

CURRICULUM VITAE



DR. LIM WAY FOONG

Senior Lecturer DS51
Institute of Nano Optoelectronics Research and Technology (INOR)
Universiti Sains Malaysia

PERSONAL DETAILS

Area of Expertise	Electronic Oxide Materials, Oxide-Semiconductor Interface, Wide Band Gap Semiconductor Materials, Metal-Oxide-Semiconductor (MOS) Device Fabrication
E-mail Address	way_foong@usm.my/ wayfoong317@yahoo.com.sg
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Researcher ID	C-2805-2013
Author ID	56900518600
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H-Index	13 (Scopus), 15 (Google Scholar)

BIOGRAPHY

Dr. Lim Way Foong obtained her BEng (1st Hons) in Materials Engineering and Doctor of Philosophy (Ph.D) in Electronic Materials from Universiti Sains Malaysia (USM) in 2009 and 2014, respectively under the free scholarship from *Perbadanan Tabung Pendidikan Tinggi Nasional* (PTPTN), “USM Fellowship” and “The USM Vice Chancellor’s Award 2011”. Her research has been focused on high dielectric constant oxide materials as passivation films on silicon (Si) and silicon carbide (4H-SiC) semiconductors, as well as metal-oxide-semiconductor (MOS) device fabrication. Dr. Lim has gained research experience during her postgraduate studies at School of Materials and Mineral Resources Engineering, USM. After joining Centre for Research Initiatives (CRI) in Natural Sciences and INOR, USM as postdoctoral fellow in 2015, Dr. Lim has widened her research scope to wide band gap semiconductors, such as metal oxides and III-nitrides. During her two-year postdoc, she has gained new skill and knowledge with regards to electrochemical etching approaches to alter surface of the III-nitrides semiconductors as well as organic thin films for light emitting diode (LED) and gas sensing applications. Dr. Lim has experience working in LED-based industry for one year in the R&D department after her postdoctoral fellow career. In June 2018, Dr. Lim joined INOR as an academic staff. She is now involved in the GaN on GaN National Project to produce high brightness LED. She has obtained 1 innovation seed fund and 1 bridging grant as the project leader. She is also the co-researcher for Long Term Research Grant (LRGS) scheme and Research University (RU) grant. She has 1 active MSc student under her supervision for a project related to hybrid organic-inorganic structures for LED application. She is also the co-supervisor for 1 MSc and 3 PhD students. Besides, Dr. Lim is also involving in administrative duties. She is currently a Chairman of *Jawatankuasa Pengajian Siswazah* and also committee member in other *Jawatankuasa* in INOR. Her active participation in research has contributed to 48 publications in international refereed top-tier journals with H-index of 15, 1 patent

granted, and 2 patents pending. Besides, she has also received several recognitions from the university under *Sanggar Sanjung* Hall of Fame awards.

ACADEMIC QUALIFICATION (Qualification), (Institution).

<p>Doctor of Philosophy, Electronic Materials, Universiti Sains Malaysia.</p> <p>Project Title: Investigation of metal-organic decomposed lanthanum cerium oxide as metal reactive oxide on silicon and 4H-silicon carbide substrates.</p>
<p>Bachelor of Engineering, Materials Engineering, 1st Class Honour (CGPA 3.78), Universiti Sains Malaysia.</p> <p>Project Title: Deposition and characterization of CeO₂ gate on n-type 4H-SiC using metal-organic decomposition technique.</p>

PROFESSIONAL (Organisation), (Role), (Year), (Level).

1.	SPIE, Early Career Professional Member, 4147970, 2018 to 2021 (3 years), International.
2.	Colloidal Materials and Interfaces (Frontiers in Materials), Review Editor, since 2017, International.
3.	Golden Key International Honour Society, Member, since 2006, International.
4.	Board of Engineers (BEM), Graduate Member, 66661A, since 2010, National.
5.	Graduate Technologist, Malaysia Board of Technologists, GT19070315, since 2019, National.

RESEARCH FUNDING (Grant Name), (Source), (Role), (Year), (Level), (Amount).

1.	Innovation Seed Fund (DIA), USM, Project Leader , May 2019 – Apr 2020, University, RM 24,000.00
2.	Bridging Grant Fasa 1/2019, USM, Project Leader , June 2019 – June 2020, University, RM 24,997.10
3.	Fundamental Research Grant Scheme (FRGS) 2019-1, Ministry of Higher Education, Project Leader , June 2019 – May 2022, National, RM 234,191.00 (<i>under review</i>)
4.	Loreal-UNESCO grant “ <i>For Women in Science Malaysia - National Young talents programme 2019 programme</i> ”, Loreal-UNESCO FWIS, Individual , International, RM 30,000.00 (<i>under review</i>)
5.	MyPAIR-PHC-Hibiscus 2019-1, Ministry of Higher Education, Co-Researcher , Mar 2019 – Feb 2021, International, RM 66,000.00 (<i>under review</i>)
6.	Long Term Research Grant Scheme (LRGS), Ministry of Higher Education, Co-Researcher , Oct 2017 – Oct 2020, National, RM 2,000,000.00
7.	Research University Grant, USM, Co-Researcher , July 2018 – June 2020, University, RM 87,100.00
8.	Science and Technology Research Grant, Malaysia Toray Science Foundation (MTSF), Project Leader , Jan 2011 – Jan 2013, National, RM 15,000.00
9.	USM-Research University Postgraduate Research Grant Scheme (USM-RU-PRGS), USM, Project Leader , Jan 2010 – Dec 2013, University, RM 13,727.00
10.	Vice Chancellor’s Award Travel Grant, USM, Project Leader , Jan 2011 – Dec 2013, University, RM 3,000.00

RESEARCH ATTACHMENT

- **Visiting Researcher to University of California, Santa Barbara (UCSB)**
 - Suggested initial date: June 2019 – Dec 2019
 - Suggested new date: Jan 2020 – June 2020

ADMINISTRATIVE DUTIES (Role), (Level), (Start date), (End Date).

1.	Pengerusi, Jawatankuasa Pengajian Siswazah (JKPS), 2 Jan 2019 – 31 Dis 2019.
2.	Ahli, Jawatankuasa Penyelidikan, Penerbitan dan KPI (JKPPK), 2 Jan 2019 – 31 Dis 2019.
3.	Ahli, Jawatankuasa Pengurusan INOR, 2 Jan 2019 – 31 Dis 2019.
4.	Ahli, Majlis Akademik INOR, 13 June 2018 – 31 Dis 2019.
5.	Ahli, Jawatankuasa Makmal dan ICT (JKMI), 2 Jan 2019 – 31 Dis 2019.
6.	Ahli, Jawatankuasa Pengantarabangsaan, Jaringan Industri dan Masyarakat (JKPJIM), 2 Jan 2019 – 31 Dis 2019.
7.	Ahli, Jawatankuasa Alumni, Pelajar, dan Pensyarah, 2 Jan 2019 – 31 Dis 2019.
8.	Ahli, Jawatankuasa Inovasi, Perundingan & Kelestarian (JKIPK), 2 Jan 2019 – 31 Dis 2019.
9.	Ahli, Jawatankuasa Sebutharga Pusat Tanggungjawab (PTJ) – Institut Penyelidikan dan Teknologi Nano Optoelektronik (INOR), 2 Jan 2019 – 31 Dis 2021.
10.	Penyelaras, Lawatan MITI / MIDA E&E team ke INOR Bersama CREST, 27 May 2019.
11.	Penyelaras, Lawatan CE of NCIA, Datuk Seri Jebasingam ke INOR Bersama CREST, 2 Apr 2019.
12.	Ahli, Jawatankuasa Penyediaan Spesifikasi Teknikal bagi Sebutharga PTJ dan Universiti, 8 Apr 2019 – kini.
13.	Ahli, Jawatankuasa Ad Hoc - Pengumpulan Data KPI 2018, 8 Dis 2018 – 8 Jan 2019.
14.	Penyelaras, Tindakan Nomination and Penyelarasan dengan pihak Senat dan MPRC tentang Aktiviti berkenaan dengan Upacara Konvokesyen bagi Penerima Ijazah Kehormat “Doctor of Science” bagi Prof. Dr. Shuji Nakamura, Mar 2019 – Sep 2019.
15.	Penyelaras Bersama, Lawatan Dato’ V Valluvan Veloo, Director of “Industri Pembuatan Sains dan Teknologi”, Ministry of Economic Affair ke INOR Bersama CREST, 4 Mar 2019 – 18 Mar 2019.
16.	Ahli, Perbincangan Pengiraan Kos Projek Penyelidikan secara Kontrak bagi OSRAM, Feb – Mar 2019.
17.	Penyelaras, Tindakan Penyediaan Pembentangan Impak Projek INOR untuk slaid Naib Canselor, 2 Jan 2019 – 4 Jan 2019.
18.	Penyelaras, Program Industry@University: 4.0 Industry Revolution Competence Centre bagi Tahun 2019, 27 Mar 2019 – June 2019.
19.	Penyelaras, Tindakan Permohonan Trademark untuk logo INOR, June 2018 – Mar 2019.
20.	Penyelaras Bersama, Tindakan Penyediaan Buku Laporan Tahunan dan Penyata Kewangan USM Tahun 2018, 30 Jan 2019 – 21 Feb 2019.
21.	Penyelaras, Tindakan Pengisian Maklumat Aktiviti Pusat Tanggungjawab (PTJ) sempana sambutan ulangtahun ke-50 tahun, 26 Dis 2018 – 4 Jan 2019.
22.	Penyelaras, Tindakan Pencalonan Ahli Akademik dan Majikan untuk Penarafan QS-WUR 2020, 21 Dis 2018 – 5 Jan 2019.
23.	Penyelaras, Jaringan Perhubungan dengan university kolaborasi lain untuk penyelidikan dan akademik – OTH Regensburg, Germany dan Universiti de Lorraine, France, Jun 2018 - kini
24.	Pembantu, Tindakan Pengisian Kaji Selidik Kebangsaan: Kemampuan Terkini Nanoteknologi Negara, 31 May 2019 – 18 Jun 2019.
25.	Pembantu, Tindakan Mereka Brosur INOR, Brosur Research Program dan Brosur Mixed Mode Program, Mar – Apr 2019.

26.	Pengerusi, Jawatankuasa Penyediaan Spesifikasi Tender “X-Ray Diffraction (XRD) System” – To Supply, Deliver, Install and Commissioning “X-Ray Diffraction (XRD) System” to Institute of Nano Optoelectronics Research and Technology (INOR), Main Campus, Universiti Sains Malaysia, Pulau Pinang, 2 Jul 2018.
27.	Pengerusi, Jawatankuasa Penilaian Teknikal bagi Sebutarga PTJ, no. sebutarga SH1/18/PR/CINOR/U/00128 dan SH1/18/PR/CINOR/U/00129, 13 Sep 2018.
28.	Pengerusi, Jawatankuasa Penilaian Teknikal bagi Sebutarga Membaiki dan Menggantikan “Komponen Goniometer” untuk alatan X-Ray Diffractometer (XRD) MRD System, 8 Aug 2018.
29.	Penyelaras, Lawatan Politeknik Tuanku Sultanah Bahiyah ke INOR, 15 Aug 2018 – 4 Sep 2018.
30.	Penyelaras, Tindakan Analisis Data berkenaan Tahap Global Prominence Pusat Pengajian (PTJ), INOR, 24 Aug 2018 – 29 Aug 2018.
31.	Penyelaras, Tindakan Pengauditan Prestasi Universiti Penyelidikan (MyRA) USM 2018 (Fasa 1), 19 Jul 2018 – 28 Jul 2018.
32.	Penyelaras, Kajian Impak Program Apex Tahun 2008 – 2017 – Pengumpulan dan Pembentangan Hasil Program/Aktiviti Universiti Apex, 21 Ogos 2018
33.	Penyelaras, Tindakan Penjajaran Headline KPI dan Objektif Strategik USM APEX 2020 – Aktiviti Peruntukan Pembangunan PTJ 2016 (Berdasarkan Prestasi 2015)

RESEARCH PUBLICATION

Publications in Refereed Journals (Authors), (Title), (Journal), (Year), (Impact Factor), (Quartile).

2019

1. Hock Jin Quah, Zainuriah Hassan, **Way Foong Lim***, Simultaneous Two-Step Assisted Growth of Aluminium Zirconium Oxide from Al-Zr Films, ***Ceramics International***, 2019 (Under Review). **(Impact Factor: 3.450, Quartile Q1)**.
2. **Way Foong Lim**, Zainuriah Hassan, Hock Jin Quah, High Temperature Growth of Aluminium Doped Zirconium Oxide via Post-Sputter Oxidation of Al-Zr Films with Different Composition, ***Journal of Alloys and Compounds***, 2019 (Under Review). **(Impact Factor: 3.779, Quartile Q1)**.
3. 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)**
4. **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: 3.398, Quartile Q1)**.
5. 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: 3.779, Quartile Q1)**.

2018

6. **Way Foong Lim**, Zainuriah Hassan, Naser Mahmoud Ahmed, and Hock Jin Quah, Porous Formation in p-Type Gallium Nitride Films via 50 Hz Operated Alternating Current-Assisted Photo-Electrochemical Etching in Methanol-Sulfuric Acid Solution, ***Journal of the Electrochemical Society***, 165, H620-H628 (2018). **(Impact Factor: 3.662, Quartile Q1)**.

7. 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 Series*, 1083, 012034 (2018). (Impact Factor: Scopus).

2017

8. 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 CeO₂ as Passivation Film on Silicon, *Journal of Alloys and Compounds*, 695, 3104-3115 (2017). (Impact Factor: 3.779, Quartile Q1).

2016

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 Formation via Photo-Electrochemical Etching in HF:C₂H₅OH Electrolyte, *Journal of the American Ceramic Society*, 99, 2395-2401 (2016). (Impact Factor: 2.956, Quartile Q1).
10. **Way Foong Lim**, Hock Jin Quah, Qifeng Lu, Yifei Mu, Wan Azli Wan Ismail, Bazura Abdul Rahim, Siti Rahmah, Yeh Yee Kee, Zainuriah Hassan, Ce Zhao, 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).
11. **Way Foong Lim**, Hock Jin Quah, 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: 1.791, Quartile Q3).
12. Hock Jin Quah, Naser Mahmoud Ahmed, Zainuriah Hassan, **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*, 163, H642-H651 (2016). (Impact Factor: 3.662, Quartile Q1).
13. Hock Jin Quah, Naser Mahmoud Ahmed, Norzaini Zainal, Fong Kwong Yam, Zainuriah Hassan, **Way Foong Lim***, Room Temperature Hydrogen Gas Sensing Characteristics of Porous Quaternary AlInGa_{0.8}N Film Prepared via UV-Assisted Photo-Electrochemical Etching, *Superlattices and Microstructures*, 95, 65-70 (2016). (Impact Factor: 2.099, Quartile Q3).
14. Hock Jin Quah, **Way Foong Lim***, Zainuriah Hassan, Fong Kwong Yam, Norzaini Zainal, Structural and Optical Investigation of Porous Quaternary Al_{0.1}In_{0.1}Ga_{0.8}N Films Produced via Ultraviolet-Assisted Photo-Electrochemical Etching in Acidic Solutions, *Journal of Alloys and Compounds*, 662, 32-43 (2016). (Impact Factor: 3.779, Quartile Q1).
15. N. F. Baharuddin Pallan, K. A. Matori, M. Hashim, **W. F. Lim**, H. J. Quah, A. N. Fauzana, N. Rosnah, M. Z. A. Khiri, S. Farhana, Z. Norhazlin, N. A. Zarifah, M. Nurzilla, M. Z. M. Hafiz, C. W. Loy, M. I. M. Zamratul, Preparation of SiO₂-Na₂O-CaO-P₂O₅ Glass-Ceramic from Waste Materials and Heat Treatment Effects on Its Morphology, *Materials Science Forum*, 846, 189-192 (2016). (Impact Factor: ISI/SCOPUS)
16. Loy Chee Wah, Khamirul Amin Matori, **Way Foong Lim**, Norhazlin Zainuddin, Zaidan Abdul Wahab, Zarifah Nadakkavil Alassan, Mohd Hafiz Mohd Zaid, Siegbert Schmid, Effects of Calcination on the Crystallography and Non-biogenic Aragonite Formation of Ark Clam Shell under Ambient Condition, *Advances in Materials Sciences and Engineering*, (2016) – Just Accepted. (Impact Factor: 1.372, Quartile Q3).

17. N. F. Samsudin, K. A. Matori, Z. A. Wahab, W. F. Yap, J. Y. C. Liew, **W. F. Lim**, M. H. M. Zaid, N. A. S. Omar, Manganese modified structural and optical properties of zinc soda lime silica glasses, *Applied Optics*, 55, 2182-2187 (2016). (Impact Factor: 1.791, Quartile Q3).

2015

18. **Way Foong Lim**, Hock Jin Quah, Zainuriah Hassan, Rosfariza Radzali, Norzaini Zainal, Fong Kwong Yam, Alteration of Structural and Optical Properties in Quaternary $\text{Al}_{0.1}\text{In}_{0.1}\text{Ga}_{0.8}\text{N}$ Films using Ultraviolet Assisted Photo-Electrochemical Etching Route, *Journal of Alloys and Compounds*, 649, 337-347 (2015). (Impact Factor: 3.779, Quartile Q1).
19. **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: 1.232, Quartile Q4).
20. 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*, <http://dx.doi.org/10.1016/j.arabjc.2015.10.003> (2015). (Impact Factor: 2.969, Quartile Q2).
21. 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).
22. Gholamrez Vahedi Sarrigani, Khamirul Amin Matori, **Way Foong Lim**, Alireza Kharazmi, Hock Jin Quah, Hamid Reza Bahari, Mansor Hashim, Structural and Optical Properties of Erbium doped Willemite-based Glass-Ceramics, *Applied Optics*, 54, 9925-9929 (2015). (Impact Factor: 1.791, Quartile Q3).
23. 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: 2.210, Quartile Q2).
24. 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, 3722-3729 (2015). (Impact Factor: 2.324, Quartile Q2).
25. 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: 1.372, Quartile Q3).
26. Zarifah N. Alassan, **Way Foong Lim**, Khamirul Amin Matori, Sidek Haji Abdul Aziz, Zaidan Abdul Wahab, Norhazlin Zainuddin, Mohamad Amran Mohd Salleh, Fadilah B. N., Fauzana A. N., An Elucidating Study on Physical and Structural Properties of 45S5 Glass at Different Sintering Temperatures, *Journal of Non-Crystalline Solids*, 412, 24-29 (2015). (Impact Factor: 2.488, Quartile Q2).

2014

27. **Way Foong Lim**, Kuan Yew Cheong, Oxygen Vacancy Formation and Annihilation in Lanthanum Cerium Oxide as a Metal Reactive Oxide on 4H-Silicon Carbide, *Physical Chemistry Chemical Physics*, 16, 7015-7022 (2014). (Impact Factor: 3.906, Quartile Q1).
28. Nur Fatin Syamimi, Khamirul Amin Matori, **Way Foong Lim**, Sidek Haji Abdul Aziz, Mohd Hafiz Mohd Zaid, Effect of Sintering Temperature on Structural and Morphological Properties of

- Europium (III) Oxide Doped Willemite, *Journal of Spectroscopy*, <http://dx.doi.org/10.1155/2014/328931> (2014). (Impact Factor: 1.391, Quartile Q3)
29. Meysam Toozaandehjani, Faizal Mustapha, Nur Ismarrubie Zahari, Mohd Khairul Anuar Ariffin, Khamirul Amin Matori, Farhad Ostovan, **Way Foong Lim**, Characterization of Aging Behavior of AA6061 Aluminum Alloy through Destructive and Ultrasonic Non-Destructive Testing Techniques, *Transactions of the Indian Institute of Metals*, 68, 561-569 (2014). (Impact Factor: 0.910, Quartile Q4)
 30. **Way Foong Lim**, Kuan Yew Cheong, Potential of Metal Reactive Oxides for Development of 4H-Silicon Carbide-based Metal-Oxide-Semiconductor Gas Sensor, *International Journal of Chem Tech Research*, 6, 1766-1770 (2014). (Impact Factor: ISI/SCOPUS)
 31. **Way Foong Lim**, Kuan Yew Cheong, Oxygen Gas Sensing of Al/La_xCe_yO_z/Si Metal-Oxide-Semiconductor Gas Sensor, *Materials Research Innovations*, 18, S6-490-S6-494 (2014). (Impact Factor: 0.830; Quartile: Q4)
 32. **Way Foong Lim**, Zainovia Lockman, Kuan Yew Cheong, Effects of Post-Deposition Annealing Time on Metal-Organic Decomposed Lanthanum Cerium Oxide Film Spin-Coated on Si Substrate, *Advanced Materials Research*, 1024, 364-367 (2014). (Impact Factor: ISI/SCOPUS)

2013

33. **Way Foong Lim**, Kuan Yew Cheong, Structural and Chemical Studies of Metal-Organic Decomposed La_xCe_yO_z Thin Film as a Catalytic Oxide on 4H-SiC as a Function of Postdeposition Annealing Time, *The Journal of Physical Chemistry C*, 117, 14014-14024 (2013). (Impact Factor: 4.484, Quartile Q1)
34. **Way Foong Lim**, Kuan Yew Cheong, Ultralow Voltage Operation of Al/La_xCe_{1-x}O_z/4H-SiC for Oxygen Sensing, *IEEE Electron Device Letters*, 34, 1430-1432 (2013). (Impact Factor: 3.433, Quartile Q2)
35. **Way Foong Lim**, Kuan Yew Cheong, Study of Molar Ratio on the Characteristics of Metal-Organic Decomposed La_xCe_{1-x}O_z Film as a Metal Reactive Oxide on Si Substrate, *Journal of Alloys and Compounds*, 581, 793-800 (2013). (Impact Factor: 3.779, Quartile Q1)
36. **Way Foong Lim**, Kuan Yew Cheong, Effects of Post-Deposition Annealing Temperature on Metal-Organic Decomposed Lanthanum Cerium Oxide Film as Metal Reactive Oxide Layer on 4H-SiC, *Materials Chemistry and Physics*, 140, 622-633 (2013). (Impact Factor: 2.210, Quartile Q2)
37. **Way Foong Lim**, Kuan Yew Cheong, Investigation of La_xCe_yO_z as a High-Dielectric Constant Metal Reactive Oxide on Si Substrate, *Physics Express*, 3, 1-7 (2013).

2012

38. **Way Foong Lim**, Kuan Yew Cheong, Metal-Oxide-Semiconductor Characteristics of Lanthanum Cerium Oxide Film on Si, *Applied Physics A: Materials Science & Processing*, 107, 459-467 (2012). (Impact Factor: 1.604, Quartile Q3).
39. **Way Foong Lim**, Kuan Yew Cheong, Influence of Post-Deposition Annealing in Oxygen Ambient on Metal-Organic Decomposed CeO₂ Film Spin Coated on 4H-SiC, *Journal of Materials Science: Materials in Electronics*, 23, 257-266 (2012). (Impact Factor: 2.324, Quartile Q2)
40. **Way Foong Lim**, Kuan Yew Cheong, Effects of Post-Deposition Annealing Temperature on Band Alignment and Electrical Characteristics of Lanthanum Cerium Oxide on 4H-SiC, *Materials Research Society*, 1433, 83-88 (2012), DOI: 10.1557/opl.2012.1144. (Impact Factor: 1.495, Quartile Q3)

2011

41. **Way Foong Lim**, Kuan Yew Cheong, Zainovia Lockman, Effects of Post-Deposition Annealing Temperature and Time on Physical Properties of Metal-Organic Decomposed Lanthanum Cerium Oxide Thin Film, *Thin Solid Films*, 519, 5139-5145 (2011). (Impact Factor: 1.939, Quartile Q2)
42. **Way Foong Lim**, Kuan Yew Cheong, Zainovia Lockman, Physical and Electrical Characteristics of Metal-Organic Decomposed CeO₂ Gate Spin-Coated on 4H-SiC, *Applied Physics A: Materials Science & Processing*, 103, 1067-1075 (2011). (Impact Factor: 1.604, Quartile Q3)
43. Hock Jin Quah, **Way Foong Lim**, Kuan Yew Cheong, Zainuriah Hassan, Zainovia Lockman, Comparison of Metal-Organic Decomposed (MOD) Cerium Oxide (CeO₂) Gate Deposited on GaN and SiC Substrates, *Journal of Crystal Growth*, 326, 2-8 (2011). (Impact Factor: 1.742, Quartile Q3)
44. **Way Foong Lim**, Zainovia Lockman, Kuan Yew Cheong, Influence of post-deposition annealing on metalorganic decomposed lanthanum cerium oxide film. *IEEE Regional Symposium on Micro and Nanoelectronics*, 24-27 (2011). (Impact Factor: ISI/SCOPUS)

2010

45. **Way Foong Lim**, Kuan Yew Cheong, Zainovia Lockman, Physical Characterization of Post-Deposition Annealed Metal-Organic Decomposed Cerium Oxide Film Spin-Coated on 4H-Silicon Carbide, *Journal of Alloys and Compounds*, 497, 195-200 (2010). (Impact Factor: 3.779, Quartile Q1)
46. **Way Foong Lim**, Kuan Yew Cheong, Zainovia Lockman, Farah Anis Jasni, Hock Jin Quah, Effects of Post-Deposition Annealing on CeO₂ Gate Prepared by Metal-Organic Decomposition (MOD) Method on 4H-SiC, *Materials Science Forum*, 645, 837, (2010). (Impact Factor: ISI/SCOPUS)
47. 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 CeO₂ Gate Spin Coated on Silicon, *Journal of the Electrochemical Society*, 157, H6-H12 (2010). (Impact Factor: 3.662, Quartile Q1)
48. Hock Jin Quah, **Way Foong Lim**, Stuart C. Wimbush, Zainovia Lockman, Kuan Yew Cheong, Electrical Properties of Pulsed Laser Deposited Y₂O₃ Gate Oxide on 4H-SiC, *Electrochemical and Solid-State Letters*, 13, H396-H398 (2010). (Impact Factor: 2.321)

Other Publications:

2019

1. **Way Foong Lim***, Kuan Yew Cheong, Zainovia Lockman, Zainuriah Hassan, Hock Jin Quah, High-k LaCeO for Passivation of Si Substrate, *Abstract Book of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019)*, 29-30 April 2019, Flamingo Hotel by the Beach, Tanjung Bungah, Penang, Malaysia.
2. A.M. Hanafiah, Z. Hassan, **W.F. Lim**, E.A. Alias, M.A. Ahmad, N.A. Hamzah, R.I.M. Asri, Effect of Varying Thermal Annealing Temperature on the Characteristics of Lower and Higher Mg-Doped GaN, *Abstract Book of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019)*, 29-30 April 2019, Flamingo Hotel by the Beach, Tanjung Bungah, Penang, Malaysia.
3. Farah Hayati Ahmad, Zainuriah Hassan, Naser Mahmoud Ahmed, Hock Jin Quah, **Way Foong Lim**, Luminescence Characteristics of Hybridized Polyfluorene, *Abstract Book of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019)*, 29-30 April 2019, Flamingo Hotel by the Beach, Tanjung Bungah, Penang, Malaysia.

4. Khai Shenn Lau, Zainuriah Hassan, Way Foong Lim, Hock Jin Quah, Naser M. Ahmed, Husnen R. Abd., Investigation of Different Fuel Sources Used in Microwave Induced Combustion Synthesis on the Luminescence Property of YAG Phosphor, ***Abstract Book of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019)***, 29-30 April 2019, Flamingo Hotel by the Beach, Tanjung Bungah, Penang, Malaysia.
5. Nabihah Kasim, Zainuriah Hassan, Way Foong Lim, Sabah M. Mohammad, Hock Jin Quah, Morphological and Structural Properties of Sol-Gel Derived ZnO Thin Films Spin-Coated on Different Substrates, ***Abstract Book of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019)***, 29-30 April 2019, Flamingo Hotel by the Beach, Tanjung Bungah, Penang, Malaysia.
6. 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, The Growth of AlN Single Layer on Sapphire at Low Pressure using Metalorganic Chemical Vapor Deposition (MOCVD), ***Abstract Book of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019)***, 29-30 April 2019, Flamingo Hotel by the Beach, Tanjung Bungah, Penang, Malaysia.
7. Hock Jin Quah, Kuan Yew Cheong, Zainuriah Hassan, Way Foong Lim, Effects of Post-Deposition Annealing Time in Forming Gas Ambient on Y_2O_3 Films Deposited on Silicon Substrate, ***Abstract Book of International Conference on Semiconductor Materials and Technology (ICoSeMT 2019)***, 29-30 April 2019, Flamingo Hotel by the Beach, Tanjung Bungah, Penang, Malaysia.

2016

8. 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

9. 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 University***, 27-28 January 2015, Shizuoka University, Hamamatsu Campus, Hamamatsu, Japan.

2014

10. Way Foong Lim, Kuan Yew Cheong, Potential of Metal Reactive Oxides for Development of 4H-Silicon Carbide-based Metal-Oxide-Semiconductor Gas Sensor, ***International Conference on Materials and Characterization Techniques 2014***, 10-12 March 2014, VIT University, Vellore, Chennai, India.

2013

11. Way Foong Lim, Kuan Yew Cheong, Effects of Post-Deposition Annealing Time on Metal-Organic Decomposed Lanthanum Cerium Oxide Film Spin-Coated on Si Substrate, ***International Conference on the Advancement of Materials and Nanotechnology 2013***, 19-22 November 2013, Park Royal Hotel, Penang, Malaysia.
12. Way Foong Lim, Kuan Yew Cheong, Oxygen Gas Sensing of $Al/La_{x}Ce_{y}O_{z}/Si$ Metal-Oxide-Semiconductor Gas Sensor, ***1st International Conference on the Science & Engineering of Materials***, 13-14 November 2013, Sunway Putra Hotel, Kuala Lumpur, Malaysia.

2012

13. **Way Foong Lim**, Kuan Yew Cheong, Influence of Spin Coating Rate on Metal-Organic Decomposed Lanthanum Cerium Oxide Film on Si Substrate, **International Conference on Science, Technology, and Social Science 2012**, 20-22 November 2012, Vistana Hotel, Kuantan, Pahang, Malaysia.
14. **Way Foong Lim**, Kuan Yew Cheong, Effects of Post-Deposition Annealing Temperature on Band Alignment and Electrical Characteristics of Lanthanum Cerium Oxide on 4H-SiC, **Materials Research Society Symposium Proceeding, MRS Spring Meeting & Exhibit 2012**, 9-13 April 2012, Moscone West Convention Center, San Francisco, United States.

2011

15. **Way Foong Lim**, Zainovia Lockman, Kuan Yew Cheong, Influence of Post-Deposition Annealing on Metalorganic Decomposed Lanthanum Cerium Oxide Film, **Proceedings of 2011 IEEE Regional Symposium on Micro and Nanoelectronics (RSM)**, Le Meridien Kinabalu Hotel, Kota Kinabalu, Sabah, Malaysia, 28-30 Sept 2011, pp. 24-27.

2010

16. **Way Foong Lim**, Kuan Yew Cheong, Zainovia Lockman, Investigation of Post-Deposition Annealed Lanthanum Cerium Oxide Gate Prepared by Metal-Organic Decomposition (MOD) Method on Silicon Substrate," **Thin Films 2010 & COMPO 2010**, 11 -14 July 2010, Harbin, China.

2009

17. **Way Foong Lim**, Kuan Yew Cheong, Zainovia Lockman, Farah Anis Jasni, Hock Jin Quah, Effects of Post-Deposition Annealing on CeO₂ Gate Prepared by Metal-Organic Decomposition (MOD) Method on 4H-SiC," **13th International Conference on Silicon Carbide and Related Materials**, 11 -16 October 2009, Nurnberg, Germany.

INTELLECTUAL PROPERTY RIGHTS

Patent:

1.	Kuan Yew Cheong, Zainovia Lockman, Way Foong Lim , Lanthanum Cerium Oxide Thin Film and Its Preparation Thereof, Malaysia MY-153033-A – Issued December 31, 2014 (Granted).
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.
3.	Zainuriah Hassan, Naser Mahmoud Ahmed, Hock Jin Quah, Way Foong Lim , Alternating Current Assisted Photo-Electrochemical Etching System and Method – PI 2015704640 – Patent Pending.

SUPERVISION (Student Name), (Level), (University), (Nationality), (Year), (Status)**i. MAIN SUPERVISION**

1. Farah Hayati binti Haji Ahmad, Master Degree, P-NOM0001/19(R), USM, Malaysian, Feb 2019, Active
2. Nsar Saad Milad Ali, PhD Degree, USM, Libyan, Coming Soon (offer letter issued on 25 Feb 2019, ref. IPS19/INO/004)
3. Barua Sujoy, PhD Degree, USM, Bangladesh, Coming Soon (offer letter issued on 3 Apr 2019, ref. IPS19/INO/010)
4. Mustapha Lateef Olajuwon, PhD Degree, USM, Nigeria, Coming Soon (offer letter issued on 25 Feb 2019, ref. IPS19/INO/002)
5. Muddasir, PhD Degree, USM, Coming Soon (offer letter issued on 16 May 2019, ref. IPS19/INO/016)
6. Umar Mohammad, PhD Degree, USM, India, Coming Soon (offer letter issued on 16 May 2019, ref. IPS19/INO/021)

ii. CO SUPERVISION

1. Noor Afifa binti Mohd Hanafiah, Master Degree, P-NOM0002/18(R), USM, Malaysian, Mar 2018, Active
2. Nabihah binti Kasim, PhD Degree, P-NOD0001/17(R), USM, Malaysian, Feb 2017, Active
3. Mohd Ann Amirul Zulfiquil bin Md Sahar, PhD Degree, P-NOD0001/18(R), USM Malaysian, Feb 2018, Active
4. Lau Khai Shenn, PhD Degree, P-NOD0006/18(R), USM, Malaysian, Sep 2018, Active
5. Mubarak Mohammad Hasan Mustafa, Master Degree, USM, Jordan, Coming Soon (offer letter issued on 16 May 2019, ref. IPS19/INO/017)
6. Nyakundi Evans Makori, PhD Degree, USM, Kenya, Coming Soon (offer letter issued on 28 Mar 2019, ref. IPS19/INO/012)

iii. FIELD SUPERVISION

7. Tan Kwong Yew, Bachelor's Degree, Monash University Malaysia, Malaysian, Oct 2017, Graduated

TEACHING (Code), (Course), (Role), (Program), (Institution)

1. INT502, Growth and Fabrication of Optoelectronic Devices, Lecturer, Master of Science (Nano-Optoelectronics) Mixed-Mode, INOR, USM (**coming soon September 2019/2020**)
2. INT505, Dissertation I, Lecturer (Chairman), Master of Science (Nano-Optoelectronics) Mixed-Mode, INOR, USM (**coming soon September 2019/2020**)
3. INT506, Dissertation II, Lecturer (Chairman), Master of Science (Nano-Optoelectronics) Mixed-Mode, INOR, USM (**coming soon September 2019/2020**)
4. EUM 112/3, Numerical Methods & Engineering Statistics, Tutor, School of Materials and Mineral Resources Engineering, USM, Semester I 2013/2014
5. EBB 154/2, Materials Engineering: Introduction Laboratory, Demonstrator, School of Materials and Mineral Resources Engineering, USM, Semester I 2013/2014.
6. EUM 112/3, Numerical Methods & Engineering Statistics, Tutor, School of Materials and Mineral Resources Engineering, USM, Semester II 2012/2013.

7. EBB 204/2, Materials Properties Laboratory, Demonstrator, School of Materials and Mineral Resources Engineering, USM, Semester II 2012/2013.
8. EUM 113/3, Engineering Calculus, Tutor, School of Materials and Mineral Resources Engineering, USM, Semester I 2012/2013.
9. EBB 325/2, Microscopy Laboratory, Demonstrator, School of Materials and Mineral Resources Engineering, USM, Semester I 2012/2013.
10. EUM 112/3, Numerical Methods & Engineering Statistics, Tutor, School of Materials and Mineral Resources Engineering, USM, Semester II 2011/2012.
11. EBB 317/2, Materials Processing Laboratory, Demonstrator, School of Materials and Mineral Resources Engineering, USM, Semester II 2011/2012.
12. EUM 113/3, Engineering Calculus, Tutor, School of Materials and Mineral Resources Engineering, USM, Semester I 2011/2012.
13. EUM 112/3, Numerical Methods & Engineering Statistics, Tutor, School of Materials and Mineral Resources Engineering, USM, Semester II 2010/2011.
14. EUM 113/3, Engineering Calculus, Tutor, School of Materials and Mineral Resources Engineering, USM, Semester I 2010/2011.
15. EUM 112/3, Numerical Methods & Engineering Statistics, Tutor, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Semester II 2009/2010.
16. EUM 113/3, Engineering Calculus, Tutor, School of Materials and Mineral Resources Engineering, USM, Semester I 2009/2010.

EXPERT CONTRIBUTIONS (Activity), (Organisation), (Role), (From)-(Until), (Level).

1. Provide engineering-related services such as suggestion, execution, technology, and recommendation of improvement in light emitting diodes (LEDs) and related projects, ITRAMAS Manufacturing Sdn. Bhd., Malaysia (*Industry*), **Consultant**, June 2019 – June 2020, **National** (*active*).
2. Nan Yang Academy of Sciences (Singapore), **Research Advisor**, since Oct 2018, **International** (*active*).
3. Managing R&D based academia-industry collaboration projects relating to LED lighting and assisting client in developing joint collaboration projects in energy efficiency division for development of new products, ITRAMAS Manufacturing Sdn. Bhd., Malaysia (*Industry*), **Consultant**, June 2018 – June 2019, **National** (*completed*).

COMPETENCY/RESEARCH COLLABORATION/LINKAGES

(Type), (Institution/ Company Name), (Level).

1. Research collaboration, Department of Physics ACBS, Eternal University, India, *International (University)*
2. Participating Member in Proposal for Application of Industry@University: 4.0 Industry Revolution Competence Centre Year 2019, USM (School of Materials and Mineral Resources Engineering, School of Physics, CDAE, School of Electrical and Electronic Engineering), *National (University)*
3. Researcher, GaN on GaN National Project, CREST, *National (University and Industry)*
4. Characterization services, MIMOS Wafer Fab, MIMOS Berhad, *National (Industry)*
5. LED packaging services, USM-IQM LED Packaging Development, IQ Group Sdn. Bhd., *National (Industry)*

6. Characterization services, University of Liverpool, Liverpool, United Kingdom, *International (University)*
7. Characterization services, Xi'an Jiaotong-Liverpool University, Jiangsu, China, *International (University)*

CONTRIBUTION TO SOCIETY (Contribution to Society), (Date), (Level)

1. **Technical Program Committee** of the Third International Conference on Mechanical, Electric and Industrial Engineering (MEIE2020), Kunming, China, 23-25 May 2020.
2. **Editorial Board Committee** of the International Conference and Exhibition on Materials & Engineering, Hilton Garden Inn Houston Westbelt, Houston, USA, 26-28 September 2019.
3. **Editorial Board Committee** of the International Conference on Semiconductor Materials and Technology (ICoSeMT 2019), Flamingo Hotel by the Beach, Tanjung Bungah, Penang, 29-30 April 2019.
4. **Secretary I** of the International Conference on Semiconductor Materials and Technology (ICoSeMT 2019), Flamingo Hotel by the Beach, Tanjung Bungah, Penang, 29-30 April 2019.
5. **Program Chairperson** of Seminar on "Strategies and Ethics in Research Paper Writing and Publishing", Auditorium 2, Eureka Complex, USM, 4 October 2018.
6. **Oversight Committee Member** (on behalf of ITRAMAS as a consultant role), GaN on GaN National Project, CREST, June 2018 – present.
7. **Oversight Committee Member**, GaN on GaN National Project, CREST, Oct 2017 – June 2018.
8. **Industry Advisory Panel** for Monash University Malaysia, 2017 – 2018.
9. **Panel of Judge**, 2018 Youth Industry Bootcamp, CREST in collaboration with USM, sains@usm, **21 Mar 2018.**
10. **Technical Program Committee** of the 2017 International Conference on Electronic Engineering and Wireless Communication (EEWC2017), Tianjin, China, 15-17 July 2017.
11. **Technical Program Committee** of the 2017 International Conference on Computer, Electronics and Communication Engineering (CECE2017), Sanya, China, 25-26 June 2017.
12. **Grant Reviewer**, Czech Science Foundation, 17 June 2017.
13. **Chief Secretariat** of the 3rd Meeting of Malaysia Nitrides Research Group (MNRG2016), Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, organized by Institute of Nano Optoelectronics Research and Technology (INOR), 6-7 December 2016.
14. **Organizing Committee (Principle Coordinator)** of the Academy of Sciences Malaysia (ASM) Fellow's Lecture: Innovative Developments in GaN-based Technology by Professor Dr. Zainuriah Hassan FASc, Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, co-organized by Institute of Nano Optoelectronics Research and Technology (INOR) and ASM, 7 December 2016.
15. **Editor** of Program Book for the 3rd Meeting of Malaysia Nitrides Research Group (MNRG2016), Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, organized by Institute of Nano Optoelectronics Research and Technology (INOR), 6-7 December 2016.
16. **Editor** of e-Proceedings (eISBN: 978-967-394-277-0) for the 3rd Meeting of Malaysia Nitrides Research Group (MNRG2016), Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, organized by Institute of Nano Optoelectronics Research and Technology (INOR), 6-7 December 2016.
17. **Organizing Sub-Committee (Event)** of the Nobel Laureate Lecture Series by Honorable Professor Dr. Shuji Nakamura, Kompleks Cahaya Siswa, Universiti Sains Malaysia, 29 July 2016.
18. **Organizing Committee (Event)** of the International Symposium on LED and OLED Technology 2015 (ISOLED 2015), Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, organized by CRI Natural Sciences, 14 December 2015.

19. **Secretariat and Master of Ceremonies** of the 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.
20. **Editor** of Abstract Book for the 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.
21. **Technical Committee** of the 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.
22. **Facilitator** of the Journal Article Writing and Publication Workshop, organized by Materials Processing and Technology Laboratory, Institute of Advanced Technology, Universiti Putra Malaysia, 17 November 2014.
23. **Facilitator** of the Journal Article Writing and Publication Workshop, organized by Materials Synthesis and Characterization Laboratory, Institute of Advanced Technology, Universiti Putra Malaysia, 21-22 August 2014.
24. **Designer for Front Cover** of the 1-Day IEEE-CPMT Advanced Packaging Workshop, Eastern & Oriental Hotel, Penang, organized by IEEE, CPMT Society, 23 September 2013.
25. **Student Helper** for the 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.
26. **Co-Publication Chair** of the 35th International Electronic Manufacturing Technology Conference 2012 (IEMT 2012), Kinta Riverfront Hotel, Ipoh, Malaysia, organized by IEEE, CPMT Society, 6-8 November 2012.
27. **Master of Ceremonies** of the 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.
28. **Student Helper** of the 1-Day Technical Course on "Green Technology & System-On-Chip, SOC", organized by The Institution of Engineers, Malaysia (IEM), 19 November 2009.

EXHIBITOR

29. **Exhibitor** in UPM 38th Agricultural Expo and Convocation Festival, Bukit Expo, Universiti Putra Malaysia, 31 October 2014.
30. **Member/Exhibitor** of Infineon Technologies (Kulim) Innovation Week, Infineon Technologies, Kulim, Malaysia, 4-7 September 2013.
31. **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.
32. **Member/Exhibitor** of The 21st International Invention, Innovation & technology Exhibition, ITEX 2010, KL Convention Center, Kuala Lumpur, Malaysia, 14-16 May 2010.
33. **Member/Exhibitor** of The 9th Malaysia Technology Expo (MTE), Putra World Trade Centre, Kuala Lumpur, Malaysia, 4-6 February 2010.

REVIEWER DUTIES

1. Reviewing Articles for Journal of Alloys and Compounds
2. Reviewing Articles for Surface Coating and Technology
3. Reviewing Articles for Journal of Luminescence
4. Reviewing Articles for Sensors and Actuators: A. Physical
5. Reviewing Articles for American Journal of Mechanical and Materials Engineering
6. Reviewing Articles for International Journal of Hydrogen Energy

7. Reviewing Articles for Advanced Materials Research
8. Reviewing Articles for Nano Hybrids and Composites
9. Reviewing Articles for Advanced Engineering Forum
10. Reviewing Articles for Scipress
11. Reviewing Articles for International Journal of Engineering Research in Africa
12. Reviewing Articles for the 4th Global Conference on Materials Science and Engineering (CMSE 2015)
13. Reviewing Articles for the 3rd Global Conference on Materials Science and Engineering (CMSE 2014)

CONTRIBUTION TO COMMUNITY

1. **Lifetime Member** of Persatuan Wanita Universiti Sains Malaysia (PWUSM), since 18 Mar 2019.
2. **Committee Member** of Rural House Lighting Visit and Survey in collaboration with Rensselaer Polytechnic Institute, USA to Kampung Bujang, Bedong, Merbok, Kedah, organized by CRI Natural Sciences, 14 November, 28 November, 12 December 2015.

ACADEMIC & RESEARCH RECOGNITIONS (Award), (Rewarding Party), (Year)

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 *Patent Publications* for the year 2014, Universiti Sains Malaysia, 2017.
3. Certificate of Reviewing for Journal of Alloys and Compounds, Elsevier, Amsterdam, The Netherlands, 2017.
4. Certificate of Reviewing for Surface & Coatings Technology, Elsevier, Amsterdam, The Netherlands, 2017.
5. Outstanding Contribution in Reviewing for Arabic Journal of Chemistry (in cooperation with King Saud University), Elsevier, Amsterdam, The Netherlands, 2017.
6. Outstanding Contribution in Reviewing for Surface & Coatings Technology, Elsevier, Amsterdam, The Netherlands, 2017.
7. Certificate of Reviewing for Journal of Luminescence, Elsevier, Amsterdam, The Netherlands, 2017.
8. Certificate of Reviewing for Sensors & Actuators: A. Physical, Elsevier, Amsterdam, The Netherlands, 2017.
9. Sanggar Sanjung Award for Excellent in Category of *Journal Publications* for the year 2015, Universiti Sains Malaysia, 2016.
10. Sanggar Sanjung Award for Excellent in Category of *Journal Publications* for the year 2013, Universiti Sains Malaysia, 2015.
11. The Universiti Sains Malaysia **Vice Chancellor's Award Scholarship** for Ph.D Studies, from *January 2011* till *December 2013*.
12. Sanggar Sanjung Award for Excellent in Category of *Journal Publications* for the year 2011, Universiti Sains Malaysia, 2012.
13. Sanggar Sanjung Award for Excellent in Category of *Journal Publications* for the year 2010, Universiti Sains Malaysia, 2011.
14. Science & Technology Research Grant funded by Malaysia Toray Science Foundation (MTSF), from *January 2011* till *Jan 2013*.

15. Universiti Sains Malaysia Fellowship for Ph.D Studies, from *August 2009* till *December 2010*.
16. 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* till *16 May 2010*.
17. Young Person's Lecture Competition (National Level), Eastin Hotel, Penang - Bronze Medal, *23 June 2010*.
18. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester II Year 2009*.
19. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester I Year 2009*.
20. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester II Year 2008*.
21. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester I Year 2008*.
22. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester II Year 2007*.
23. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester I Year 2007*.
24. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester II Year 2006*.
25. Dean's List from School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, *Semester I Year 2006*.

PROGRAM ATTENDED (Program Name), (Organizer), (Venue), (Date)

1. 5th Cambridge Islamic Finance Leadership Program, Cambridge International Financial Advisory, Clare College, University of Cambridge, **7-12 July 2019**.
2. The 15th International Solid States Alliance (ISA) Technical Committee on Standardization (TCS) Meeting, CREST, Equatorial Hotel, **15 May 2019**.
3. "Garis Panduan Pembangunan Program Akademik (GPPA) Universiti Awam Edisi Kedua", Universiti Sains Malaysia, Dewan Persidangan, **25 Apr 2019**.
4. International Conference on Semiconductor Materials and Technology (ICoSeMT 2019), USM in collaboration with CREST and UiTM CPP, Flamingo Hotel by the Beach, Tanjung Bungah, Penang, **29 – 30 Apr 2019**.
5. YYP1901 – Perutusan Naib Canselor USM 2019 (Induk) – "Membawa USM ke Persada Dunia & Dunia ke USM", Dewan Tunku Syed Putra, Universiti Sains Malaysia, **26 Feb 2019**.
6. "Sesi Perkongsian Maklumat Bersama Pejabat Inovasi", Universiti Sains Malaysia, **17 July 2018**.
7. Program "Nobel Laureate Talk", Dewan Budaya, Universiti Sains Malaysia, **11 August 2018**.
8. CDAE – Teaching & Learning Seminar, CDAE, Universiti Sains Malaysia, **17 October 2018**.
9. Seminar "Strategies and Ethics in Research Paper Writing and Publishing", Institute of Nano Optoelectronics Research and Technology (INOR), Eureka, Universiti Sains Malaysia, **4 October 2018**.
10. Innovative Developments in GaN-based Technology, delivered by Professor Dr. Zainuriah Hassan, FASc, Auditorium Murad Mohd Noor, sains@usm, Universiti Sains Malaysia, **7 December 2016**.
11. Nobel Laureate Lecture Series: Future Energy Efficient Lighting and Displays, delivered by Professor Dr. Shuji Nakamura, Kompleks Cahaya Siswa, Universiti Sains Malaysia, **29 July 2016**.
12. Dislocations in GaN Materials and Devices, delivered by Professor James Speck from Materials Department of University of California, Santa Barbara, Bilik Persidangan INOR, sains@USM, Persiaran Bukit Jambul, Universiti Sains Malaysia, **22 March 2016**.

13. Recent Advances in Gallium Nitride based Light Emitting Diodes (LEDs) and Laser Diodes for Energy Efficient Lighting, delivered by Professor Steven DenBaars from Solid-State Lighting and Energy Electronics Center of University of California, Santa Barbara, Bilik Persidangan INOR, sains@USM, Persiaran Bukit Jambul, Universiti Sains Malaysia, **22 March 2016**.
14. Photonics Research at King Abdullah University of Science & Technology (KAUST): Breaking the Barriers & Opportunities, delivered by Professor Boon S. Ooi, Bilik Persidangan INOR, sains@USM, Persiaran Bukit Jambul, Universiti Sains Malaysia, **14 January 2016**.
15. 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**.
16. 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**.
17. Journal Article Writing and Publication Workshop, Putrajaya International Convention Centre, Putrajaya, **8-9 December 2014**.
18. 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**.
19. 2-Day Workshop on X-ray Diffraction, Computer Laboratory, Faculty of Science, Universiti Putra Malaysia, **23-24 October 2014**.
20. 2-Day Workshop on Surface Science and Catalysts Characterization, Saintis Gemilang Room, Faculty of Science, Universiti Putra Malaysia, **23-24 September 2014**.
21. Half-Day Interaction Session with Prof. Emeritus Geoffrey A Cordell, Auditorium, Faculty of Engineering, Universiti Putra Malaysia, **24 September 2014**.
22. 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**.
23. 1st Meeting of Malaysia Nitrides Research Group (MNRG), Auditorium Room, INFORMM, USM Main Campus, conducted by Centre for Research Initiatives in Natural Sciences, Universiti Sains Malaysia, **7 April 2014**.
24. 1-Day Workshop on Nanomaterials, Park Royal Hotel, Penang, Malaysia, organized by Universiti Sains Malaysia and Universiti Teknologi Mara, **19 November 2013**.
25. 1-Day IEEE-CPMT Advanced Packaging Workshop, Eastern & Oriental Hotel, Penang, organized by IEEE, CPMT Society, **23 September 2013**.
26. RF Training Course, USM Engineering Campus, organized by QT Hightech Malaysia Sdn Bhd, **12 & 14 November 2012**.
27. 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**.
28. Vacuum Training Course, USM Engineering Campus, organized by QT Hightech Malaysia Sdn Bhd, **23-24 October 2012**.
29. 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**.
30. Professional & Personal Development Workshop on "Writing Good and Relevant Literature Review", organized by Institute of Postgraduate Studies, USM, Engineering Campus, **12 December 2011**.
31. Half-Day Seminar on Nano-TiO₂ 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**.
32. 3-Day Course on Surface Analysis Technique, Usains Holding SdnBhd, USM Main Campus, Penang, conducted by School of Materials & Mineral Resources Engineering, USM Engineering Campus, **1-2 March 2011**.

33. EAG Working Smarter Seminar: A Course in Analytical Techniques, G Hotel, Penang, Malaysia, organized by Evans Analytical Group, **9 November 2010**.
34. 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**.
35. Occupational Safety & Health Course for Post Graduate Students, Auditorium Hall, USM Engineering Campus, organized by Occupational Safety and Health Committee of USM, **31 July 2010**.
36. 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**.
37. 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**.
38. Workshop on Technical Problem Solving, School of Materials & Mineral Resources Engineering, USM Engineering Campus, organized by School of Materials & Mineral Resources Engineering and Institute of Materials Malaysia, Northern Region, **28 January 2008**.

ANALYTICAL SKILLS

Physical Analysis (Structural, Morphological, and Optical):

1. X-ray Photoelectron Spectroscopy (XPS)
 - Depth Profiling Analysis: Wide scans, Narrow scans, Valence band scans
2. Time-of-Flight Secondary Ion Mass Spectroscopy (TOF-SIMS)
 - Depth Profiling Analysis
3. High Resolution Transmission Electron Microscopy (HRTEM)
 - Energy-Dispersive X-ray (EDX): Spot Analysis, Line Scan, Mapping
 - Electron Energy Loss Spectroscopy (EELS): Spot Analysis, Line Scan, Mapping
4. Energy-Filtered Transmission Electron Microscopy (EFTEM)
5. Scanning Transmission Electron Microscopy (STEM)
 - High-Angle Annular Dark Field (HAADF)
6. Field Emission Scanning Electron Microscopy (FESEM)
 - Energy-Dispersive X-ray (EDX): Spot Analysis, Line Scan, Area
7. Atomic Force Microscopy (AFM)
 - Surface Topography, Surface Roughness, Mean Diameter
8. X-ray Diffraction (XRD)
 - Phase Analysis, Rocking Curves Studies
9. Fourier Transformed Infrared Spectroscopy (FTIR)
10. X-ray Fluorescence (XRF)
11. Ultraviolet-Visible Spectroscopy (UV-Vis)
12. Ellipsometer
13. Filmetric
14. Photoluminescence (PL)
15. Raman Spectroscopy

Electrical Measurements:

1. Semiconductor Parameter Analyzer (SPA)
 - Current-Voltage (I-V) Measurement
 - Current-Time (I-t) Measurement

2. Inductance-Capacitance-Resistance (LCR) Meter
 - Capacitance-voltage (C-V) measurement
3. SPA and LCR attached with Vacuum System and High Temperature Controller
 - High Temperature I-V and C-V measurement
4. Hall Effect Measurements
5. Gas Sensing Measurements
6. Photodetector Measurements

Luminaires Measurements:

1. Spectrophotometer (Integrating Sphere)
2. Goniophotometer
3. Electromagnetic Compatibility Measurement
4. Linear Gonio Measurement

Thin Film Growth/ Electrode Deposition/ Device Fabrication Techniques:

1. Metal-Organic Decomposition (MOD)
2. Radio Frequency Magnetron Sputtering
3. Chemical Bath Deposition
4. Thermal Evaporator
5. Turbo Evaporator
6. Photolithography
7. Chemical Etching
8. Ultraviolet-Assisted Photo-Electrochemical Etching (Direct Current and Alternating Current)
9. Doctor-Blade
10. Spin-Coating

Others:

1. Charge Conduction Mechanism
2. Extraction of Electronic Parameters from I-V and C-V
3. Sigma Plot
4. ImageJ
5. Microsoft Office (Words, PowerPoint, Excel)
6. Origin