CURRICULUM VITAE

PERSONAL DETAILS

Name	Dr. Quah Hock Jin
Gender	Male
Nationality	Malaysian
Designation	Senior Lecturer
Department	Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia
Area of Expertise	Materials Engineering (Electronics Materials)
Mobile No.	018-9419891
E-mail Address	hock_jin@usm.my/jinquah1st@hotmail.com
Scopus ID	http://www.scopus.com/authid/detail.url?authorId=24779772700
Google Scholar	https://scholar.google.com/citations?user=a7EOgx4AAAAJ&hl=en

BIBLIOMETRIC DATA

Total Articles in Publication List	**:** 46
Sum of the Times Cited	**:** 523
H-Index	: 15
Cumulative Impact Factor	: 119.364

BIOGRAPHY

Dr. Quah Hock Jin is currently working as senior lecturer at Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia (USM). Previously, he was a MOCVD engineer in Collaborative Research in Engineering, Science, & Technology (CREST), with the responsibility of controlling CREST MOCVD system that is located at INOR, USM for the national project related to “GaN on GaN”. He received his BEng (Hons) in Materials Engineering from School of Materials and Mineral Engineering (SMMRE),

Universiti Sains Malaysia (USM) in 2008. He graduated with PhD (2014) and MSc (2010) in Electronics Materials from SMMRE, USM under the sponsorship of "***The USM Vice Chancellor's Award 2011***" and "***USM Fellowship***", respectively. He was previously a post-doctoral fellow in Institute of Nano Optoelectronics Research and Technology (INOR), USM and Institute of Advanced Technology (ITMA), Universiti Putra Malaysia. His research interest encompasses development of thin film technology and optimization of device performance based on high dielectric constant thin film materials as well as wide band gap semiconductors for potential applications in power electronics, solid-state lighting, and gas sensors. For years, he has actively involved in the growth of binary and ternary based thin film materials as passivation layers for GaN-, SiC-, Si-, and Ge-based metal-oxide-semiconductor (MOS) capacitors. In recent times, his research areas are widened to the growth and modification of GaN-based compound semiconductors using low cost route to study the aspects of optical performance and gas sensing behaviours point of view. His contribution in the field of research and development is reflected through 43 refereed international top-tier publications with H-Index of 15 and 2 patents filed under MyIPO. He has also received several recognitions from the university under "***Sanggar Sanjung***" awards for year 2008, 2010, 2011, 2012, 2013, 2014, 2015, and 2016 as well as the "***Best Thesis Award* for *Category of CRI: Engineering and Technology***" for the year 2014. He is presently an editorial board member of "The Open Electrical & Electronic Engineering Journal (Bentham Open)" as well as reviewer for "Applied Surface Science, Journal of Alloys and Compounds, Sensors & Actuator A: Physical, Materials Research Bulletin, Superlattices and Microstructures, Materials Letters, Materials Science in Semiconductor Processing, Materials Science & Engineering B, Journal of Electronic Materials, and Thin Solid Films".

WORKING EXPERIENCE/ACADEMIC QUALIFICATION

1. **Senior Lecturer**
   Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia
   From *January 2019* until -

2. **MOCVD Engineer**
   Collaborative Research in Engineering, Science, & Technology (CREST)
   From *September 2017* until *December 2018*

3. **Post-Doctoral Fellow**
   Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia
   From *January 2016* until *July 2017*
   - **Research Title:**
     Investigation of GaN on GaN Technology for Solid State Lighting.

4. **Post-Doctoral Fellow**
   Centre of Research Initiatives in Natural Sciences, Universiti Sains Malaysia
   From *January 2015* until *December 2015*
   - **Research Title:**
     Investigation of GaN on GaN Technology for Solid State Lighting.

5. **Post-Doctoral Fellow**
   Institute of Advanced Technology (ITMA), Universiti Putra Malaysia
   From *July 2014* until *December 2014*
   - **Research Title:**
     Deposition Mechanisms of Graphene as Thin Films.

6. **Doctor of Philosophy, PhD (Materials Engineering)**
   School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia
   From *September 2010* until *May 2014*
   - **Research Title:**
     Investigation of RF-Magnetron Sputtered Y_2O_3, Al_2O_3, and Y_2O_3/Al_2O_3 Thin Films on Gallium Nitride Substrate.

7. **Master of Science, MSc by Research (Materials Engineering)**
   School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia
   From *August 2008* until *August 2010*
   - **Research Title:**
     Investigation of Metal-Organic Decomposed (MOD) Cerium Oxide (CeO_2) Gate Deposited on Silicon and Gallium Nitride Substrate via Spin-On Coating Technique.

8. **Bachelor of Engineering (Materials Engineering; CGPA = 3.48)**
   School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia
   From *2004* until *2008*
   - **Research Title (Final Year Project):**
     Synthesis of Silicon Carbide Nanotubes via Shape Memory Synthesis (SMS).

AWARDS AND RECOGNITIONS

1. Sanggar Sanjung Award for Excellent in Category of Journal Publications for the year 2016, Universiti Sains Malaysia, *2017*.
2. Sanggar Sanjung Award for Excellent in Category of Journal Publications for the year 2015, Universiti Sains Malaysia, *2016*.
3. Sanggar Sanjung Award for **Best Thesis Award** for **Category of CRI: Engineering and Technology** for the year 2014, Universiti Sains Malaysia, *2015*.
4. Sanggar Sanjung Award for Excellent in Category of Journal Publications for the year 2013, Universiti Sains Malaysia, *2015*.

5. Sanggar Sanjung Award for Excellent in Category of Journal Publications for the year 2012, Universiti Sains Malaysia, *2014*.
6. The Universiti Sains Malaysia **Vice Chancellor's Award Scholarship** for PhD. Studies, From *January 2011* until *December 2013*.
7. Sanggar Sanjung Award for Excellent in Category of Journal Publications for the year 2011, Universiti Sains Malaysia, *2012*.
8. Sanggar Sanjung Award for Excellent in Category of Journal Publications for the year 2010, Universiti Sains Malaysia, *2011*.
9. **Universiti Sains Malaysia Fellowship** for PhD. Studies, From *September 2010* until *December 2010*.
10. The 21st International Invention, Innovation and Technology Exhibition, ITEX 2010, Kuala Lumpur Convention Center, for "An Invention of CERIA Gate for High Efficient Power Applications" - Bronze Medal, From *14* until *16 May 2010*.
11. **Universiti Sains Malaysia Fellowship** for Master Studies, From *January 2009* until *December 2009*.
12. Sanggar Sanjung Award for Excellent in Category of Journal Publications for the year 2008, Universiti Sains Malaysia, *2009*.
13. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester II Year 2008*.
14. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester II Year 2007*.
15. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester II Year 2006*.
16. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester II Year 2005*.

RESEARCH FUNDING

1. Investigation of RF Magnetron Sputtered $Al_2O_3/CeO_2/Al_2O_3$ Gate Stacked to Passivate SiC-Based Metal-Oxide-Semiconductor Devices, USM Bridging Grant, RM24999.10, *From June 2019 to June 2020* (Principle Researcher).
2. Surface Alteration of Gallium Nitride As Growth Template, USM Innovation Seed Fund, *From May 2019 until April 2020* (Co-researcher).
3. Wide Bandgap Semiconductor – Energy Efficient Lighting, Long Term Research Grant Scheme (LRGS), *From October 2017 until October 2020* (Co-researcher).
4. Growth and Characterization of Hybrid Heterostructures for Ultraviolet Emission, Research University Grant, *From July 2018 until June 2020* (Co-researcher).
5. Investigation of RF Sputtered Yttrium Oxide (Y_2O_3) Thin Film on Gallium Nitride Based Metal-Oxide Semiconductor (MOS) Capacitor for High Power Applications, USM-Research University Postgraduate Research Grant Scheme (USM-RU-PRGS), RM 15466.00, From *September 2011* until *September 2014* (Principle Researcher).
6. USM Vice Chancellor's Award Travel Grant, RM 3000.00, From *January 2011* until *December 2013* (Principle Researcher).

7. Investigation of Metal Organic Decomposition (MOD) Derived CeO_2 Thin Film on GaN-based Metal-Oxide-Semiconductor (MOS) Structure for High Power Application, USM-Research University Postgraduate Research Grant Scheme (USM-RU-PRGS), RM 7949.00, From *January 2009* until *December 2010* (Principle Researcher).

RESEARCH PUBLICATION

Publications in Refereed Journals (*Corresponding author):

2019

1. **Hock Jin Quah**, Zainuriah Hassan, Way Foong Lim, "Passivation of Silicon Substrate using Two-Step Grown Ternary Aluminium Doped Zirconium Oxide," ***Applied Surface Science***, 493, 411-422 (2019). **(Impact Factor: 5.155, Quartile: Q1)**
2. Way Foong Lim, Zainuriah Hassan, **Hock Jin Quah***, "Structural, Morphological, Optical, and Gas Sensing Characteristics of Ultraviolet-Assisted Photoelectrochemical Etching Derived AlInGaN Nano-Spikes," ***Journal of Materials Research and Technology***, 8, 2767-2776 (2019). **(Impact Factor: 3.327, Quartile: Q1)**
3. **Hock Jin Quah,** Zainuriah Hassan, Way Foong Lim, "A Two-Step Growth Route of Ternary Aluminium Doped Zirconium Oxide Film on Silicon," ***Journal of Alloys and Compounds***, 777, 736-748 (2019). **(Impact Factor: 4.175; Quartile: Q1)**

2018

4. Way Foong Lim, Zainuriah Hassan, Naser Mahmoud Ahmed, **Hock Jin Quah*,** "Porous Formation of P-Type Gallium Nitride Films via 50 Hz Operated Alternating Current-Assisted Photo-Electrochemical Etching in Methanol-Sulphuric Acid Solution", ***Journal of the Electrochemical Society,*** 165, H620-H628 (2018). **(Impact Factor: 3.120; Quartile: Q1)**
5. Siti Nurfarhana Sohimee, Zainuriah Hassan, Naser Mahmoud Ahmed, Lim Way Foong, **Quah Hock Jin**, "Effect of Different UV Light Intensity on Porous Silicon Fabricated by Using Alternating Current Photo-Assisted Electrochemical Etching (ACPEC) Technique", ***Journal of Physics: Conference Seri***es, 1083, 012034 (2018). **(Impact Factor: Scopus)**

2017

6. **Hock Jin Quah**, Zainuriah Hassan, Fong Kwong Yam, Naser Mahmoud Ahmed, Mohammad Amran Mohd Salleh, Khamirul Amin Matori, and Way Foong Lim, "Effects of Ammonia-Ambient Annealing on Physical and Electrical Characteristics of Rare Earth CeO_2 as Passivation Film on Silicon," ***Journal of Alloys and Compounds***, 695, 3104-3115 (2017). **(Impact Factor: 4.175; Quartile: Q1)**

2016

7. **Hock Jin Quah**, Naser Mahmoud Ahmed, Zainuriah Hassan, and Way Foong Lim, Surface Alteration of Planar P-Type Gallium Nitride to Porous Structure using 50 Hz Alternating Current-Assisted Photo-Electrochemical Etching Route***, Journal of the Electrochemical Society***, 263, H642-H651 (2016). **(Impact Factor: 3.120, Quartile: Q1)**
8. **Hock Jin Quah**, Naser Mahmoud Ahmed, Norzaini Zainal, Fong Kwong Yam, Zainuriah Hassan, and Way Foong Lim, Room Temperature Hydrogen Gas Sensing Characteristics of Porous Quaternary AlInGaN Film Prepared via UV-Assisted Photo-Electrochemical Etching, ***Superlattices and Microstructures***, 95, 65-70 (2016). **(Impact Factor: 2.385; Quartile: Q2)**
9. Way Foong Lim, **Hock Jin Quah***, Zainuriah Hassan, Rosfariza Radzali, Norzaini Zainal, Fong Kwong Yam, Porous Quaternary $Al_{0.1}In_{0.1}Ga_{0.8}N$ Film via Photo-Electrochemical Etching in HF:C_2H_5OH Electrolyte, ***Journal of the American Ceramic Society*****,** 99, 2395-2401 (2016). **(Impact Factor: 3.094; Quartile: Q1)**
10. **Hock Jin Quah**, Way Foong Lim, Zainuriah Hassan, Fong Kwong Yam, and Norzaini Zainal, 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, ***Journal of Alloys and Compounds***, 662, 32-43 (2016). **(Impact Factor: 4.175; Quartile: Q1)**
11. Way Foong Lim, **Hock Jin Quah***, and Zainuriah Hassan, Effects of Annealing Temperature on Optical, Morphological, and Electrical Characteristics of Polyfluorene-derivative Thin Films on ITO Glass Substrate, ***Applied Optics***, 55, 1198-1205 (2016). **(Impact Factor: 1.973; Quartile: Q2)**
12. Way Foong Lim, **Hock Jin Quah**, Lu Qifeng, Mu Yifei, Wan Azli Wan Ismail, Bazura Abdul Rahim, Siti Rahmah Esa, Yeh Yee Kee, Zainuriah Hassan, Ce Zhou Zhao, and Kuan Yew Cheong, 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, ***Applied Surface Science***, 365, 296-305 (2016). **(Impact Factor: 5.155; Quartile: Q1)**
13. Nur Fadilah Baharuddin Pallan, Khamirul Amin Matori, Mansor Hashim, Way Foong Lim, **Hock Jin Quah**, A. N. Fauzana, N. Rosnah, M. Z. A. Khiri, S. Farhana, Z. Horhazlin, N. A. Zarifah, M. Nurzilla, Mohd Zaid Mohd Hafiz, C. W. Loy, and M. I. M. Zamratul, Preparation of SiO_2-Na_2O-CaO-P_2O_5 Glass-Ceramic from Waste Materials and Heat Treatment Effects on its Morphology, ***Materials Science Forum***, 846, 189-192 (2016). **(Impact Factor: ISI/Scopus)**

2015

14. **Hock Jin Quah**, Way Foong Lim, Zainuriah Hassan, Rosfariza Radzali, Norzaini Zainal, and Fong Kwong Yam, Effects of Ultraviolet-Assisted Electrochemical Etching Current Densities on Structural and Optical Characteristics of Porous

Quaternary AlInGaN Alloys, ***Arabian Journal of Chemistry***, (2015) – Article in Press. (**Impact Factor: 3.298; Quartile: Q2)**

15. Way Foong Lim, **Hock Jin Quah***, Zainuriah Hassan, Rosfariza Radzali, Norzaini Zainal, Fong Kwong Yam, Alteration of Structural and Optical Properties in Quaternary $Al_{0.1}In_{0.1}Ga_{0.8}N$ Films using Ultraviolet Assisted Photo-Electrochemical Etching Route, ***Journal of Alloys and Compounds***, 649, 337-347 (2015). **(Impact Factor: 4.175; Quartile: Q1)**
16. Gholamrez Vahedi Sarrigani, Khamirul Amin Matori, Way Foong Lim, Alireza Kharazmi, **Hock Jin Quah**, Hamid Reza Bahari, and Mansor Hashim, Structural and Optical Properties of Erbium-doped Willemite-based Glass-Ceramics, ***Applied Optics***, 54, 9925-9929 (2015). **(Impact Factor: 1.973; Quartile: Q2)**
17. Mohd Hafiz Mohd Zaid, Khamirul Amin Matori, **Hock Jin Quah**, Way Foong Lim, Sidek Haji Abdul Aziz, Wan Mahmood Mat Yunus, Zaidan Abdul Wahab, Investigation on Structural and Optical Properties of SLS-ZnO Glasses Prepared using a Conventional Melt Quenching Technique, ***Journal of Materials Science: Materials in Electronics***, 26, 3722 (2015). **(Impact Factor: 2.195; Quartile: Q2)**
18. Khamirul Amin Matori, Mohd Hafiz Mohd Zaid, **Hock Jin Quah**, Sidek Haji Abdul Aziz, Zaidan Abdul Wahab, Mohd Sabri Mohd Ghazali, Studying the Effect of ZnO on Physical and Elastic Properties of $(ZnO)_x(P_2O_5)_{1-x}$ Glasses using Nondestructive Ultrasonic Method, ***Advances in Materials Science and Engineering***, 2015, 596361-1-6 (2015). **(Impact Factor: 1.399; Quartile: Q4)**
19. Farhad Ostovan, Khamirul Amin Matori, Meysam Toozandehjani, Arshin Oskoueian, Hamdan Mohamed Yusoff, Robiah Yunus, Azmah Hanim Mohamed Ariff, **Hock Jin Quah**, and Way Foong Lim, Effects of CNTs Content and Milling Time on Mechanical Behavior of MWCNT-Reinforced Aluminum Nanocomposites, ***Materials Chemistry and Physics***, 166, 160-166 (2015). **(Impact Factor: 2.781; Quartile: Q2)**
20. Gholamrez Vahedi Sarrigani, **Hock Jin Quah**, Way Foong Lim, Khamirul Amin Matori, Noraini Mohd Razali, Alireza Kharazmi, Mansor Hashim, Hamid Reza Bahari, Characterization of Waste Material Derived Willemite-based Glass-Ceramics Doped with Erbium, ***Advanced in Materials Science and Engineering***, 2015, 953659-1-7 (2015). **(Impact Factor: 1.399; Quartile: Q4)**
21. **Hock Jin Quah**, Kuan Yew Cheong, Effects of Annealing Time on the Electrical Properties of the Y_2O_3 Gate on Silicon, ***Journal of Experimental Nanoscience***, 10, 19-28 (2015). **(Impact Factor: 2.482; Quartile: Q2)**
22. Way Foong Lim, **Hock Jin Quah**, Siva Sreenivasan, Kuan Yew Cheong, Investigation of Aloe Vera as Active Layer for Development of Organic Based Memory Devices, ***Materials Technology***, 30, A29-A35 (2015). **(Impact Factor: 1.820; Quartile: Q3)**
23. **Hock Jin Quah**, Way Foong Lim, Kuan Yew Cheong, Space-Charge-Limited-Conduction in RF-Magnetron Sputtered Y_2O_3 Film on Silicon Substrate, ***Science Letters***, 4, 89 (2015).

2014

24. **Hock Jin Quah**, Kuan Yew Cheong, Retardation Mechanism of Ultrathin Al_2O_3 Interlayer on Y_2O_3 Passivated Gallium Nitride Surface, ***ACS Applied Materials and Interfaces***, 6, 7797-7805 (2014). **(Impact Factor: 8.456; Quartile: Q1)**
25. **Hock Jin Quah**, Kuan Yew Cheong, Characterization of Ultrathin Al_2O_3 Gate Oxide Deposited by RF-Magnetron Sputtering on Gallium Nitride Substrate, ***Materials Chemistry and Physics***, 148, 592-604 (2014). **(Impact Factor: 2.781; Quartile: Q2)**
26. **Hock Jin Quah**, Kuan Yew Cheong, Effects of Post-Deposition Annealing Time in Oxygen Ambient on Y_2O_3 Film Deposited on Silicon Substrate, ***Materials Research Innovations***, 18, S6-495-S6-498 (2014). **(Impact Factor: 0.830; Quartile: Q4)**
27. **Hock Jin Quah**, Kuan Yew Cheong, Post-Deposition Annealing in Nitrous Oxide Ambient of RF-Magnetron Sputtered Y_2O_3 Film on Silicon Substrate, ***Advanced Materials Research***, 1024, 360-363 (2014). **(Impact Factor: Scopus)**
28. **Hock Jin Quah**, Kuan Yew Cheong, Effects of Post-Deposition Annealing Time in Nitrogen Ambient on Y_2O_3 Films Deposited on Silicon, ***Topics of Science, Technology and Social Sciences; International Conference on Science, Technology, and Social Science 2012***, Springer Publisher, 649-655 (2014).

2013

29. **Hock Jin Quah**, Kuan Yew Cheong, Surface Passivation of Gallium Nitride by RF-Magnetron Sputtered Al_2O_3 Gate, ***ACS Applied Materials and Interfaces***, 5, 6860-6863 (2013). **(Impact Factor: 8.456; Quartile: Q1)**
30. **Hock Jin Quah**, Kuan Yew Cheong, Current Conduction Mechanisms in RF-Magnetron Sputtered Y_2O_3 Gate on GaN under Different Post-Deposition Annealing Ambient, ***Science of Advanced Materials***, 5, 1816-1827 (2013). **(Impact Factor: 1.158; Quartile: Q4)**
31. **Hock Jin Quah**, Kuan Yew Cheong, Effects of Post-Deposition Annealing Ambient on Band Alignment of RF Magnetron-Sputtered Y_2O_3 Film on Gallium Nitride, ***Nanoscale Research Letters***, 8, 53-1-53-7 (2013). **(Impact Factor: 3.159; Quartile: Q2)**
32. **Hock Jin Quah**, Kuan Yew Cheong, Effects of Post-Deposition Annealing Ambient on Chemical, Structural, and Electrical Properties of RF Magnetron Sputtered Y_2O_3 Gate on Gallium Nitride, ***Journal of Alloys and Compounds***, 575, 382-392 (2013). **(Impact Factor: 4.175; Quartile: Q1)**
33. **Hock Jin Quah,** Kuan Yew Cheong, Current Conduction Mechanisms of RF-Magnetron Sputtered Y_2O_3 Gate Oxide on Gallium Nitride, ***Current Applied Physics***, 13, 1433-1439 (2013). **(Impact Factor: 2.010; Quartile: Q2)**

2012

34. **Hock Jin Quah,** Kuan Yew Cheong, Study on Gallium Nitride-Based Metal-Oxide-Semiconductor Capacitors with RF Magnetron Sputtered Y_2O_3 Gate, ***IEEE Transactions on Electron Devices***, 59, 3009-3016 (2012). **(Impact Factor:2.704; Quartile: Q2)**
35. **Hock Jin Quah,** Kuan Yew Cheong, Effects of Post-Deposition Annealing Ambient on Y_2O_3 Gate Deposited on Silicon by RF Magnetron Sputtering, ***Journal of Alloys and Compounds***, 529, 73-83 (2012). **(Impact Factor:4.175; Quartile: Q1)**

2011

36. **Hock Jin Quah**, Kuan Yew Cheong, Deposition and Post-Deposition Annealing of Thin Y_2O_3 Film on n-type Si in Argon Ambient, ***Materials Chemistry and Physics***, 130, 1007-1015 (2011). **(Impact Factor: 2.781; Quartile: Q2)**
37. **Hock Jin Quah,** Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, Effects of N_2O Postdeposition Annealing on Metal-Organic Decomposed CeO_2 Gate Oxide Spin-Coated on GaN Substrate, ***Journal of the Electrochemical Society***, 158, H423-H432 (2011). **(Impact Factor: 3.120; Quartile: Q1)**
38. **Hock Jin Quah**, Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, Effect of Postdeposition Annealing in Oxygen Ambient on Gallium-Nitride-based MOS Capacitors with Cerium Oxide Gate, ***IEEE Transactions on Electron Devices***, 58, 122-131 (2011). **(Impact Factor:2.704; Quartile: Q2)**
39. **Hock Jin Quah**, Way Foong Lim, Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, Comparison of Metal-Organic Decomposed (MOD) Cerium Oxide (CeO_2) Gate Deposited on GaN and SiC Substrates, ***Journal of Crystal Growth***, 326, 2-8 (2011). **(Impact Factor: 1.573; Quartile: Q3)**
40. **Hock Jin Quah**, Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, Investigation of Forming-Gas Annealed CeO_2 Thin Film on GaN, ***Journal of Materials Science: Materials in Electronics***, 22, 583-591 (2011). **(Impact Factor: 2.195; Quartile: Q2)**
41. **Hock Jin Quah**, Kuan Yew Cheong, Zainuriah Hassan, Forthcoming Gallium Nitride Based Power Devices in Prompting the Development of High Power Applications, ***Modern Physics Letters B***, 25, 77-88 (2011). **(Impact Factor: 0.929; Quartile: Q3)**

2010

42. **Hock Jin Quah**, Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, Farah Anis Jasni, Way Foong Lim, Effects of Postdeposition Annealing in Argon Ambient on Metallorganic Decomposed CeO_2 Gate Spin Coated on Silicon, ***Journal of the Electrochemical Society***, 157, H6-H12 (2010). **(Impact Factor: 3.120; Quartile: Q1)**

43. **Hock Jin Quah**, Way Foong Lim, Stuart C. Wimbush, Zainovia Lockman, Kuan Yew Cheong, Electrical Properties of Pulsed Laser Deposited Y_2O_3 Gate Oxide on 4H-SiC, ***Electrochemical and Solid-State Letters***, 13, H396-H398 (2010). **(Impact Factor: 2.321; Quartile: Q1)**
44. **Hock Jin Quah**, Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, MOS Characteristics of Metallorganic-Decomposed CeO_2 Spin-Coated on GaN, ***Electrochemical and Solid-State Letters***, 13, H116-H118 (2010). **(Impact Factor: 2.321; Quartile: Q1)**
45. Way Foong Lim, Kuan Yew Cheong, Zainovia Lockman, Farah Anis Jasni, **Hock Jin Quah**, Effects of Post-Deposition Annealing on CeO_2 Gate Prepared by Metal-Organic Decomposition (MOD) Method on 4H-SiC, ***Materials Science Forum***, 645, 837 (2010). **(Impact Factor: ISI/SCOPUS)**

2009

46. **Hock Jin Quah**, Kuan Yew Cheong, Zainovia Lockman, Stimulation of Silicon Carbide Nanotubes Formation Using Different Ratios of Carbon Nanotubes to Silicon Dioxide Nanopowders, ***Journal of Alloys and Compounds***, 475, 565-568 (2009). **(Impact Factor: 4.175; Quartile: Q1)**
47. **Hock Jin Quah**, Kuan Yew Cheong, and Zainovia Lockman, The Effect of Temperature on Formation of Silicon Carbide Nanotubes via Shape Memory Synthesis, ***Malaysian Journal of Microscopy***, 5, 126-131 (2009). **(Impact Factor: SCOPUS)**

Publications in Proceedings:

2016

1. e-Proceedings for the 3rd Meeting of Malaysia Nitrides Research Group (MNRG2016), edited by Zainuriah Hassan, **Quah Hock Jin**, Lim Way Foong, Ng Sha Shiong, and Yam Fong Kwong (eISBN: 978-967-394-277-0).

2015

2. **Hock Jin Quah**, Way Foong Lim, Sasi Sreenivasan, and Kuan Yew Cheong, Active Layer in Organic-Based Memory Devices: Incorporation of Gold Nanoparticles in Aloe Vera Gel, ***2015 International Symposium Toward the Future of Advanced Researchers in Shizuoka Un 1iversity,*** 27-28 January 2015, Shizuoka University, Hamamatsu Campus, Hamamatsu, Japan.

2013

3. **Hock Jin Quah**, Kuan Yew Cheong, Post-Deposition Annealing in Nitrous Oxide Ambient of RF-Magnetron Sputtered Y_2O_3 Film on Silicon Substrate, ***International***

Conference on the Advancement of Materials and Nanotechnology 2013, 19-22 November 2013, Park Royal Hotel, Penang, Malaysia.

4. **Hock Jin Quah**, Kuan Yew Cheong, Effects of Post-Deposition Annealing Time in Oxygen Ambient on Y_2O_3 Film Deposited on Silicon Substrate, ***1st International Conference on the Science & Engineering of Materials***, 13-14 November 2013, Sunway Putra Hotel, Kuala Lumpur, Malaysia.

2012

5. **Hock Jin Quah,** Kuan Yew Cheong, Effects of Post-Deposition Annealing Ambient on Band Alignment of RF Magnetron-Sputtered Y_2O_3 Film on Gallium Nitride, ***Collaborative Conference on Crystal Growth,*** 11-14 December 2012, Orlando Florida, USA.
6. **Hock Jin Quah**, Kuan Yew Cheong, Effects of Post-Deposition Annealing Time in Nitrogen Ambient on Y_2O_3 Films Deposited on Silicon, ***International Conference on Science, Technology, and Social Science 2012***, 20-22 November 2012, Vistana Hotel, Kuantan, Pahang, Malaysia.
7. **Hock Jin Quah,** Kuan Yew Cheong, Effects of Annealing Time on the Electrical Properties of the Y_2O_3 Gate on Silicon, ***International Conference on Enabling Science and Nanotechnology 2012***, 5-7 January 2012, Persada Johor International Convention Centre, Johor Bahru, Malaysia.

2008

8. **Hock Jin Quah,** Kuan Yew Cheong, Zainovia Lockman, The Effect of Temperature on Formation of Silicon Carbide Nanotubes via Shape Memory Synthesis, ***17th Scientific Conference of Electron Microscopy Society of Malaysia***, 18-20 December 2008, Holiday Inn Glenmarie, Shah Alam, Selangor, Malaysia.

INTELLECTUAL PROPERTY RIGHTS

Patent:

1. Zainuriah Hassan, Naser Mahmoud Ahmed, **Hock Jin Quah**, and Way Foong Lim, Alternating Current Assisted Photo-Electrochemical Etching System and Method, Patent Application NO: PI 2015704640.
2. Kuan Yew Cheong, Zainovia Lockman, Zainuriah Hassan, **Hock Jin Quah**, Way Foong Lim, A Method for Producing Metal-Oxide-Semiconductor (MOS) Capacitor, WO 2012/057608 A1 – Patent Pending.

ADMINISTRATIVE DUTIES

1. **Chairman**, Internationalization, Industry, and Community Network Committee for Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia, 2019.
2. **Member**, Management Committee for Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia, 2019.
3. **Member**, Research, Publications, and KPI Committee for Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia, 2019.
4. **Member**, Graduate Study Committee for Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia, 2019.
5. **Member**, Innovation, Consultancy, and Sustainability Committee for Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia, 2019.
6. **Member**, Alumni, Student, and Lecturer Committee for Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia, 2019.
7. **Member**, Laboratory and ICT Committee for Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia, 2019.
8. **Chairman**, Daily Ops Meeting for GaN on GaN project for CREST and Institute of Nano Optoelectronics Research and Technology (INOR), Universiti Sains Malaysia, 2019.
9. **Member,** Committee of Technical Specification for PTJ and University Quotations, 2019.

SUPERVISION

1. Doctoral Degree (PhD; co-supervisor), Nabihah Kasim, Fabrication and Characterization of GaN-based Heterostructures For Ultraviolet LED Applications.
2. Doctoral Degree (PhD; co-supervisor), Lau Khai Shenn, Fabrication and Characterization of Near Ultraviolet (UV)-based White Light Emitting Diode (LED)

PROFESSIONAL AFFILATIONS, LINKAGES, AND ACTIVITIES

Professional Affiliations:

1. Editorial Board Member –Journal of Material Science and Technology Research (Zeal Press)
2. Editorial Board Member – The Open Electrical & Electronic Engineering Journal (Bentham Open)
3. Review Editor – Colloidal Materials and Interfaces (Frontiers in Materials; Impact Factor: 2.689)

4. Member – Golden Key International Honour Society
5. Graduate Member – Board of Engineers (BEM), Malaysia

Industrial Linkages/Collaborations:

1. USM-IQM LED Packaging Development, IQ Group Sdn. Bhd., Bayan Lepas, Penang, Malaysia, From *January 2017* until *present.*
2. XPS, ToF-SIMS, and HRTEM characterizations for lanthanum doped zirconium oxide on 4H-SiC substrate, MIMOS Berhad, Kuala Lumpur, Malaysia, From *January 2015* until *June 2015*.
3. HRTEM and EDX Mapping characterizations for CeO_2 gate deposited on GaN and SiC substrates, Infineon Technologies Sdn. Bhd., Kulim, Kedah, Malaysia, From *December 2009* until *August 2010*.
4. Dynamic 4-Point Bend Test: BGA/CSP, Motorola Technology Sdn. Bhd., Bayan Lepas, Penang, Malaysia, From *February 2010* until *April 2010*.

Event Organizer:

1. **E-Abstract Book (Editor-in-Chief)** of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019), Flamingo Hotel by the Beach Penang, Malaysia, 29-30 April 2019.
2. **Oral Presentation Evaluator** of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019), Flamingo Hotel by the Beach Penang, Malaysia, 29 April 2019.
3. **Session Chair** of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019), Flamingo Hotel by the Beach Penang, Malaysia, 29 April 2019.
4. **Organizing Committee (Publication)** of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019), Flamingo Hotel by the Beach Penang, Malaysia, 29-30 April 2019.
5. **Technical Program Committee** for 2018 The 4th Int'l Conference on Thin Film Technology and Applications, Sanya, China, 13-15 January 2018.
6. **Technical Program Committee** for 2017 International Conference on Computer, Electronics and Communication Engineering (CECE2017), Sanya, China, 25-26 June 2017.
7. **Technical Program Committee** for The 2017 International Conference on Electronic Engineering and Wireless Communication (EEWC2017), Tianjin, China, 15-17 July 2017.
8. **Technical Program Committee** for International Conference on Service Science, Technology and Engineering (SSTE2017), Suzhou, China, 19-21 May 2017.

9. **Scientific & Publication (Head),** 3rd Meeting of Malaysia Nitrides Research Group (MNRG 2016), Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, 6-7 December 2016.
10. **Committee Member,** Academy of Sciences Malaysia Fellow's Lecture: Innovative Developments in GaN-based Technology by Prof. Zainuriah Hassan FASc, Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, 7 December 2016.
11. **Technical Program Committee** for 2nd Annual International Conference on Sustainable Development (ICSD2016), Shaanxi, Xian, China, 2-4 December 2016.
12. **Organizing Committee (Events)** of Nobel Laureate Lecture Series by Honorable Prof. Dr. Shuji Nakamura, Kompleks Cahaya Siswa, Universiti Sains Malaysia, 29 July 2016.
13. **Organizing Committee (Events)** of International Symposium of LED and OLED Technology in Conjunction with the International Year of Light 2015 (ISOLED 2015), Auditorium Murad Mohd Noor, SAINS@USM Bukit Jambul, 14 December 2015.
14. **Organizing Committee** of Rural Community Lighting Survey, Kampung Bujang, Bedong, Merbok, Kedah, 14, 28 November and 12 December 2015.
15. **Organizing Committee (Secretariat)** of 2nd Meeting of Malaysia Nitrides Research Group (MNRG), INFORMM Auditorium Room, Universiti Sains Malaysia, organized by Centre for Research Initiatives in Natural Sciences, Universiti Sains Malaysia, 8-9 June 2015.
16. **Technical Committee** of Putra Colloquium on Carbon 2014 (PUTRACar' 14), Bilik Taklimat, Tower Block, Faculty of Engineering, Universiti Putra Malaysia, organized by Institute of Advanced Technology, Universiti Putra Malaysia, 11 November 2014.
17. **Facilitator** of Journal Article Writing and Publication Workshop, organized by Materials Processing and Technology Laboratory, Institute of Advanced Technology, Universiti Putra Malaysia, 17 November 2014.
18. **Facilitator** of Journal Article Writing and Publication Workshop, organized by Materials Synthesis and Characterization Laboratory, Institute of Advanced Technology, Universiti Putra Malaysia, 21-22 August 2014.
19. **Student Facilitator** of International Conference on the Advancement of Materials and Nanotechnology (ICAMN III) 2013, Park Royal Hotel, Penang, Malaysia, organized by Universiti Sains Malaysia and Universiti Teknologi Mara, 19-22 November 2013.
20. **Design of Front Cover** of 1-Day IEEE-CPMT Advanced Packaging Workshop, Eastern & Oriental Hotel, Penang, organized by IEEE, CPMT Society, 23 September 2013.
21. **Committee Member (Co-Publication Chair)** of 35th International Electronic Manufacturing Technology Conference 2012 (IEMT 2012), Kinta Riverfront Hotel, Ipoh, Malaysia, organized by IEEE, CPMT Society, 6-8 November 2012.
22. **Committee Member (Master of Ceremonies)** of 2nd Symposium of USM Fellowship 2011, "Injecting Humanistic Values Into Our Education", Vistana Hotel, Penang, Malaysia, organized by IPS Universiti Sains Malaysia, 23-24 November 2011.
23. **Student Facilitator** of 1-Day Technical Course on "Green Technology & System-On-Chip, SOC", organized by The Institution of Engineers, Malaysia (IEM), 19 November 2009.

Exhibition:

1. **Exhibitor** in UPM 38th Agricultural Expo and Convocation Festival, Bukit Expo, Universiti Putra Malaysia, 31 October 2014.
2. **Member/Exhibitor** of Infineon Technologies (Kulim) Innovation Week, Infineon Technologies, Kulim, Malaysia, 4-7 September 2013.
3. **Member/Exhibitor** of "Sempena Ulang Tahun Ke-25 Pusat Pengajian Kejuruteraan Bahan dan Sumber Mineral", Dewan Utama, Kampus Kejuruteraan, Universiti Sains Malaysia, 12 September 2011.
4. **Member/Exhibitor** of The 21st International Invention, Innovation & technology Exhibition, ITEX 2010, KL Convention Center, Kuala Lumpur, Malaysia, 14-16 May 2010.

Teaching/Working Experiences:

1. Demonstrator of EBB 154/2 Materials Engineering: Introduction Laboratory, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester I 2013/2014.
2. Tutor of EUM 113/3 Engineering Calculus, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester I 2013/2014.
3. Demonstrator of EBB 204 Materials Properties Laboratory, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester II 2012/2013.
4. Tutor of EUM 112/3 Numerical Methods & Engineering Statistics, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester II 2012/2013.
5. Demonstrator of EBB 325 Microscopy Laboratory, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester I 2012/2013.
6. Tutor of EUM 113/3 Engineering Calculus, Semester I 2012/2013.
7. Tutor of EUM 112/3 Numerical Methods & Engineering Statistics, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester II 2011/2012.
8. Tutor of EUM 113/3 Engineering Calculus, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester I 2010/2011.
9. Tutor of EUM 112/3 Numerical Methods & Engineering Statistics, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester II 2009/2010.
10. Tutor of EUM 113/3 Engineering Calculus, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester I 2009/2010.
11. Demonstrator of EBB 317/2 Materials Processing Laboratory, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester II 2008/2009.
12. Industrial Trainee at Komag (Malaysia) Sdn. Bhd, 2007.

TRAINING ATTENDED (COURSES/SEMINARS/WORKSHOPS)

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1. Nobel Laureate Lecture Series: Future Energy Efficient Lighting and Displays by Prof. Dr. Shuji Nakamura, Kompleks Cahaya Siswa, Universiti Sains Malaysia, 29 July 2016.
2. Dislocations in GaN Materials and Devices by Prof. James Speck, Bilik Persidangan Institut Penyelidikan dan Teknologi Nano Optoelektronik (INOR), SAINS@USM, 22 March 2016.
3. Recent Advances in Gallium Nitride based Light Emitting Diodes (LEDs) and Laser Diodes for Energy Efficient Lighting by Prof. Steven DenBaars, Bilik Persidangan Institut Penyelidikan dan Teknologi Nano Optoelektronik (INOR), SAINS@USM, 22 March 2016.
4. Bulk Single Crystal GaN: Growing the Foundation for Novel & High Efficiency III-Nitride Devices, Bilik Persidangan Institut Penyelidikan dan Teknologi Nano Optoelektronik (INOR), SAINS@USM, 25 February 2016.
5. Photonics Research at King Abdullah University of Science & Technology (KAUST): Breaking the Barriers & Opportunitites, Bilik Persidangan Institut Penyelidikan dan Teknologi Nano Optoelektronik (INOR), SAINS@USM, 14 January 2016.
6. Dilute-As GaNAs Semiconductor for Visible Light Emitters, delivered by C. K. Tan from Lehigh University USA, Seminar Room 3, Chancellory II, Universiti Sains Malaysia, 3 July 2015.
7. Thin Film & Organic Electronic Research Group Seminar Series 1/2015: Recent Development in OLEDS, Bilik Mesyuarat, Aras 5, Kompleks Penyelidikan, Universiti Kebangsaan Malaysia, 26 March 2015.
8. Putra Colloquium on Carbon 2014 (PUTRACar' 14), Bilik Taklimat, Tower Block, Faculty of Engineering, Universiti Putra Malaysia, organized by Institute of Advanced Technology, Universiti Putra Malaysia, 11 November 2014.
9. Bengkel Pemurnian Program Pemindahan Ilmu-KTP UPM 2014, Bilik Latihan, Pusat Transformasi Komuniti Universiti (UCTC), Universiti Putra Malaysia, 13 November 2014.
10. 2-Days Workshop on Surface Science and Catalysts Characterization, Saintis Gemilang Room, Faculty of Science, Universiti Putra Malaysia, 23-24 September 2014.
11. Half-Day Interaction Session with Prof. Emeritus Geoffrey A Cordell, Auditorium, Faculty of Engineering, Universiti Putra Malaysia, 24 September 2014.
12. 2-Days Workshop on Advanced Materials and Nanotechnology 2014 (WAMN2014), Auditorium Fakulti Kejuruteraan, Universiti Putra Malaysia, 25-26 August 2014.
13. Talk on Oxide Electronics by Prof. Dr. Arokia Nathan, Cambridge University, United Kingdom organized by Functional Devices Laboratory, Institute of Advanced Technology, Dewan Taklimat, Tower Block, Faculty of Engineering, Universiti Putra Malaysia, 29 August 2014.
14. 1-Day Workshop on Nanomaterials, Park Royal Hotel, Penang, Malaysia, organized by Universiti Sains Malaysia and Universiti Teknologi Mara, 19 November 2013.
15. 1-Day IEEE-CPMT Advanced Packaging Workshop, Eastern & Oriental Hotel, Penang, organized by IEEE, CPMT Society, 23 September 2013.

16. RF Training Course, USM Engineering Campus, organized by QT Hightech Malaysia Sdn Bhd, 12 & 14 November 2012.
17. Short Course on Progressive Advances in High Density Substrates & Packaging to Deliver More than Moore, Kinta Riverfront Hotel, Ipoh, Malaysia, organized by IEEE, CPMT Society, 6 November 2012.
18. Vacuum Training Course, USM Engineering Campus, organized by QT Hightech Malaysia Sdn Bhd, 23-24 October 2012.
19. 2-Day Course on Understanding of Materials Properties, Usains Holding Sdn Bhd, USM Main Campus, Penang, conducted by School of Materials & Mineral Resources Engineering, USM Engineering Campus, 19-20 July 2012.
20. Professional & Personal Development Workshop on "Writing Good and Relevant Literature Review", organized by Institute of Postgraduate Studies, USM, Engineering Campus, 12 December 2011.
21. Half-Day Seminar on Nano-TiO_2 for Green Building, School of Materials & Mineral Resources Engineering, USM Engineering, organized by Nanomaterials Initiative Group (NanoMIG) and School of Materials & Mineral Resources Engineering, USM, 22 July 2011.
22. 3-Day Course on Surface Analysis Technique, Usains Holding Sdn Bhd, USM Main Campus, Penang, conducted by School of Materials & Mineral Resources Engineering, USM Engineering Campus, 1-2 March 2011.
23. EAG Working Smarter Seminar: A Course in Analytical Techniques, G Hotel, Penang, Malaysia, organized by Evans Analytical Group, 9 November 2010.
24. 1-Day Technical Course on "Green Technology & System-On-Chip, SOC", Evergreen Laurel Hotel, Penang, Malaysia, organized by The Institution of Engineers, Malaysia (IEM), 19 November 2009.
25. Occupational Safety & Health Course for Post Graduate Students, Auditorium Hall, USM Engineering Campus, organized by Occupational Safety and Health Committee of USM, 28 February 2009.
26. Postgraduate Seminar: Interpersonal Skills, Auditorium Universiti Sains Malaysia, Engineering Campus, organized by Institute of Postgraduate Studies and School of Materials & Mineral Resources Engineering, USM Engineering Campus, 11 August 2009.
27. Technical Course on Advanced Materials Characterization Techniques, School of Materials & Mineral Resources Engineering, USM Engineering Campus, organized by Postgraduate Student Club, School of Materials & Mineral Resources Engineering, USM Engineering Campus, 6-7 August 2009.
28. Research Design and Methodology Scientific Writing and Data Analysis, organized by Institute of Postgraduate Studies, Universiti Sains Malaysia, 15-25 Jun 2009.
29. Workshop on High Resolution Transmission Electron Microscopy 2008, organized by Advanced Materials Research Centre (AMREC) SIRIM Berhad, 25-27 November 2008.