K. Ali

(ii) Effect of porosity on the characteristics of GaN grown on sapphire
Ainorkhilah Mahmood, Zainuriah Hassan, Fong Kwong Yam, Lee Siang Chuah

80. National Seminar on Science and Mathematics Applications 2010 – SKASM 2010 (December 8-10, 2010)

The structural study of titanium dioxide nanotubes prepared by anodic process
S. W. Ng, F. K. Yam, K. P. Beh, S. S. Tneh, Z. Hassan,

81. 2nd ASEAN – APCTP Workshop on Advanced Materials Science and Technology (December 21-23, 2010)

(i) Structural and surface morphology of ZnO thin films grown by RF magnetron sputtering
(p. 39 (Abstracts))
Yushamdan Yusof, Mohd Anas Ahmad, Ng Sha Shiong, Halim Ahmad, Mat Johar Abdullah, Zainuriah Hassan, Haslan Abu Hassan

(ii) Synthesis and characterization of nanocrystalline CdS thin films via chemical bath deposition
(p. 54 (Abstracts))
M. A. Mahdi, Asmiet Ramizy, Z. Hassan, S. S. Ng

(iii) MSM-photodetectors based on $Al_xGa_{1-x}N$/GaN heterostructures grown on Si(111) by molecular beam epitaxy
(p. 55 (Abstracts))
A. SH. Hussein, Z. Hassan, S. M. Thahab, H. Abu Hassan, N. M. Ahmed

(iv) MSM-photodetectors based on $Al_xGa_{1-x}N$/GaN heterostructures grown on Si(111) by molecular beam epitaxy
(p. 63 (Abstracts))
A. J. Ghazai, S. S. Thahab, H. Abu Hassan, Z. Hassan, A SH. Hussein

(v) Structural, optical and photoelectrochemical (PEC) charatcterization of n-Si(100) synthesized by wet chemical etching
(p. 75 (Abstracts))
L. S. Chuah, A. Mahmood, Z. Hassan, S. K. Mohd Bakhori

(vi) Nanostructured CdS grown by chemical bath deposition based on porous silicon substrate
(p. 76 (Abstracts))
Asmiet Ramizy, M. A. Mahdi, Z. Hassan, S. S. Ng

(vii) Characterization of InGaN thin film grown by RF-plasma molecular beam epitaxy
(p. 85 (Abstracts))
M. A. Ahmad, S. K. Mohd Bukhori, Y. Yusof, C. W. Chin, S. S. Ng, Z. Hassan, H. Abu Hassan

(viii) Structural and optical studies of GaN pn-junction with AlN buffer layer grown on Si(111) by RF plasma enhanced MBE
(p. 91 (Abstracts))
Mohd Zaki Mohd Yusoff, Zainuriah Hassan, Chin Che Woei, Haslan Abu Hassan, Mat Johar Abdullah

(ix) The investigation of $Al_{0.29}Ga_{0.71}N$/GaN/AlN and AlN/GaN/AlN thin films grown on Si(111) by RF-plasma assisted MBE
(p. 92 (Abstracts))
Mohd Zaki Mohd Yusoff, Azzafeerah Mahyuddin, Zainuriah Hassan, Haslan Abu Hassan, Mat Johar Abdullah

82. World Academy of Science, Engineering and Technology -– WASET 2011 (February 22-24, 2011) Penang, Malaysia

Nanostructured porous GaN for gas sensing applications
Zainuriah Hassan (Invited Speaker)

83. Professorial Talk (March 25, 2011)

III-nitrides semiconductor materials – Applications for optoelectronic and electronic devices
Zainuriah Hassan

84. International Conference on Nanotechnology – Research and Commercialization 2011 (June 6-9, 2011)

(i) Porous silicon-based violet-UV detetector
(p. 93 (Abstracts))
Naser M. Ahmed, Z. Hassan, Naif Alhardan

(ii) Effect of etching time on porous silicon processing
(p. 118 (Abstracts))
Khaldun A. Salman, Khalid Omar, Z. Hassan, A. J. Ghazai, A. J. Hashim

85. The International Conference for Nanomaterials Synthesis and Characterization 2011 – INSC2011 (July 4-5, 2011)

(i) The investigation of porous $Al_xGa1-xN$ layers on Si(111) substrtae with GaN/AlN as buffer layer
(p. 40 (Abstracts))
Y. Yusof, M. Z. Mohd Yusoff, A. Mahmood, Z. Hassan, H. Abu Hassan, M. J. Abdullah

(ii) Synthesis and characterization of vertically aligned ZnO nanrods on a variety of substrates
(p. 49-50 (Abstracts))
J. J. Hassan, Z. Hassan, H. Abu Hassan, M. A. Mahdi

(iii) Optical and structural characterization of GaN nanostructures
(p. 51-52 (Abstracts))
L. Shekari, H. Abu Hassan, S. M. Thahab, Z. Hassan

(iv) Structural properties of nanocrystalline PbS thin films prepared by chemical bath deposition

(p. 65 (Abstracts))
Ahmed Salman Obaid, Z. Hassan, M. A. Mahdi, Asmiet Ramizy

(v) Enhanced properties of porous GaN prepared by UV assisted electrochemical etching
(p.65-66 (Abstracts))
Ainorkhilah Mahmood, Naser Mahmoud Ahmed, Zainuriah Hassan, Yam Fong Kwong, Siti Khadijah Mohd Bakhori, Yushamdan Yusof, Chuah Lee Siang

(vi) Temperature effect on GaN-based VCSEL performance
(p. 67-68 (Abstracts))
A. Zandi, Z. Hassan, H. Abu Hassan

(vii) GaN nanowires grown on PZnO and PGaN by thermal evaporation
(p. 73-74 (Abstracts))
L. Shekari, H. Abu Hassan, S. M. Thahab, Z. Hassan

(viii) Crystal structure and optical properties of nanocrystalline InN/Si grown at low temperature
(p.75-76 (Abstracts))
Maryam Amirhoseiny, Zainuriah Hassan, Ng Sha Shiong

(ix) A study of growth of cadmium oxide nanostructure
(p.79 (Abstracts))
Mustafa Zaien, Khalid Omar, Z. Hassan

(x) The fabrication of Ag islands on AlN/GaN/AlN/Si(111) by using thermal evaporator and thermal annealing methods
(p. 101 (Abstracts))
M. Z. Mohd Yusoff, A. Mahyuddin, Z. Hassan, H. Abu Hassan, M. J. Abdullah

(xi) Growth and characterization of GaN p-n junction grown on Si (111) substrate by plasma-assisted molecular beam epitaxy
(p. 110(Abstracts))
Rosfariza Radzali, MohdAnas Ahmad, Z. Hassan, Yam Fong Kwong, ChinChe Woei

86. Asia-Pacific Workshop on Materials Characterization (September 22-24, 2011) India

Fabrication and characterization of nanostructured porous GaN on Si(111)
Zainuriah Hassan (Invited Speaker)
(p. 122 (Abstracts))
Z. Hassan, L. S. Chuah, A. Ramizy, C. W. Chin

87. 26th Regional Conference of Solid State Science and Technology 2011 – RCSSST 2011 (November 22-24, 2011)

(i) Nanostructured wide band gap semiconductor materials and their applications as gas sensors – Plenary speaker
(p. 29 (Abstracts))
Z. Hassan, A. Ramizy, H. I. Abdulgafour, C. W. Chin, F. K. Yam

(ii) GaN nanowire growth and analysis by different gas flow
(p. 43 (Abstracts))
L. Shekari, H. Abu Hassan, Z. Hassan

(iii) Current-voltage characteristics of n-$Al_{0.08}In_{0.08}Ga_{0.84}$ Schottky diode using Pt metal contact

(p. 106 (Abstracts))
Alaa J. Ghazai, H. Abu Hassan, Z. Hassan

(iv) The effect of InGaN growth with different indium mole fraction on structure and optical properties by PAMBE
(p. 174 (Abstracts))
M. A. Ahmad, S. K. Mohd Bakhori, C. W. Chin, S. S. Ng, Z. Hassan

88. Regional Annual Fundamental Science Symposium 2011 – RAFSS 2011 (December 20-21, 2011) Johor, Malaysia

Fabrication and characterization of humidity sensor based on Pd/ GaN
(p. 40 (Abstracts))
Li Li Low, F. K. Yam, K. P. Beh, A. Abdul Rahman, M. F. N. Mohd Nordin, Z. Hassan

89. International Conference on Enabling Science and Nanotechnology 2012 – ESciNano 2012 (January 5-7, 2012)

(i) InGaN-based multi-quantum well blue-violet light emitting diode
Extended Abstract (on CD)
Ahmad Hadi Ali, Ahmad Shuhaimi bin Abu Bakar, Zainuriah Hassan

(ii) Effects of structure parameters on time response and power-current characteristics of InGaN/GaN single quantum well laser by solving rate equations
Extended Abstract (on CD)
Ghasem Alahyarizadeh, Hassan Aghajani, Hadi Mahmoodi, Raheleh Rahmani, Zainuriah Hassan

(iii) Applications of image processing (IP) method on the structure measurements in porous GaN
Extended Abstract (on CD)
Ainorkhilah Mahmood, Naser Mahmoud Ahmed, Asmiet Ramizy, Zainuriah Hassan, Yam Fong Kwong, Chuah Lee Siang, Mohd Bukhari Md Yunus

(iv) ZnO nanostructures grown on porous silicon substrate without catalyst
Extended Abstract (on CD)
Nurul Izni Rusli, Hind Abdulgafour, Zainuriah Hassan, Fong Kwong Yam, Nihad K. Ali, Abdul Manaf Hashim, Mohamad Rusop Mahmood, Nafarizal Nayan

(v) Effect of crystal size on optical characteristics of porous silicon (110)
Extended Abstract (on CD)
Maryam Amirhoseiny, Zainuriah Hassan, Ng Sha Shiong

(vi) Defects in GaN film grown on Si(100) substrate
Extended Abstract (on CD)
Norzaini Zainal, Siti Nurul Waheeda Mohmad Zaini, Mohd Nuru Ehsan Yusof, Ezzah Azimah Alias, Rosfariza Radzali, Zainuriah Hassan

(vii) Characterization of p- and n-type GaN thin films grown by plasma-assisted molecular beam epitaxy
Extended Abstract (on CD)
Rosfariza Radzali, Norzaini Zainal, Yam Fong Kwong, Zainuriah Hassan

(viii) Ohmic contacts to p-type doped ZnO

Extended Abstract (on CD)
L. S. Chuah, S. S. Tneh, Z. Hassan, K. G. Saw, F. K. Yam

(ix) The effect of Al mole fraction of DBRs on the GaN-based VCSELs performance
Extended Abstract (on CD)
Azita Zandi Goharrizi, Zainuriah Hassan, Haslan Abu Hassan

(x) Analysis of the effect of surface electronic states of GaN nanowires on Si(111) substrates
Extended Abstract (on CD)
Leila Shekari, Haslan Abu Hassan, Zainuriah Hassan

(xi) To develop porous Si as substrate for better quality GaN layer
Extended Abstract (on CD)
Norzaini Zainal, Rosfariza Radzali, Muhammad Esmed Alif Samsudin, Muhamad Ikram Md Taib, Asmiet Ramizy, Zainuriah Hassan

90. 4th International Conference on Nanoscience (ICNS4) (March 12-14, 2012)
GaN nanowires on PSi and PGaN
L. Shekari, Haslan Abu Hassan, Zainuriah Hassan,
Proceedings of the 4th International Conference on Nanoscience (ICNS4) 378-380

91. The Asian International Conference on Materials, Minerals, and Polymer (MAMIP) 2012 (March 23-24, 2012), Penang

The Investigation of Morphological Characteristics of Porous Anodic Alumina Generated by Electrochemical Etching
L.K. Tan, F.K. Yam, K.P.Beh, Z. Hassan

92. International Conference on Computer, Electrical, Electronics & Biomedical Engineering (ICCEEBE'2012) (19-20, May 2012)

Study on influence of cavity length on the electrical properties of deep violet InGaN double quantum well lasers
Gh. Alahyarizadeh, Z. Hassan, S.M. Thahab and A.J. Ghazai

93. International Conference on Nanotechnology 2012 – ICONT 2012 (May 30-June1, 2012) Kuantan, Malaysia

Light Extraction from GaN using microcavity structure
(p. 71 (Abstracts))
Naser M. Ahmed, Z. Hassan

94. International Conference on X-rays & Related Techniques in Research & Industry 2012, ICXRI 2012 (3-5 July 2012)

(i) Non-destructive approach to investigate InGaN layer grown on Si (111) substrate
((p. 67 (Abstracts))
Rosfariza Radzali, Norzaini Zainal, Yam Fong Kwong, Chin Che Woei, Zainuriah Hassan

(ii) Properties of AlGaN/Si (111) substrate with different growth time
((p. 117 (Abstracts))
Azharul Ariff, Norzaini Zainal, Ahmad Hadi Ali, Zainuriah Hassan

(iii) Mechanism growth ZnO nanorods at different temperatures without catalyst by wet thermal oxidation process
((p. 159 (Abstracts))
H. I. Abdulgafour, Y. Yusof, Z. Hassan, and F. K. Yam

(iv) Structural and optical properties of In0.28Ga0.72N/Si(111) film grown by using PA-MBE technique
((p. 217 (Abstracts))
S. Hasson, Z. Hassan, F. K. Yam, Alaa Ghazai

(v) Morphology of porous silicon (100) with different etching time
((p. 235 (Abstracts))
M. Ikram Md Taib, M. E. A Samsudin, N. Zainal, S. Yaakob, R. Radzali, Z. Hassan

(vi) Detects atmosphere in GaN film on Si (100) substrate
((p. 237 (Abstracts))
S N Waheeda, M N Ehsan, N Zainal and Z Hassan

(vii) Optical investigation of GaN film grown on Si (111) substrates
((p. 239 (Abstracts))
M. N. E. Yusof, S. N. W. M. Zaini, N. Zainal and Z. Hassan

(viii) A simple method prepare nanocrystalline indium oxide on Si (110)
((p. 255 (Abstracts))
Maryam Amirhoseiny, Zainuriah Hassan, Ng ShaShiong

(ix) Structural and surface studies of undoped porous GaN grown on sapphire
((p. 269 (Abstracts))
A. Mahmood, Z. Hassan, Y. Yusof, Y. F. Kwong, C. L. Siang and N. M. Ahmed

(x) Structural and compositional characterization of heterostructure InGaN-based light emitting diode by high resolution x-ray diffraction
(p. 271 (Abstracts))
Ahmad Hadi Ali, Ahmad Shuhaimi bin Abu Bakar, Zainuriah Hassan and Yushamdan Yusof

(xi) Growth of nanocrystalline PbS thin films by solid-vapor deposition
((p. 280 (Abstracts))
A. S. Obaid, M. A. Mahdi and Z. Hassan

(xii) Effect of H2O2 on morphological properties of porous silicon (100)
((p. 288 (Abstracts))
M. E. A. Samsudin, M. Ikram Md Taib, N. Zainal, R. Radzali, S. Yaakob, Z. Hassan

(xiii) Effect of Mg doping on GaN
((p. 296 (Abstracts))
E. Azimah, N. Zainal, Z. Hassan, A. Shuhaimi

95. The 6th International Conference on Technological Advances of Thin Films & Surface Coatings (ThinFilms 2012), Singapore (14-17 July 2012)

Growth of self-assembled InGaN quantum dots on Si (111) at reduced temperature by molecular beam epitaxy
(p. 172 (Abstract))
C.W. Chin, Z. Hassan, F.K. Yam, M. A. Ahmad

96. 3rd International Conference on Photonic, 2012 (ICP2012) (1-3 October 2012)

Structural properties of InGaN-based light emitting diode epitaxial growth on Si (111) with AlN/InGaN buffer layer
(p. 22 (Abstract))
Ahmad Hadi Ali, Ahmad Shuhaimi and Zainuriah Hassan

97. International Conference on Advanced Material Engineering & Technology (ICAMET 2012) (28-30 November 2012)

Effects of cavity length on optical characteristics of deep violet InGaN DQW lasers
Ghasem Alahyarizadeh, Zainuriah Hassan, Sabah M. Thahab, Maryam Amirhoseiny, Alaa J. Ghazai

98. The 3rd ISESCO International Workshop and Conference on Nanotechnology 2012 (IWCN 2012) (5-7th December 2012)

A Study of Properties of the Nanocrystalline CdO Thin Film Prepared by Solid-vapor Deposition Method
M. Zaien, M. A. Ahmed, Z. Hassan

99. Advanced Materials Conference 2012 (AMC 2012) (12-13th December 2012)

The fast UV detection and hydrogen sensing of ZnO nanorod arrays grown on a flexible Kapton tape
J.J. Hassan, M.A. Mahdi, Naser M. Ahmed, H. Abu.Hassan, Z. Hassan

100. 4th International Conference on Solid State Science and Technology, ICSSST 2012 (18-20 December 2012)

(i) Fabrication of porous ZnO thin films via ammonium hydroxide: effects of etching time and oxidizer on the surface morphology and surface roughness
(p. 51(Abstract))
S. S. Ng, P. K. Ooi, S. Yaakob, M. J. Abdullah, H. Abu Hassan, Z. Hassan

(ii) GaN nanowires and nanoribbons: effects of ammonia flow rate on structural and vibrational properties
(p. 52 (Abstract))
K.P. Beh, F.K. Yam, S. Shahrudin, S.N.S. Ahmad Bistaman, Z. Hassan

(iii) Comparative study: defects properties in GaN on Si (100) and Si (111) substrates
(p. 56 (Abstract))
S N Waheeda; M N Ehsan; N Zainal; Z Hassan

(iv) Characterization of GaN sased P-N junction on Si substrate
(p. 101(Abstract))
E. Azimah, N.Zainal, A. Shuhaimi, Z. Hassan

(v) Characteristics of cuprous oxide thin films deposited on glass and polyethylene terephthalate substrates
(p. 109(Abstract))
P. K. Ooi, C. G. Ching, S. S. Ng, M. J. Abdullah, H. Abu Hassan, Z. Hassan

(vi) Effect of nitridation temperatures on gallium nitride thin films formed on silicon substrates
(p. 112(Abstract))
C. Y. Fong, C. G. Ching, S. S. Ng, F. K. Yam, H. Abu Hassan, Z. Hassan

(v) Fabrication and optical studies of porous GaN thin films via UV-assisted electrochemical etching approach
(p. 115(Abstract))
S. F. Cheah, S. S. Ng, F. K. Yam, H. Abu. Hassan, Z. Hassan

(vi) Growth mechansim of nanostructure PbS Thin Film via solid-vapor deposition
(p. 116(Abstract))
A.S. Obaid, M. A. Mahdi, Z. Hassan and M. Bououdina

(vii) Schottky characteristics of Pt contact on porous $In_{0.27}Ga_{0.73}N$ thin film revealed from I-V-T measurement
(p.118 (Abstract))
Saleh H. Abud, Z. Hassan, F. K. Yam

(viii) Structural properties of zinc oxide thin films deposited on various substrates
(p.119 (Abstract))
C. G. Ching, P. K. Ooi, S. S. Ng, Z. Hassan, H. Abu Hassan, M. J. Abdullah

101. International Conference on Education, Applied Sciences and Management (ICEASM'2012) (26-27th, December 2012)

Effect of Deposition Time on the PbS thin films Prepared Using Microwave-Assisted Chemical Bath Deposition: Structure and Optical Characterization
A. S. Obaid, M. A. Mahdi, Alaa Ahmed Dihe, and Z.Hassan

102. 2nd International Conference on Sustainable Materials (ICoSM2013) (26-27th March, 2013)

(i) Microstructural and optical properties of SnO thin film by thermal evaporation
(p.62 (Abstract))
L. S. Chuah, Z. Mohamed, Z. Hassan

(ii) Growth of vertically aligned ZnO nanorods arrays by hydrothermal method
(p.68 (Abstract))
Mahmoud Alimanaseh, Jalal Rouhi, Norzaini Zainal, Saeid Kakooei, Zainuriah Hassan

103. 2nd international Conference on Nanotechnologies and Biomedical Engineering; German-Moldovan Workshop on Novel Nanomaterials for Electronic, Photonic and Biomedical Applications, Republic of Moldova (18-20 April, 2013)

The role of alternating current in photo-assisted electrochemical porosification of GaN
(p. 383-384 (Proceedings))
Ainorkhilah Mahmood, Naser M. Ahmed, Ion Tiginyanu, Yushamdan Yusof, Yam Fong Kwong, Chuah Lee Siang, Zainuriah Hassan

104. Second International Conference on Advances in Computer and Information Technology (ACIT) (04-05 May, 2013)

An image encryption approach using quantum chaotic map
(doi:-10.3850/978-981-07-6261-2_36 (Proceedings))
A. Akhshani, S. Behnia, A. Akhavan, S-C. Lim, Z. Hassan

105. BOND21 - Joint International Conference on Nanoscience, Engineering and Management (19-21 August, 2013)

(i) Physical properties of porous $In_{0.08}Ga_{0.92}N$
(p.21 (Abstract))
Saleh H. Abud, Z. Hassan, F. K. Yam

(ii) Polycrystalline tin cadmium chalcogenide thin film grown by spray pyrolysis
(p.24 (Abstract))
A. S. Obaid, Alaa Ahmed Dihe, Z. Hassan, M. Bououdina

(ii) Structural and optical properties of hexagonal ZnO nanorods arrays on polycarbonate substrate (PC) by a simple hydrothermal process
(p.25 (Abstract))
Mahmoud Alimanaseh, Jalal Rouhi, Hadi Mahmodi, Norzaini Zainal, Saeid Kakooei, Zainuriah Hassan

(iv) Fabrication of gallium nitride (GaN) nanostructures by thermal chemical vapor deposition (TCVD) technique
(p.50 (Abstract))
Qahtan N. A , F. K. Yam, Z. Hassan, M. Bououdina

(v) Electrical characterization of Al/Ag contacts on al-Zn co-doped SnO_2 thin films deposited by solid state chemical vapor deposition
(p.55 (Abstract))
L. S. Chuah, S. S. Tneh, Z. Hassan

(vi) Post annealing effects on ITO thin films RF sputtered at different thicknesses on Si and glass
(p. 59 (Abstract))
Ahmad Hadi Ali, Ahmad Shuhaimi, Siti Khadijah, Zainuriah Hassan

(vii) Effect of reagents molar concentration on deposition rate of CdS thin films grown by chemical bath deposition under microwave irradiation
(p.70 (Abstract))
M. Husham, M. A. Mahdi, Z. Hassan,

106. 8th International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT) Spain (22-25 September 2013)

Porous In0.47Ga0.53N Prepared by KOH Electrochemical Etching with Different Light Source (p. 167 (Abstract))
R. Radzali, N. Zainal, F.K. Yam, Z. Hassan

107. 1st International Conference on the Science & Engineering of Materials ICOSEM 2013 (13-14 November 2013)

(i) Characterization of porous GaN prepared by KOH photoelectrochemical etching (p. 100 (Abstract))
R. Radzali, N. Zainal, F. K. Yam, Z. Hassan

(ii) Fabrication and characterization of aluminium nitride films on silicon substrate for a better overgrown layer
(p. 90 (Abstract))
YSM. Alvin, N. Zainal, Z. Hassan

108. International Conference on the Advancement of Materials and Nanotechnology 2013 ICAMN III 2013 (19-22 November, 2013)

Characterization of ITO/Ag and ITO/Ni Bi-Layer Transparent Conductive Electrodes
Ahmad Hadi Ali, Ahmad Shuhaimi, Mohd Anas Ahmad, Zainuriah Hassan

109. The 27th Regional Conference of Solid State Science and Technology - RCSSST27 (19-22 December, 2013)

(i) Attenuated total reflection studoes of honeycomb nanoporous GaN thin films
(p. 88 (Abstract))
S. F. Cheah, S. C. Lee, S. S Ng, F. K. Yam, H. Abu Hassan, Z. Hassan

(ii) Effect of indium tin oxide thin films thickness on optical and electrical characteristics
(p. 88 (Abstract))
Ahmad Hadi Ali, Ahmad Shuhaimi, Zainuriah Hassan

110. International Symposium on Fundamental and Applied Sciences - ISFAS (March 28-30, 2014) Japan

(i) Growth of rutile TiO_2 nanorods on Si substrates by CBD method at different concentrations of $TiCl_3$ solutions
Abbas M. Selman, Z. Hassan, M. Husham

(ii) Characteristics of Pt- and Ni/ Porous $In_{0.08}Ga_{0.92}N$ Schottky contacts
Saleh H. Abud, Z. Hassan, F. K. Yam, Naser M. Ahmed

111. 1st meeting of Malaysia Nitrides Research Group (MNRG 2014) – April 7, 2014

(i) Self-assembled $In_{0.5}Ga_{0.5}N$ Quantum Dots Grown by Plasma-Assisted Molecular Beam Epitaxy

(p. 12 (Abstract))
C.W. Chin, Z. Hassan, F.K. Yam

(ii) Reduction of Defects Density in GaN Layer Grown by Simpler and Low-Cost Effective Technique via Radio-Frequency Sputtering
(p. 12 (Abstract))
M.E.A Samsudin, N. Zainal, Z. Hassan

(iii) Synthesis of InGaN Nanostructures Grown on Si via Chemical Vapor Deposition
(p. 13 (Abstract))
Q.N. Abdullah, F.K. Yam, Z. Hassan

(iv) MBE Growth of Aluminum Nitride Heterostructures Grown on Si (111) Substrate
(p. 14 (Abstract))
M.Z. Mohd Yusoff, A. Mahyuddin, Z. Hassan, H. Abu Hassan, M.J. Abdullah

(v) Deposition and Fabrication of GaN on GaAs (100) Substrate via RF Sputtering
(p. 15 (Abstract))
M. Ikram Md Taib, N. Zainal, Z. Hassan

(vi) Improvement of Grain Coalescence in GaN/m-Plane Sapphire Grown via RF Sputtering
(p. 16 (Abstract))
A. Ariff, N. Zainal, Z. Hassan

(vii) Investigation of Hexagonal Inclusions in Thick and Bulk Cubic GaN
(p. 17 (Abstract))
S. N. Waheeda, N. Zainal, S. V. Novikov, A.V. Akimov, A. J. Kent, Z. Hassan

(viii) Porous InAlGaN Prepared by Photoelectrochemical Etching
(p. 18 (Abstract))
R. Radzali, Z. Hassan, N. Zainal, F.K. Yam

(ix) Characteristics of CVD Grown GaN Nanowires under Different NH_3 Flow Rate.
(p. 19 (Abstract))
Beh Khi Poay, Yam Fong Kwong, Syahkirah Shahrudin, Siti Noor Shuhada Ahmad Bistaman, Tan Lay Kim, Zainuriah Hassan.

(xi) Improved Optoelectronics Properties of Ni/Ag/ITO Transparent Conductive Electrodes on p-GaN
(p. 20 (Abstract))
Ahmad Hadi Ali, Ahmad Shuhaimi, Zainuriah Hassan

(xii) High Sensitivity of Undoped Porous GaN MSM Photodetector Using Platinum Contact
(p. 24 (Abstract))
Ainorkhilah Mahmood, Zainuriah Hassan, Naser M. Ahmed, Yushamdan Yusof, Yam Fong Kwong, Chuah Lee Siang

(xiii) *Characterization of GaN Layer for Fabrication of Photo-Detector*
(p. 25 (Abstract))
A. Zakwan, W. E. Putra, N. Zainal, Z. Hassan

(xiv) Low-bandgap $In_{0.52}Ga_{0.48}N$/Si-based solar cells
(p. 25 (Abstract))
Saleh H. Abud, Z. Hassan, F. K. Yam

112. International Symposium on Engineering and Natural Sciences - ISEANS (May 22-24, 2014) China

Effect of duration time on growth of rutile TiO_2 nanorods by chemical bath deposition method on Si substrate
Abbas M. Selman, Z. Hassan

113. International Conference on Mathematics, Engineering & Industrial Applications 2014-ICoMEIA 2014 (May 28-30, 2014)

(i) *Fabrication of porous anodic alumina using normal anodization and pulse anodization (p. 67 (Abstract))*
I.K. Chin, F. K. Yam, Z. Hassan

(ii) *Characteristics of titanium dioxide nanostructures synthesized via electrochemical anodization at different applied voltages*
(p. 92 (Abstract))
Y.L. Cheong, F.K Yam, Z. Hassan

(iii) *Stability of the anodic growth porous tungsten oxide in different solutions*
(p. 100 (Abstract))
Y.Chai, F. K. Yam, Z. Hassan

114. International Conference on Manufacturing Science and Technology – ICMST 2014 (June 7-8, 2014)

Effect of annealing treatment on growth of rutile TiO_2 nanorods by chemical bath deposition method on silicon substrate
Abbas M. Selman, Z. Hassan

115. International Conference on Advances in Pure and Applied Sciences– ICAPAS (November 3-4, 2014)

Growth of nanocrystalline CdS thin films on silicon (100) via microwave-assisted chemical bath deposition: Synthesis and characterization
(p. 8-9 (Abstract))
M. Husham, Z. Hassan, M. A. Mahdi, Abass M. Selman

116. Science Plus International Conference (December 20, 2014)

The fabrication and characterization of UV sensor based on TiO_2 nanorods array on silicon substrate heterojunction
Abbas M. Selman, Z. Hassan

117. International Conference on Nano-Electronic Technology Devices and Materials (IC-NET 2015) (February 27- March 2, 2015)

(i) Cus P- Type Thin Firm characterization Deposited on Ti, Ito And Glass Substrates Using Spray pyrolysis Deposition (spd) For Light Emitting Diode (Led) Application
(p. 38 (Abstract))
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Hiba S. Rasheed, Shrook A. Azzez

(ii) Systematic growth of highly aligned ZnO nanorod arrays by chemical bath deposition
(p. 46 (Abstract))
Sh.A. Azzez, Z. Hassan, J.J. Hassan, M. Alimanesh, H.S. Rasheed

(iii) Growth And Characterization Of Vanadium Oxide Nanorods Using Spray Pyrolysis Technique At Low Temperatures
(p. 48 (Abstract))
N.M.Abd- Alghafour, Naser, M.Ahmed, Z.Hassan, Sabah M.Mohammad

(iv) Simulation of Optimum Parameters for GaN MSM UV photodetector
(p. 55 (Abstract))
Mohanad A. Alhelfi , Naser M. Ahmed, M. R. Hashim, Z. Hassan

(v) Hydrothermal Growth Of Vertically Well-aligned and High Density ZnO Nanorods On Glass and Silicon Using A Simple And Low Cost System
(p. 62 (Abstract))
Sabah M. Mohammad, Z. Hassan, Naser M. Ahmed, Rawnaq A. Al-Yahya, Nabeel M. Abd-Alghafour

(vi) Characterization of Zno/Cu/Zno Multilayers Structure For Solar Cell Devices
(p. 69 (Abstract))
Hiba S. Rasheed, Z. Hassan, Naser M. Ahmed, Fayroz A. Sabah, Shrook A. Azzez

118. World Conference on Engineering & Applied Sciences (May 30-31, 2015)

Structural and photoluminescence studies of rutile TiO_2 nanorods prepared by CBD method on Si substrates
Abbas M. Selman, Z. Hassan

119. 2nd meeting of Malaysia Nitrides Research Group (MNRG 2015) –June 8-9, 2015

(i) Improved Optoelectronic Characteristics of Post-Annealed Ti/Al/ITO Transparent Conducting Electrodes Deposited on n-GaN
(p. 18 (Abstract))
Ahmad Hadi Ali, Ahmad Shuhaimi, Zainuriah Hassan

(ii) Fabrication of Porous GaN using Bottom-Up Approached through Electron Beam Evaporator for High Efficient Devices
(p. 18 (Abstract))
M.E.A Samsudin, N. Zainal, Z. Hassan

(iii) High Sensitivity of Porous Si-Doped GaN MSM Photodetector using Thermally Untreated Platinum Contact
(p. 20 (Abstract))
Ainorkhilah Mahmood, Zainuriah Hassan, Naser M. Ahmed, Yushamdan Yusof, Yam Fong Kwong,Chuah Lee Siang

(iv) Properties of Porous InGaNbased Hydrogen Gas Sensor
(p. 21 (Abstract))

R. Radzali, Z. Hassan, N. Zainal, F.K. Yam

(v) *Preliminary Studies of Porous GaNbased Dye-Sensitized Solar Cells*
(p. 21 (Abstract))
K.P. Beh, F.K. Yam, Y.L. Cheong, C.W Chin, L.K. Tan, Z. Hassan

(vi) *Optimization of Post-Annealing NH3Temperature for GaN Growth on GaAs (100) Substrate via Electron Beam Evaporator*
(p. 22 (Abstract))
M. Ikram MdTaib, N. Zainal, Z. Hassan

(vii) *Role of NH3Annealing Treatment in Improving ScN Layer onGaAs Substrate Using Electron Beam Evaporator*
(p. 22 (Abstract))
Y.S.M. Alvin, N. Zainal, Z. Hassan

(viii) *Optimization of Post-Annealing Treatment Conditions on GaN Layer Grown on m-Plane Sapphire Substrate by Electron Beam Evaporator*
(p. 25 (Abstract))
A. Ariff, N. Zainal, Z. Hassan, K. Ibrahim

(ix) *Preliminary Studies of InGaON Thin Film on Si Substrate Using Simple Growth Technique*
(p. 28 (Abstract))
S.S. Tneh, K.P. Beh, F.K. Yam, S.W. Ng, S.C. Lee, S.S. Ng, Z. Hassan

(x) *High Sensitivity Hydrogen Gas Sensor based on InGaN Quantum Dots*
(p. 28 (Abstract))
C.W. Chin, Z. Hassan, F.K. Yam

(xi) *Properties of p-GaN Layer on Different Nitride Surfaces*
(p. 29 (Abstract))
N. Fatihah, N. Zainal, Z. Hassan

(xii) *Growth of n-ZnOnanorods on p-GaN using an Aqueous Solution Method*
(p. 29 (Abstract))
Sabah M. Mohammad, Z. Hassan, Naser M. Ahmed

120. 5th International Conference on the Recent Advances in Materials, Mineral and Environment (RAMM) & 2nd International Postgraduate Conference on Materials, Mineral and Polymer (MAMIP) – August 4-6, 2015

(i) *Investigation and Characterization of ZnO Nanostructures Synthesized by Electrochemical Deposition*
(p. 135 (Abstract))
C. F. Mh, F. K. Yam, Z. Hassan

(ii) *The properties of ZnO/Cu/ZnO multilayer before and after annealing in the different atmosphere*
(p. 138 (Abstract))
Hiba S. Rasheed, Z. Hassan, Naser M. Ahmed, Fayroz A. Sabah

(iii) *Fabrication of Tungsten Oxide Nanostructure by Sol-Gel Method*
(p. 141 (Abstract))
Y. Chai, F. Y. Ha, F. K. Yam and Z. Hassan

(iv) Annealing Effects On Characterization Of CuS Thin Films
(p. 153 (Abstract))
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan, Hiba S. Rasheed

(v) Fabrication and characterization of ZnMgO Nanorod Arrays by Hydrothermal Growth Method
(p. 167 (Abstract))
Shrook A. Azzez, Z. Hassan, J. J. Hassan, C. W. Chin

121. 24th Scientific Conference of the Microscopy Society Malaysia SCMSM2015 (December 2-4, 2015)

Sidewall microstructure analysis of laser diced ultrathin silicon wafer using focused ion beam and transmission electron microscopy
(p. 49 (Abstract))
Michael Raj Marks, Foo Khong Yong, Zainuriah Hassan, Kuan Yew Cheong

122. The 2nd International Conference on Functional Materials and Metalurgy (ICOFM 2016) – May 28, 2016

(i) Influence of solution deposition rate on properties of V_2O_5 thin films deposited by spray pyrolysis technique
(p. 10 (Abstract))
N. M. Abd-Alghafour, Naser M. Ahmed, Z. Hassan, Sabah M. Mohammad

(ii) Catalyst-free growth of ZnO nanowires on ITO seed/glass by thermal evaporation method: Effects of ITO seed layer thickness
(p. 9 (Abstract))
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed

123. Laser Technology and Optic Symposium 2016 – September 5-6, 2016

(i) Catalyst-free growth of ZnO nanowire balls on ITO seeds glass by thermal evaporation
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed

(ii) Catalyst-free growth of ZnO tetrapod: Effects of growth temperature
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed

124. 2nd International Conference on Applied Physics and Engineering (ICAPE2016) – September 5-6, 2016

The effect of etching duration on structural properties of porous Si fabricated by a new two-steps alternating current photo-assisted electrochemical etching (ACPEC) technique for MSM photodetector applications
Extended abstract (p. 273-275)
R. Radzali, M. Z. Zakariah, A. Mahmood, A. F. A. Rahim, Z. Hassan, Y.Yusof

125. 3rd meeting of Malaysia Nitrides Research Group (MNRG 2016) – December 6-7, 2016

(i) *Innovative developments in GaN-based technology*
(p. 25 (Abstract))
Zainuriah Hassan

(ii) *Influence of annealing temperature on InN thin films grown by RF magnetron sputtering*
(p. 28 (Abstract))
Umar Bashir, Zainuriah Hassan, Naser M. Ahmed

(iii) *Review on UV-LEDs: State of the art and challenges ahead*
(p. 29 (Abstract))
M.E.A. Samsudin, N. Zainal, Z. Hassan,

(iv) *Phosphors for white LED conversion*
(p. 30 (Abstract))
Husnen R. Abd, Z. Hassan, Naser M. Ahmed, A. S. Yusof, Nabeel Z. Al-Hazeem

(v) *Near ultra-violet electroluminescence from a ZnO nanorods/p-GaN heterojunction light emitting diode*
(p. 31 (Abstract))
Sabah M. Mohammad, Z. Hassan, Naser M. Ahmed

(vi) *Closing green gap in LEDs technology: Challenges and future solutions*
(p. 31 (Abstract))
M. Ikram MdTaib, N. Zainal, Z. Hassan

(vii) *Effects of ammonia flow rate on the synthesis of AlGaN thin films prepared via spin coating approach*
(p. 35 (Abstract))
Nurul Atikah Mohd Isa, Sha Shiong Ng, Z. Hassan

(viii) *Sol concentration effects on sol-gel spin coated indium nitride thin films*
(p. 37 (Abstract))
Zhi Yin Lee, Sha Shiong Ng, Fong Kwong Yam, Zainuriah Hassan

(ix) *Fabrication of high-stability blue-light-emitting diode based on n-ZnO nanorods/p-GaN structure heterojunction grown by hydrothermal method*
(p. 39 (Abstract))
Shrook A. Azzez, Z. Hassan, J. J. Hassan, Mohamed S. Mahdi, M. Bouodina

(x) *Improvement in opto-electrical properties of GaN MSM photodetector by contact work-function selection*
(p. 41 (Abstract))
F. A. Ariff, N. Zainal, Z. Hassan

(xi) *Fabrication and characterization of copper doped zinc oxide on p-type and n-type GaN by sputtering*
(p. 42 (Abstract))
A. S. Yusof, Z. Hassan, N. Zainal,

126. Academy of Sciences Malaysia Fellow's Lecture – December 7, 2016

Innovative developments in GaN-based technology
Zainuriah Hassan

127. 5th International Science Postgraduate Conference – March 7-8, 2017

Morphology and photoluminescence of photo-electrochemically synthesized porous silicon: Influence varying current density
Asad Thahe, Noriah Bidin, Zainuriah Hassan

128. Astana Expo 2017 (Kazakhstan) – June 23, 2017

Pocket Talk
GaN on GaN - Invention and development of blue light emitting diodes (LEDs)
Zainuriah Hassan

129. 3rd International Conference on the Applications of Science and Mathematics (SCIEMATHIC 2017) October 24-25, 2017

Keynote Speech *- Zainuriah Hassan*
Wide band gap semiconductors for LED applications
(p. 17 (Abstract))
Zainuriah Hassan, Lim Way Foong, Quah Hock Jin, Sabah M. Mohammad, Shrook A. Azzez, Husnen R. Abd, Ahmad Sauffi Yusof, Mohd Anas Ahmad

130. 6th International Conference on Solid State Science and Technology (ICSSST 2017) – November 13-16, 2017

(i) ***Plenary Talk*** *- Zainuriah Hassan*
GaN-based ternary and quaternary alloys for sensor applications
(p. 42 (Abstract))
Z. Hassan, W. F. Lim, H. J. Quah, S. H. Abud, M. Z. M. Yusoff, R. Radzali

(ii) Effect of annealing temperature on growth particles of YAG: Ce+3 phosphor and white light chromaticity values
(p. 44 (Abstract))
Husnen R. Abd, Z. Hassan, Naser M. Ahmed, a. F. Omar, Munirah Abdullah Almessiere, Forat H. Alsultany

(iii) Chromaticity study of curcumin dye extracted from curcuma longa l. using for UV light down conversion for white light emitting diode
(p. 52 (Abstract))
M. Al Shafouri, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere

(iv) Hydrothermal synthesis and structural properties of V_2O_5 nanoflowers at low temperature
(p. 57 (Abstract))
N. M. Abd-Alghafour, Naser M. Ahmed, Z. Hassan, Munirah Abdullah Almessiere

(v) pH sensing characteristics of CuS/ZnO thin film implemented as EGFET
(p. 59 (Abstract))
Fayroz A. Sabah, Naser M. Ahmed, Z. Hassan

(vi) Effect of graphite particle size on structural and morphological characteristics of carbon nanotubes grown by microwave oven

(p. 62 (Abstract))
Natheer A. Algadri, Z. Hassan, K. Ibrahim, M. Bououdina

(vii) Growth temperature dependence of sol-gel spin coated indium nitride thin films
(p. 65 (Abstract))
Lee Zhi Yin, Ng Sha Shiong, Yam Fong Kwong, Zainuriah Hassan

(viii) Enhancing performance of porous Si-doped GaN based MSM photodetector using AC technique
(p. 68 (Abstract))
Ainorkhilah Mahmood, Zainuriah Hassan, Alhan Farhanah Abd Rahim, Rosfariza Radzali, Naser M. Ahmed

(ix) Catalyst-free growth on ZnO seed layer/glass by thermal evaporation method: Effects of carrier gas flow rate
(p. 77 (Abstract))
Forat H. Alsultany, Z. Hassan, Naser M. Ahmed

(x) Aluminum nitride thin films grown sol-gel spin coating technique
(p. 138 (Abstract))
Nurul Atikah Mohd Isa, Ng Sha Shiong, Zainuriah Hassan

(xi) Fabrication and characterization of Cu-doped ZnO films using rf reactive magnetron sputtering
(p. 177 (Abstract))
A. S. Yusof, Z. Hassan, N. Zainal

(xii) Fabrication of InxGa1-xN/GaN multi-quantum well structure for green light emitting diode on patterned sapphire substrate by metal organic chemical vapour deposition
(p. 200 (Abstract))
Shamsul Amir Abdul Rais, Hayatun Najiha, Zainuriah Hassan, Ahmad Shuhaimi

(xiii) Effect of different UV light intensity on porous silicon fabricated by using alternating current photo-assisted electrochemical etching (ACPEC) technique
(p. 225 (Abstract))
Siti Nurfarhana Sohimee, Zainuriah Hassan, Naser Mahmoud Ahmed, Lim Way Foong, Quah Hock Jin

131. Journey to Astana Symposium – March 8, 2018

Next generation optoelectronics for energy efficiency and green technology
Professor Dr. Zainuriah Hassan, FASc

132. 1st International Conference on Materials Engineering and Science IConMEAS – August 8-9, 2018, Turkey

The effect of the wavelength of the LED used to pump phosphor produced from curcuminoids dye extracted from turmeric (Curcuma longa L.) to produce white light
M Al Shafouri, Naser M Ahmed, Z Hassan, Munirah Abdullah Almessiere

133. International Workshop on Nitride Semiconductors (IWN 2018) – November 11-16, 2018, Japan

The effect of indium pre-deposition on fabrication of deep green light emitting diode
Shamsul Amir Abdul Rais, Zainuriah Hassan, Ahmad Shuhaimi Bin Abu bakar, Muhammad Nazri bin Abdul Rahman, Yusnizam bin Yusuf, Muhamad Ikram Bin Md Taib, Abdullah Fadil bin Sulaiman, hayatun Najihah binti Hussin, Mohd Fairuz bin Ahmad, Akimoto Yuka, Nagai Keiji

134. 2nd National Nanotechnology Workshop (NM-2 2018) – December 23-24, 2018, Iraq

Synthesis of nanocrystalline PbS for promising solar cells using microwave-assisted chemical bath deposition
M. Husham, Z. Hassan,

135. A Seminar of the IEEE WA joint EDS/SSCS/IPS Chapter – February 15, 2019, Australia

Advancement of Materials and Device Technology Based on Wide Band Gap Semiconductors
Professor Zainuriah Hassan

136. International Conference on Semiconductor Materials and Technology (ICoSeMT 2019) - April 29-30, 2019

(i) *Fabrication of deep green light emitting diode on bulk gallium nitride substrate*
(p. 28 (Abstract))
Shamsul Amir Abdul Rais, Zainuriah Hassan, Ahmad Shuhaimi Abu Bakar, Muhammad Nazri Abdul Rahman, Yusnizam Yusuf, Muhamad Ikram Md Taib, Abdullah Fadil Sulaiman, Hayatun Najihah Hussin, Nagai Keiji, Mohd Fairus Ahmad, Akimoto Yuka, Shoji Dai

(ii) *Chromaticity properties of curcuminoids dye nanofibers prepared by electrospinning for white light down-conversion*
(p. 85 (Abstract))
Mahmood Shaikhan Taeeb Said Al Shafouri, Naser M. Ahmed, Zainuriah Hassan, Munirah Abdullah Almessiere

(iii) *Effect of post-annealing in oxygen environment on ITO thin films deposited using RF magnetron sputtering*
(p. 90 (Abstract))
N.A. Hamzah, R.I.M. Asri, M.A. Ahmad, M.A.A.Z. Md Sahar, S.N. Waheeda, Z. Hassan

(iv) *Effect of varying thermal annealing temperature on the characteristics of lower and higher Mg-doped GaN*
(p. 94 (Abstract))
A.M. Hanafiah, Z. Hassan, W.F. Lim, N. Ibrahim, E.A. Alias, M.A. Ahmad, N.A. Hamzah, R.I.M. Asri

(v) *Comparative studies between porous silicon and porous p-type gallium nitride prepared using alternating current photo-assisted electrochemical etching technique*
(p. 97 (Abstract))
S.N. Sohimee, Z. Hassan, Naser M. Ahmed, R. Radzali, H.J. Quah, W.F. Lim

(vi) *Effect of GaN nucleation layer temperature on structural and morphological properties of ud-GaN template grown on PSS*
(p. 101 (Abstract))
M.A. Ahmad, N.A. Hamzah, R. I. M. Asri, N. Zainal, Z. Hassan

(vii) *Morphological and structural properties of sol-gel derived ZnO thin films spin-coated on different substrates*
(p. 104 (Abstract))
Nabihah Kasim, Zainuriah Hassan, Way Foong Lim, Sabah M. Mohammad, Hock Jin Quah

(viii) *The growth of AlN single layer on sapphire at low pressure using metalorganic chemical vapor deposition (MOCVD)*
(p. 107 (Abstract))
Mohd Ann Amirul Zulffiqal Md Sahar, Zainuriah Hassan, Way Foong Lim, M.E.A. Samsudin, A.M. Hanafiah, Yusnizam Yusuf, M.A. Ahmad, Nur Atiqah Hamzah, Rahil Izzati Mohd Asri

(ix) *Characteristics of Cu-doped ZnO films prepared using magnetron co-sputtering*
(p. 110 (Abstract))
A.S. Yusof, Z. Hassan

(x) *Effects of post-deposition annealing time in forming gas ambient on Y_2O_3 films deposited on silicon substrate*
(p. 112 (Abstract))
Hock Jin Quah, Kuan Yew Cheong, Zainuriah Hassan, Way Foong Lim

(xi) *High-k LaCeO for passivation of Si substrate*
(p. 114 (Abstract))
Way Foong Lim, Kuan Yew Cheong, Zainovia Lockman, Zainuriah Hassan, Hock Jin Quah

(xii) *Reactive sputtering growth of indium nitride thin films on flexible substrate under different substrate temperatures*
(p. 116 (Abstract))
S.A. Osman, S.S. Ng, Z. Hassan

(xiii) *Role of RF magnetron sputtering power on optical and electrical properties of ITO films on soda-lime glass substrates*
(p. 118 (Abstract))
R.I.M. Asri, N.A. Hamzah, M.A. Ahmad, M. Ikram Md Taib, S.M.S. Sahil, Z. Hassan

(xiv) *The effect of needle diameter on optical properties and morphological structure of La_2O_3-PVA phosphor nanofibers using electrospinning method*
(p. 124 (Abstract))
Hasma A. Wahab, Z. Hassan, Naser M. Ahmed

(xv) *Luminescence characteristics of hybridized polyfluorene*
(p. 127 (Abstract))
Farah Hayati Ahmad, Zainuriah Hassan, Naser Mahmoud Ahmed, Hock Jin Quah, Way Foong Lim

(xvi) *On the investigations of chip-on-board ultra-violet sensor by screen printing of GaN powder*
(p. 136 (Abstract))
Khi Poay Beh, Raed Abdalrheem, Fong Kwong Yam, Zainuriah Hassan

(xvii) *Enhancing performance of porous Si-doped GaN based MSM photodetector using 50 Hz ACPEC*
(p. 145 (Abstract))
Ainorkhilah Mahmood, Zainuriah Hassan, Alhan Farhanah Abd Rahim, Rosfariza Radzali, Mahayatun Dayana Johan Ooi, Naser M. Ahmed

(xviii) *Fabrication and characterization of light emitting diode based on n-ZnO nanorods grown via a low-temperature method on p-GaN*
(p. 149 (Abstract))
Sabah M. Mohammad, Nabeel M. Abd-Alghafour, Zainuriah Hassan, Naser M. Ahmed, Amal Mohamed Ahmed Ali, Raed Abdalrheem, Mundzir Abdullah

(xix) *Diamond as power device*
(p. 151 (Abstract))
Mohd Syamsul, Zainuriah Hassan, Hiroshi Kawarada

(xx) *Study of the effect of injection currents on white light emission of Ce-doped YAG phosphor powder prepared by microwave combustion*
(p. 152 (Abstract))
Husnen R. Abd, Z. Hassan, Naser M. Ahmed

(xxi) *Investigation of different fuel sources used in microwave induced combustion synthesis on the luminescence property of YAG phosphor*
(p. 154 (Abstract))
Khai Shenn Lau, Zainuriah Hassan, Way Foong Lim, Hock Jin Quah, Naser M. Ahmed, Husnen R. Abd

137. 5th USM-UL Colloquium – August 19-21, 2019

(i) ***Invited Talk***
Development of InGaN thin films for solar cell application
Z. Hassan, M. S. M. Saheed, A. S. Yusof, M. A. Ahmad, W. F. Lim, S. S. Ng, S. Hamady, N. Fressengeas, Q. Kieffer, C. Chevallier

(ii) ***Invited Talk***
Development of novel thin films solar cells: Design and Elaboration
S. Hamady, N. Fressengeas, Q. Kieffer, C. Chevallier, Z. Hassan, M. A. Anas, W. F. Lim, S. S. Ng,

138. National Nanotechnology Colloquium on GaN, TeraHertz and Flexible Electronics 2019 - August 22, 2019

invited Talk *- Professor Dr. Zainuriah Hassan, FASc*

Overview of National Scenario, International Scenario, and Way Forward for Gallium Nitride Technology in Malaysia

139. International Energy and Sustainability Conference - IESC 2019 – October 17-18, 2019

(i) Metal oxide-based heterojunction thin films for solar cell application

Z. Hassan, M. S. M. Saheed, A. S. Yusof

(ii) Enhanced white light luminescence of Ce^{3+}-activated $Y_3Al_5O_5$ phosphors powder synthesized via continuous wave (CW) CO_2 laser-assisted combustion
Z. Hassan, Husnen R. Abd, Naser M. Ahmed

140. USM-Osaka University Joint Colloquium - November 26, 2019

Keynote Talk *- Professor Dr. Zainuriah Hassan, FASc*

Development of GaN on GaN for next generation technology

141. 5th Meeting of Malaysia Nitrides Research Group (MNRG 2020) – December 1-2, 2020

(i) Development of InGaN based thin film solar cells present status and challenges
(p. 35 (Abstract))
Sidi Ould Saad Hamady, Ahmad Sauffi bin Yusof, Sourav Bose, Christyves Chevallier, Nicolas Fressengeas, Queny Kieffer, Zainuriah Hassan, M. Anas Anas, Way Foong Lim, Sha Shiong Ng

(ii) Effects of V/III ration of InGaN quantum well on the properties of near ultraviolet light emitting diodes
(p. 48 (Abstract))
Mohd Ann Amirul Zulffiqal Md Sahar, Zainuriah Hassan, Sha Shiong Ng, Way Foong Lim, Khai Sheen Lau, Ezzah A. Alias, Mohd Anas Ahmad, Nur Atiqah Hamzah, Rahil Izzati Mohd Asri

(iii) Inhomogeneity of an InGaN based blue LED studied by secondary ion mass spectrometry (SIMS) and atom probe tomography (APT)
(p. 51 (Abstract))
Mohd Anas Ahmad, Nur Atiqah Hamzah, Rahil Izzati Mohd Asri, Norzaini Zainal, Sha Shiong Ng, Zainuriah Hassan,

(iv) Effects of three-step magnesium doping in p-GaN layer on the properties of InGaN based light emitting diode
(p. 55 (Abstract))
Nur Atiqah Hamzah, Rahil Izzati Mohd Asri, Mohd Anas Ahmad, Sha Shiong Ng, Zainuriah Hassan

(v) The role of growth temperature on the indium incorporation process for MOCVD growth of inGaN/GaN heterostructures
(p. 58 (Abstract))
Ahmad Sauffi Yusof, Zainuriah Hassan, Sidi Hamady, Sha Shiong Ng, Mohd Anas Ahmad, Way Foong Lim, Nicolas Fressengeas, Christyves Chevallier

(vi) Influence of etching time on the porous p-type gallium nitride using alternating current photo-assisted electrochemical etching technique
(p. 61 (Abstract))
Siti Nurfarhana Sohimee, Zainuriah Hassan, Naser M. Ahmed, Rosfariza Radzali, Way Foong Lim

(vii) ZnO nanostructures assisted growth by different NH_4 concentrations for potential photovoltaic applications
(p. 63 (Abstract))

Aminu Muhammad, Zainuriah Hassan, Sabah M. Mohammed, Suvindaj Rajamanickam

(viii) Chromaticity study of La_2O_3-PVA phosphor nanofibers prepared by electrospinning process for UV light down conversion for white light emitting diode
(p. 64 (Abstract))
Hasma A. Wahab, Zainuriah Hassan, Naser M. Ahmed

(ix) A comparison study of ZnO, InZnO, GaZnO and InGaZnO physical properties and optical bandgap
(p. 68 (Abstract))
Nabihah Kasim, Zainuriah Hassan, Way Foong Lim, Hock Jin Quah

(x) Effect of annealing temperature on cerium oxide thin films grown by DC sputtering method
(p. 69 (Abstract))
Ainita Rozati Mohd Zabidi, Zainuriah Hassan, Way Foong Lim

(xi) Effects of post-deposition annealing in oxygen ambient of RF magnetron sputtered Ga_2O_3 thin film
(p. 71 (Abstract))
Puteri Haslinda Megat Abdul Hedei, Zainuriah Hassan, Hock Jin Quah

(xii) Effects of annealing growth conditions of β-Ga2O3 thin films for solar blind UV photodetectors by using sol-gel dip coating method
Maizatul Akmam Ab Hamid1, Sha Shiong Ng, Zainuriah Hassan

(xiii) Synthesis of zinc oxide nano twins using electrochemical deposition technique at different current densities
(p. 74 (Abstract))
E. A. Kabaa, Zainuriah Hassan, Naser M. Ahmed

(xiv) Effects of different growth temperatures towards indium composition and performance of InGaN quantum well heterostructure
(p. 77 (Abstract))
Muhd Azi Che Seliman, Zainuriah Hassan, Ahmad Sauffi Yusof, Mohd Anas Ahmad, Nur Atiqah Hamzah, Rahil Izzati Mohd Asri, Mohd Syamsul Nasyriq Samsol Baharin

(xv) Comparison study of hydrothermally grown ZnO nanorods on untreated silicon and black silicon substrates
(p. 78 (Abstract))
Sabah M. Mohammad, Zainuriah Hassan, Suvindraj Rajamanickam, Aminu Muhammad

(xvi) Encapsulation of Ag nanoparticle-carbon composite and enhancement of visible light nanorods photodiode
(p. 79 (Abstract))
Suvindraj Rajamanickam, Sabah M. Mohammad, Z. Hassan, Aminu Muhammad, E. A. Kabaa

(xvii) Investigation of facile synthesis of YAG:Ce nanoceramic powder prepared with microwave solution combustion and application in white light emission
(p. 88 (Abstract))
Khai Shenn Lau, Zainuriah Hassan, Way Foong Lim, Hock Jin Quah

142. European Materials Research Society Fall Meeting (E-MRS 2021) – September 20-23, 2021

Transport properties of InGaN/GaN heterostructure investigated with van der Pauw/Hall effect using two-layer analysis procedure
A. S. Yusof, S.O.S. Hamady, C. Chevallier, N. Fressengeas, Z. Hassan, S.S. Ng, M.A. Ahmad, W.F. Lim

143. 2nd International Conference on Semiconductor Materials and Technology (ICoSeMT 2021) and International Invention, Innovation & Design Expo (INoDEx 2021) November 8-9, 2021

(i) Structural, Morphological, and Optical Properties of Low-Cost Fluorine, Silver Co-Doped ZnO Nanostructures
Aminu Muhammad, Zainuriah Hassan, Sabah M. Mohammad, Suvindraj Rajamanickam, Shireen Mohmmed Abed

(ii) Nanomanipulation of Functionalized Gold Nanoparticles on GaN
M.A. Che Seliman, N.A. Ali Yusup, M. Hasnan, R.I.M Asri, M. Inaba, M. Nakano, J. Suehiro, H. Kawarada, Z. Hassan, S. Falina, M. Syamsul

(iii) Influence of the Rods as Collector on Morphology and Uniformity of Nanofibers via Electrospinning"
Nabeel Z. Al-Hazeem, Z. Hassan, Sabah M. Mohammad

(iv) *Electrical Properties of GaN Cap Layer for AlGaN/GaN HEMT"*
M. Hasnan, R.I.M Asri, M. Nuzaihan, M. Inaba, M. Nakano, J. Suehiro, Z. Hassan, S. Falina, H. Kawarada, M. Syamsul

(v) Fabrication UV ZnO NRs Photodetector Based on Seeded Silicone (Si) Substrate via the Drop-Casting Technique"
Shireen Mohammed Abed, Sabah M. Mohammad, Z. Hassan, A. Muhammad, Suvindraj Rajamanickam

(vi) Effect of Silver Nitrate Concentration on the Morphological, Structural and Optical Properties of ZnO Nanorods"
Suvindraj Rajamanickam, Sabah M. Mohammad, Z. Hassan, Aminu Muhammad, Shireen Mohmmed Abed

(vii) Fabrication of Ps/Al Nanocomposites As Foils And Evaluation Of Their Optical Properties"
Hameed Naser, Z. Hassan, Haider Mohammed Shanshool, Sabah M. Mohammad

(viii) Rapıd Thermal Annealıng Process Toward Enhancement of ITO Thin Films
R.I.M. Asri, N.A. Hamzah, M.A. Ahmad, M.A.A Z. Md Sahar, M. A. Che Seliman, M. Abdullah, Z. Hassan

(ix) The Effect of V-Pits on Electronic and Optical Properties and Internal Quantum Efficiency of GaN-Based Green Light-Emitting Diodes
M.A. Ahmad, N.A. Hamzah, M.I.M. Taib, R.I.M. Asri, N. Zainal, Z. Hassan

Other Publications

1. Introduction to Error Analysis (in Malay)-
Zainuriah Hassan, Lecture Module for Short Course on Laboratory Management and Maintenance, School of Physics, USM (May 2001).

2. Photodetectors-

Zainuriah Hassan, Lecture module for Tropical College on Photonics and Optical Communications, Penang (October 2001).

Patent/IP

1. Method of fabricating an indium gallium nitride (inGaN) over a patterned sapphire substrate (PSS) and a bulk gallium nitride (GaN) substrate with low lattice mismatch
   Zainuriah Hassan, Ahmad Sauffi Yusof, Mohd Anas Ahmad, Muhd Azi Che Seliman, Ng Sha Shiong
   Filing Date: 23 June 2021
   MyIPO Application Number: PI 2021003546

2. Method of producing gallium nitride thin films on silicon substrate by modified sol-gel spin coating technique
   Ng Sha Shiong, Wang Tiankun, Maizatul Akmam binti Ab Hamid, Zainuriah Hassan
   Filing Date: 21 July 2021
   MyIPO Application Number: PI 2021004138

3. A method of microwave combustion solution synthesis of LCAB:Eu phosphor for light emitting diode
   Zainuriah Hassan, Lau Khai Shenn, Lim Way Foong, Quah Hock Jin
   Filing Date: 30 April 2021
   MyIPO Application Number: PI 2021002404

4. A method for producing crystalline indium nitride thin film on a single crystal substrate
   Ng Sha Shiong, Lee Zhi Yin, Fong Chee Yong, Zainuriah Hassan, Yam Fong Kwong
   Filing Date: 1 March 2016
   My IPO Application Number: PI 2016700714
   Date of Grant: 18 February 2021
   Grant Number: MY-183464-A

5. Alternating current assisted photo-electrochemical etching system and method
   Zainuriah Hassan, Naser Mahmoud Ahmed, Quah Hock Jin, Lim Way Foong
   Filing Date: 18 December 2015
   Date of Grant: 6 February 2020
   Grant Number: MY-173594-A
   Duration of Patent: 18 December 2015 – 18 December 2035

6. Gallium nitride based light emitting diode device
   Zainuriah Hassan, Mohd Anas Ahmad, Mohd Ann Amirul Zulffiqal Md Sahar, Lau Khai Shenn, Nur Atiqah Hamzah, Rahil Izzati Mohd Asri, Lim Way Foong
   Filing Date: 4 March 2020
   MyIPO Application Number: PI 2020001166

7. Trademark name – INOR
   Application date: 5 March 2019
   Registration date: 12 August 2020
   Duration: 5/3/2019 – 5/3/2029
   Trademark No: TM2019007531
   Malaysian Trademark Office
   Intellectual Property Corporation of Malaysia

8. Direct heat substrate-modified chemical bath deposition system for growth of ultra long zinc oxide (ZnO) nanorods and process for fabrication of a nano-size junction LED
   Zainuriah Hassan, Sabah M. Mohammad, Naser Mahmoud Ahmed
   Filing Date: 31 March 2017
   PCT International Patent Application Number: PCT/MY2017/050013

9. Method of producing a free standing bulk polycrystalline gallium nitride substrate
   Norzaini Zainal, Zainuriah Hassan, Muhammad Esmed Alif Samsudin, Ezzah Azimah Alias, Azharul Ariff kamarulzaman, Siti Nurul Waheeda Mohmad Zaini, Muhamad Ikram Md Taib
   Filing Date: 4 August 2017
   Date of Grant: 4 August 2021
   Grant Number: MY-186662-A

10. Direct heat substrate-modified chemical bath deposition system for growth of ultra long zinc oxide (ZnO) nanorods and process for fabrication of a nano-size junction LED
    Zainuriah Hassan, Sabah M. Mohammad, Naser Mahmoud Ahmed
    Filing Date: 22 June 2016
    MyIPO Application Number: PI 2016702309

11. Method of processing a GaN based device
    Zainuriah Hassan, Lee Yan Cheung
    Filing Date: 29 December 2006
    Date of Grant: 30 June 2014
    Grant Number: MY-151664-A
    Duration of Patent: 29 December 2006 – 29 December 2026

12. A method for producing metal-oxide-semiconductor (MOS) capacitor
    CHEONG, Kuan, Yew, LOCKMAN, Zainovia, HASSAN, Zainuriah, QUAH, Hock, Jin, LIM, Way, Foong
    International Publication Date: 3 May 2012
    International Publication Number: WO 2012/057608 A1

Relevant Workshops/Courses/Training

1. Post Grad. Education Workshop
   Oct. 22, 1998.

2. Micro Teaching Workshop
   Dec. 16 – 17, 1999.

3. Writing Workshop
   May 11-13, 2000.

4. Logical Framework Approach Workshop
   Sept. 25, 2001.

5. Advanced Training on Spectrum GX FTIR Spectroscopy System
   Sept. 12 – 14, 2005 (United Kingdom)

6. Advanced Training on HR 800 UV Photoluminescence and Raman Spectroscopy System
   Sept. 19 – 20, 2005 (France)

7. Advanced Training on TEM Sample Preparation Tools – Ion Milling System and Accessories
   February 13 – 18, 2006 (USA)

8. Advanced Training on High Resolution X-ray Diffraction System (HRXRD)
   Nov. 27 – Dec. 1, 2006 (Netherlands)

9. Advanced Training on Operation and Maintenance of Molecular Beam Epitaxy (MBE) System
   August 18 – 20, 2008 (USA)

10. An exposure to fabrication of LEDs/laser based on III-nitrides
    December 15 – 18, 2009 (Japan)

11. Value Management Lab
    March 10-13, 2014

12. Essentials of accurate and reliable surface analysis using XPS and AES
    October 23, 2019

Updated as of March 2022