


CURRICULUM VITAE

PERSONAL PARTICULAR

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Google Scholar	: https://scholar.google.com/citations?user=nBY_zxsAAAAJ&hl=en	

RESEARCH INTERESTS

Engineering of metal oxide nanomaterials (e.g. ZnO, WO₃, MnO₂ and CCTO)

- synthesis of nanostructures such as nanorods, thin films and nanoparticles,
- control growth of nanorods: (i) morphology, (ii) aligned growth,
- bandgap engineering, and
- application of nanomaterials (e.g. anti-bacterial/anti-fungal, organic dyes removal, heavy metal ions removal)

Phosphor materials

ACADEMIC QUALIFICATION

2010	University of Nottingham, United Kingdom PhD in Material Engineering and Materials Design Thesis title: Synthesis and characterization of zinc oxide nanowires
2002	Universiti Malaya, Malaysia Master of Technology (Material Science) Dissertation title: Formation of copper dots in Copper Decoration Technique
1998	Universiti Sains Malaysia, Malaysia Bachelor of Engineering (Hons) (Materials Engineering) First Class Honour

CAREER HISTORY

2010 -	Lecturer, Universiti Sains Malaysia, Penang, Malaysia.
2006	Six Sigma Engineer, Flextronic Technology (Shah Alam) Sdn. Bhd., Shah Alam, Malaysia.
2003 – 2006	Laboratory Supervisor, InventQjaya Sdn. Bhd., Cyberjaya, Malaysia.
2002	QA Engineer, National Semiconductor Sdn. Bhd., Melaka, Malaysia
1998 - 2002	R&D Engineer/ Materials Characterization Engineer, S.E.H. (Malaysia) Sdn. Bhd., Ulu Klang, Malaysia.

RESEARCH GRANTS

(a) Principal researcher

1. Research University Grant (RUI) (USM)

Researcher(s) : Pung Swee Yong, Saw Kim Guan, Srimala Sreekantan, Yeoh Fei Yee, and Ong Ming Thong
Duration : 1 Sep 2018 to 31 Aug 2020
Status : In progress
“Development of ZnO based semiconductor photocatalyst on conductive support via rapid Direct Heating method”

2. Collaborative Research Grant – AUN/SEED-net (International)

Researcher(s) : Pung Swee Yong, Atsunori Matsuda, Khatijah Yaacob and Soe Soe Han
Duration : 1 Apr 2018 to 30 Mar 2020
Status : In progress
“Synthesis and Characterization of ZnO Based photovoltaic cells”

3. Bridging Grant (USM)

Researcher(s) : Pung Swee Yong
Duration : 25 Jan 2018 to 24 Jan 2019
Status : Completed
“Synthesis and characterization of zinc/zinc oxide based nanorods by localized heating technique on resistive substrate”

4. Fundamental Research Grant Scheme (FRGS) (National)

Researcher(s) : Pung Swee Yong, Yeoh Fei Yee, Srimala Sreekantan and Pung Yuh Fen
Duration : 1 Nov 2015 to 28 Feb 2019
Status : Completed
“The fundamental study of photocatalytic mechanism by semiconductor coupling (ZnO/WO₃) photocatalysts in degradation of organic pollutants and inactivation of bacteria”

- 5. Collaborative Research Grant – AUN/SEED-net (International)**
Researcher(s) : Pung Swee Yong, Atsunori Matsuda, Srimala Sreekantan and Huynh Dai Phu
Duration : 1 Oct 2016 to 30 Sep 2018
Status : Completed
“Reusability of ZnO nanoparticles in removal of organic dyes after heavy metal deposition”
- 6. Research University Grant (RUI) (USM)**
Researcher(s) : Pung Swee Yong, Srimala Sreekantan, Chuah Lee Siang and Pung Yuh Fen
Duration : 1 Dec 2013 to 31 Jul 2017
Status : Completed
“Sunlight-driven water purifier based on semiconductor photocatalysts that grown on polymer fiber for degradation of organic pollutants and bacteria removal”
- 7. Collaborative Research Grant – AUN/SEED-net (International)**
Researcher(s) : Pung Swee Yong, Itoh Mitsuru, Azizan Aziz and Kay Thi Lwin
Duration : 1 Apr 2013 to 31 Mar 2016
Status : Completed
“Synthesis and Characterization of Ni-based ZnO nanocomposite”
- 8. Short Term Grant (USM)**
Researcher(s) : Pung Swee Yong, Ahmad Fauzi Mohd Noor, M. Nazarov and Shah Rizal Kasim
Duration : 15 Jun 2012 to 14 Jun 2014
Status : Completed
“Synthesis and characterization of doped strontium magnesium silicates for persistent luminescence”
- 9. Nippon Sheet Glass Foundation (International)**
Researcher(s) : Pung Swee Yong and Srimala Sreekantan
Duration : 1 January 2012 to 31 December 2013
Status : Completed
“Continuous-flow photocatalytic water purifier based on ZnO/V₂O₅ NWs for degradation of organic pollutant”
- 10. Malaysia Toray Science Foundation (MTSF) (Private)**
Researcher(s) : Pung Swee Yong and Yeoh Fei Yee
Duration : 1 January 2012 to 31 December 2013
Status : Completed
“Photocatalytic study of manganese oxide nanowires with different polymeric phase”
- 11. Fundamental Research Grant Scheme (FRGS) (National)**
Researcher(s) : Pung Swee Yong and Srimala Sreekantan
Duration : 1 April 2011 to 30 June 2013
Status : Completed
“Fundamental study of luminescence mechanism of ZnO nanostructures”
- 12. Short Term Grant (USM)**
Researcher(s) : Pung Swee Yong and Zainovia Lockman
Duration : 1 April 2011 to 31 March 2013
Status : Completed
“Synthesis and characterization of doped ZnO nanowires”

13. Incentive Grant (USM)

Researcher(s) : Pung Swee Yong

Duration : 18 October 2010 to 17 October 2011

Status : Completed

“Synthesis and characterization of vertically aligned ZnO nanowires via heteroepitaxial growth using Chemical Vapour Deposition technique”

(b) Co-researcher

1. Fundamental Research Grant Scheme (FRGS) (National)

Researcher(s) : Pan Yan, Ong Chin Eng, Pung Yuh Fen, Pung Swee Yong and Kong Chin

Duration : 1 Sep 2019 to 31 Aug 2022

Status : In-progress

“Size- and shape- dependent modulatory mechanisms of zinc oxide (ZnO) nanoparticles (NPs) towards cytochrome P450 enzymes and ZnO-bio-interactions in *Caenorhabditis elegans*”

2. Fundamental Research Grant Scheme (FRGS) (National)

Researcher(s) : Khatijah Aisha Yaacob, Pung Swee Yong, Zainuriah Hassan and Nur Zatil ‘Ismah Hashim

Duration : 1 Jan 2019 to 31 Dec 2021

Status : In-progress

“The mechanism of charge transfer for dual-gate Si NW sensors fabricated by atomic force microscope lithography for heavy metal detection”

3. Fundamental Research Grant Scheme (FRGS) (National)

Researcher(s) : Srimala Sreekantan, Pung Swee Yong, Hazizan Md Akil and Tuti Katrina Abdullah

Duration : 1 Jan 2019 to 31 Dec 2020

Status : In-progress

“Mechanistic studies on the self-healing and recovery kinetics of superhydrophobic coating”

4. Research University Grant (RUI) (USM)

Researcher(s) : Khatijah Aisha Yaacob, Rosnita Muhammad, Pung Swee Yong

Duration : 1 Mar 2018 to 28 Feb 2021

Status : In-progress

“Understanding on the self-limiting oxidation mechanism on scaling down of silicon sub-micron wires to nano wires fabricated using AFM lithography”

5. Fundamental Research Grant Scheme (FRGS) (National)

Researcher(s) : Tuti Katrina Abdullah, Anasyida Abu Seman, Pung Swee Yong, and Muhammad Firdaus Mohd Nazeri

Duration : 1 Jan 2019 to 31 Dec 2020

Status : In-progress

“Investigation of oxidation kinetics and oxide growth mechanisms in developing protective oxide layer of super heater materials in alkali salt environment”

6. Fundamental Research Grant Scheme (FRGS) (National)

Researcher(s) : Zainovia Lockman, Cheong Kuan Yew, Hiroki Habazaki, Pung Swee Yong, Khairunisak Abdul Razak

Duration : 15 Aug 2017 to 14 Aug 2019

Status : Completed

“Investigation on factors affecting the formation of nanocrystallites within nanotube walls fabricated by anodisation process”

7. **Collaborative Research Grant – AUN/SEED-net (International)**
Researcher(s) : Cheong Kuan Yew, Pung Swee Yong, Zulklifi bin Ahmad and Le Van Thang
Duration : 1 Oct 2016 to 30 Sep 2019
Status : Completed
“Development of UV Photodetector Based on Extraction of Natural Plant”
8. **Fundamental Research Grant Scheme (FRGS) (National)**
Researcher(s) : Shah Rizal Kasim, Ahmad Fauzi Mohd Noor, Nurazreena Ahmad and Pung Swee Yong
Duration : 1 Aug 2016 to 30 Jul 2019
Status : Completed
“Understanding the mechanism of synthesis and densification behavior of sintered Mg-substitute biphasic calcium phosphate (Mg-BCP)”
9. **Collaborative Grant (University of Nottingham) (International)**
Researcher(s) : Pung Yuh Fen, Le Cheng-Foh, Shafi M Tareq and Pung Swee Yong
Duration : 1 Jan 2016 to 31 Dec 2016
Status : Completed
“Mechanistic study of water purifier derived from semiconductor photocatalysts in degradation of organic pollutants and inactivation of microbes”
10. **Fundamental Research Grant Scheme (FRGS) (National)**
Researcher(s) : Yeoh Fei Yee, Pung Swee Yong, Hasmaliza Mohamad, Sim Yoke Leng and Suhaina Ismail
Duration : 1 Nov 2015 to 31 Oct 2018
Status : Completed
“Fundamental investigation on mechanism of metal immobilization in water sludge by nanoporous clay for sustainable water security”
11. **University-Community/ University-Industry Engagement Project (USM)**
Researcher(s) : Yeoh Fei Yee, Pung Swee Yong, Suhaina Ismail and Lee Ting
Duration : 1 Aug 2013 to 31 May 2016
Status : Completed
“Biochar conversion from biomass generated from palm oil wastes”
12. **Postgraduate Research Grant Scheme (PRGS) (USM)**
Researcher(s) : Chan Yim Leng, Pung Swee Yong and Srimala Sreekantan
Duration : 15 May 2013 to 14 Aug 2014
Status : Completed
“Development of a sunlight activated heterogeneous semiconductor photocatalysts for organic pollutants removal”
13. **Fundamental Research Grant Scheme (FRGS) (National)**
Researcher(s) : Saw Kim Guan, Yam Fong Kwong, Pung Swee Yong and Ng Sha Shiong
Duration : 1 May 2013 to 31 Oct 2016
Status : Completed
“Fundamental Analysis of Semiconductor-Metal Transition in Indium-doped Zinc Oxide Using Carrier Concentration and Current-Voltage Measurements”

14. **Research University Grant (RUI) (USM)**
 Researcher(s) : Srimala Sreekantan, Pung Swee Yong, Vithyacharan a/l Retnasamy and Zaliman Sauli
 Duration : 15 Jul 2012 to 14 Oct 2015
 Status : Completed
 “Development of Al₂O₃-CaO nanorods by electrodeposition”

15. **AUN/SEED-Net Collaborative Research Program with Industry (CRI) (International)**
 Researcher(s) : Yeoh Fei Yee, Mukai Shin, Pung Swee Yong and Lee Ting
 Duration : 1 October 2011 to 10 March 2014
 Status : Completed
 “Nanoporous Activated Carbon Fiber derived from Palm Empty Fruit Bunch”

PUBLICATIONS

Academic journals/Referred conference proceeding (full paper) (International)

1. S.L. Chiam, S.Y. Pung, F.Y. Yeoh, “Recent developments on MnO₂ based photocatalyst in organic pollutant removal: A review”, *Environmental Science and Pollution Research*, (2020) doi.org/10.1007/s11356-019-07568-8 (ISI cited, impact factor: 2.914).
2. M. Ahmadipour, M. Arjmand, M.F. Fadzil Ain, Z.A.A. Ahmad, S.Y. Pung “Influence of annealing temperature on morphological and photocatalytic activity of sputter-coated CaCu₃Ti₄O₁₂ thin film under ultraviolet light irradiation”, *Ceramics International*, 45 (2019) 20697-20703 (ISI cited, impact factor: 3.187).
3. M.Z. Toe, N.A.H. Nik Jusoh, A. Matsuda, S.S. Han, K. Yaacob, W.K. Tan and S.Y. Pung, “Effect of ZnO seed layer on the growth of ZnO nanorods on silicon substrates”, *Materials Today: Proceedings*, 17 (2019) 553–559 (ISI cited).
4. K. Lim, K.Z. Chiew, S.Y. Pung and W.S. Chow, “UV-protective properties of poly(lactic acid) nanocomposites containing chemical treated halloysite nanotubes”, *Materials Today: Proceedings*, 17 (2019) 853-863 (Scopus cited).
5. Y.L. Ying, S.Y. Pung, M.T. Ong, F.Y. Yeoh and Y.F. Pung, “Structural and antibacterial activity of WO_x/ZnO nanocomposites against pathogenic bacteria”, *Materials Today: Proceedings*, 17 (2019) 1008–1017 (Scopus cited).
6. K. Lim, W.S. Chow and S.Y. Pung, “Accelerated weathering and UV protection-ability of poly(lactic acid) nanocomposites containing zinc oxide treated halloysite nanotube”, *Journal of Polymers and the Environment*, 27(8) (2019) 1746-1759 (Scopus cited, impact factor: 2.765).
7. M. Ahmadipour, M.F. Fadzil Ain, Z.A.A. Ahmad, S.Y. Pung “Effect of Ar:N₂ flow rate on morphology, optical and electrical properties of CCTO thin films deposited by RF magnetron sputtering” *Ceramics International*, 45 (2019) 15077-15081 (ISI cited, impact factor: 3.450).
8. K. Lim, W.S. Chow and S.Y. Pung, “Enhancement of thermal stability and UV resistance for halloysite nanotube using zinc oxide functionalization via solvent free approach”, *International Journal of Minerals, Metallurgy, and Materials*, 26(6), (2019) 787-795 (ISI cited, impact factor: 1.221).
9. M. Ahmadipour, M. Arjmand, M.F. Fadzil Ain, Z.A.A. Ahmad, S.Y. Pung, “Effect of WO₃ loading on structural, electrical and dielectric properties of CaCu₃Ti₄O₁₂ ceramic composites” *Journal of Materials Science: Materials in Electronics*, 30(7) (2019) 6806-6810 (ISI cited, impact factor: 2.195).
10. L.A. Thi, S.Y. Pung, S. Sreekantan, A. Matsuda and H.D. Phu, “Mechanisms of heavy metal ions removal by ZnO particles”, *Heliyon* 5 (2019) e01440 (ISI cited).

11. C.H. Ooi, Y.P. Ling, W.Z. Abdullah, A.Z. Mustafa, S.Y. Pung and F.Y. Yeoh, "Physicochemical evaluation and In Vitro hemocompatibility study on nanoporous hydroxyapatite" *Journal of Materials Science: Materials in Medicine* 30 (2019) 40 (ISI cited, impact factor: 2.467).
12. C.H. Ooi, Y.P. Ling, S.Y. Pung, and F.Y. Yeoh, "Mesoporous hydroxyapatite derived from surfactant-templating system for p-Cresol adsorption: Physicochemical properties, formation process and adsorption performance" *Powder Technology* 342 (2019) 725734 (ISI cited, impact factor: 3.413).
13. S.K. Soo, L.A. Thi, S.Y. Pung, S. Sreekantan, A. Matsuda and H.D. Phu, "Effect of metal/metal oxide coupling on the photoluminescence properties of ZnO microrods", *Applied Physics A* 124 (2018) 783 (ISI cited, impact factor: 1.784).
14. S.Y. Pung, C.H. Chang, M.N. Ahmad Fauzi and S.R. Kasim, "Effect of co-dopant on the phase structure and photoluminescence properties of Sr₂MgSi₂O₇: Eu²⁺ phosphors", *Journal of Physics: Conference Series* 1082 (1) (2018) 012022 (Scopus cited).
15. L.A. Thi, S.Y. Pung, S. Sreekantan, A. Matsuda and H.D. Phu, "Assessment of Rhodamine B dye removal by ZnO nanodisks under visible light", *Journal of Physics: Conference Series* 1082 (1) (2018) 012045 (Scopus cited).
16. Y.L. Ying, S.Y. Pung, M.T. Ong and Y.F. Pung, "Photocatalytic activity of ZnO nanodisks in degradation of Rhodamine B and Bromocresol Green under UV light exposure", *Journal of Physics: Conference Series* 1082 (1) (2018) 012085 (Scopus cited).
17. Y.L. Ying, S.Y. Pung, M.T. Ong and Y.F. Pung, "Antibacterial activity of WO_x nanoparticles against Gram-positive bacteria and Gram-negative bacteria", *Journal of Industrial and Engineering Chemistry*, 67 (2018) 437-447 (ISI cited, impact factor: 4.978).
18. C.H. Ooi, S.Y. Pung and F.Y. Yeoh, "Synthesis and characterization of nanoporous hydroxyapatite with high hemocompatibility" *Biomedical Journal of Scientific & Technical Research*, DOI: 10.26717/BJSTR.2018.05.001239 (ISI cited, impact factor: 0.548).
19. F.C.O. Soh, J.H. Kee, M.T. Thein, Y.L. Ying, C.F. Le, D.N.D Nguyen, B.H. Goh, S.Y. Pung, and Y.F. Pung, "Antibacterial activity by ZnO nanorods and ZnO nanodisks: A model used to illustrate "Nanotoxicity Threshold"", *Journal of Industrial and Engineering Chemistry*, 62 (2018) 333-340 (ISI cited, impact factor: 4.978).
20. M.T. Thein, S.Y. Pung, L.S. Chuah and Y.F. Pung, "Photodegradation behaviour of ZnO nanorods on various types of organic dyes" *Advances in Materials and Processing Technology* 4, (2018) 272-280 (Scopus cited).
21. Y.L. Ying, S.Y. Pung, M.T. Ong and Y.F. Pung "A comparison study of ZnO nanorods and WO₃/ZnO nanorods in Bromocresol Green dye removal", *Solid State Phenomena* 264, (2017) 87-90 (ISI cited).
22. M.T. Thein, S.Y. Pung, A. Aziz and M. Itoh, "Effect of calcination temperature on the photodegradation efficiency of Ni/ZnO composite in removal of organic dye", *AIP Conference Proceeding*, 1865 (1), (2017) 050010 (Scopus cited).
23. S.N.Q.A. Abd. Aziz, R.A. Kamazahruman, S.Y. Pung, S. Sreekantan, M.T. Ong and G. Sahgal, "Effect of sodium tungstate dehydrate concentration on the growth of tungsten oxide layer grown on polyethylene terephthalate fiber and its photocatalytic in removal of RhB dye under visible light irradiation", *AIP Conference Proceeding*, 1865 (1), (2017) 020012 (Scopus cited).
24. S.N.Q.A. Abd. Aziz, R.A. Kamazahruman, S. Sreekantan, M.T. Ong, G. Sahgal, and S.Y. Pung, "Effect of deposition temperature on the growth of tungsten oxide layer deposited on polyethylene terephthalate fibers", *Procedia Engineering*, 184 (2017) 695-707 (ISI cited).
25. A.F. Samsuddin, S.N.Q.A. Abd. Aziz, and S.Y. Pung, "Loading effect of Ag/AgO on the photocatalytic performance of ZnO rods" *Applied Physics A*, 123(1) (2017) 1-12 (ISI cited, impact factor: 1.604).

26. C.H. Ooi, W.K. Cheah, Y.L. Sim, S.Y. Pung, F.Y. Yeoh, "Conversion and characterization of activated carbon fibre derived from palm empty fruit bunch waste and its kinetic study on urea adsorption" *Journal of Environmental Management* 197 (2017) 199-205 (ISI cited, impact factor: 3.860).
27. M.T. Thein, S.Y. Pung, J.E. Chim and Y.F. Pung, "Highly UV light driven $WO_x@ZnO$ nanocomposites synthesized by liquid impregnation method", *Journal of Industrial and Engineering Chemistry*, 46 (2017) 119-129 (ISI cited, impact factor: 4.841).
28. K.G. Saw, N.M. Aznan, F.K. Yam, S.S. Ng, and S.Y. Pung, "Insights on semiconductor-metal transition in indium-doped zinc oxide from X-ray photoelectron spectroscopy, time-of-flight secondary ion mass spectrometry and X-ray diffraction", *AIP Conference Proceeding*, 1733, 020033 (2016) (Scopus cited).
29. Y.L. Chan, S.Y. Pung, S. Sreekantan and F.Y. Yeoh "Photocatalytic activity of ZnO-MnO₂ core shell nanocomposite in degradation of RhB dye", *Pigment and Resin Technology* 45, 6 (2016) 408-418 (ISI cited, impact factor: 0.788).
30. S. Sreekantan, N.N. Hlaing, K. Vignesh, S.Y. Pung, H. Hinode, W. Kurniawan, R. Othman, A.A. Thant, A.R. Mohamed, C. Salim "Effect of cetyl trimethyl ammonium bromide concentration on structure, morphology and carbon dioxide adsorption capacity of calcium hydroxide based sorbents", *Applied Surface Science* 363 (2016) 586-592 (ISI cited, impact factor: 2.711).
31. M.T. Thein, S.Y. Pung, A. Aziz and M. Itoh, "Effect of Ni coupling on the photoluminescence property and photocatalytic activity of ZnO nanorods" *Journal of the Taiwan Institute of Chemical Engineers* 61 (2016) 156-165 (ISI cited, impact factor: 3.000).
32. R.A. Kamazahruman, S.Y. Pung, S. Sreekantan, M.T. Ong and G. Sahgal "Photocatalytic Study of WO₃ Particles in Removal of Organic Dye" *Malaysia Journal of Microscopy* 11 (2015) 45-49 (Scopus cited).
33. K.G. Saw, N.M. Aznan, F.K. Yam, S.S. Ng, S.Y. Pung, "New insights on the Burstein-Moss shift and band gap narrowing in indium-doped zinc oxide thin films", *PLOS ONE* (2015) DOI:10.1371/journal.pone.0141180 (ISI cited, impact factor: 3.234).
34. S.Y. Pung, C.H. Chang, M.N. Ahmad Fauzi and S.R. Kasim, "Effect of excitation wavelength on the blue emitting Sr₂MgSi₂O₇ phosphor", *Advanced Materials Research* 1087 (2015) 360-364 (Scopus cited).
35. Y.L. Chan, S.Y. Pung, S. Sreekantan and F.Y. Yeoh "Photocatalytic activity of β -MnO₂ nanotubes grown on PET fibre under visible light irradiation", *Journal of Experimental Nanoscience* 11 (8) (2015) 603-618 (ISI cited, impact factor: 0.981).
36. M.T. Thein, S.Y. Pung, A. Aziz and M. Itoh, "Stacked ZnO nanorods synthesized by solution precipitation method and their photocatalytic activity study" *Journal of Sol-Gel Science & Technology* 74 (1) (2015) 260-271 (ISI cited, impact factor: 1.547).
37. N.N. Hlaing, S. Sreekantan, R. Othman, S.Y. Pung, H. Hinode, W. Kurniawan, A.A. Thant, A.R. Mohamed, and C. Salimee "Sol-gel hydrothermal synthesis of microstructured CaO-based adsorbents for CO₂ capture", *RSC Advanced* 5 (2015) 6051 (ISI cited, impact factor: 3.708).
38. M.T. Thein, S.Y. Pung, A. Aziz and M. Itoh, "The role of ammonia hydroxide in the formation of ZnO hexagonal nanodisks using sol-gel technique and their photocatalytic study", *Journal of Experimental Nanoscience* 10 (14) (2014) 1068-1081 (ISI cited, impact factor: 1.043).
39. S.N.Q.A. Abd. Aziz, S.Y. Pung, and Z. Lockman, "Growth of Fe-doped ZnO nanorods using Aerosol Assisted-Chemical Vapour Deposition via *in-situ* doping" *Applied Physics A* 116 (4) (2014) 1801-1811 (ISI cited, impact factor: 1.545).
40. C.H. Ooi, T. Lee, S.Y. Pung and F.Y. Yeoh "Activated Carbon Fiber derived from Single Step Carbonization-Activation Process" *ASEAN Engineering Journal B* 4 (1) (2014) 43-53.

41. S.N.Q.A. Abd. Aziz, S.Y. Pung, N.N. Ramli and Z. Lockman, "Growth of ZnO nanorods on stainless steel wire using chemical vapour deposition and their photocatalytic activity" *The Scientific World Journal* (2014) doi:10.1155/2014/252851 (ISI cited, impact factor: 1.730).
42. S.Y. Pung, C.S. Ong, K. Mohd Isha and M. H. Othman, "Synthesis and characterization of Cu-doped ZnO nanorods", *Sains Malaysiana* **43** (2) (2014) 273-281 (ISI cited, impact factor: 0.488).
43. S.Y. Pung, C.H. Tan, M.N. Ahmad Fauzi and S.R. Kasim, "Luminescence of Sr₂MgSi₂O₇ phosphor prepared by solid state reaction", *Advanced Materials Research* 1024 (2014) 344-347 (Scopus cited).
44. M.T. Thein, S.Y. Pung, A. Aziz and M. Itoh "Controlled growth of ZnO nanoparticles with different morphologies using sol-gel technique", *Advanced Materials Research* 1024 (2014) 19-22 (Scopus cited).
45. S.N.Q.A. Abd. Aziz, S.Y. Pung, Z. Lockman and N.A. Hamzah, "Structural and optical properties of Fe-doped ZnO nanorods" *Advanced Materials Research* 854 (2014) 151-158 (Scopus cited).
46. K.G. Saw, S.S. Tneh, S.Y. Pung, S.S. Ng, F.K. Yam and Z. Hassam, "Ultraviolet photoresponse properties of zinc oxide on heavily boron-doped diamond heterojunction", *Advanced Materials Research* 832 (2014) 172-177 (Scopus cited).
47. Y.L. Chan, S.Y. Pung and S. Sreekantan, "Degradation of Organic Dye using ZnO nanorods based Continuous Flow Water Purifier", *Journal of Sol-Gel Science & Technology* (2013) **6** 399-405 (ISI cited, impact factor: 1.660).
48. S.Y. Pung, K.L. Choy and X. Hou, "Growth of (002)-oriented ZnO thin films on largely lattice-mismatched substrates using atomic layer deposition", *International Journal of Nanotechnology* (2013) **10** 247-259 (ISI cited, impact factor: 1.013).
49. S.N.Q.A. Abd. Aziz, S.Y. Pung, Z. Lockman, N.A. Hamzah, Y.L. Chan, "Ex-situ doping of ZnO nanorods by spray pyrolysis technique" *Materials Science Forum* 756 (2013) 16-23. (Scopus cited, impact factor: 0.399)
50. N.A Hamzah, S.Y. Pung, S. Sreekantan and S.N.Q.A. Abd Aziz, "Effect of CVD synthesis parameters on the growth of catalyst-free ZnO NRs", *Materials Science Forum* 756 (2013) 24-30. (Scopus cited, impact factor: 0.399)
51. Y.L. Chan, S.Y. Pung, N.S. Hussain, S. Sreekantan and F.Y. Yeoh, "Photocatalytic degradation of Rhodamine B using MnO₂ and ZnO nanoparticles", *Materials Science Forum* 756 (2013) 161-174. (Scopus cited, impact factor: 0.399)
52. N.A Hamzah, S.Y. Pung, S. Sreekantan and S.N.Q.A. Abd Aziz, "Synthesis and growth mechanism of catalyst-free ZnO nanowires using chemical vapour deposition", *Advanced Materials Research* 620 (2013) 320-324. (Scopus cited).
53. S.Y. Pung and K.L. Choy, "Growth of vertically aligned ZnO nanowires on iron oxide layer", *Advanced Materials Research* 378-379 (2012) 740-743. (Scopus cited)
54. S.Y. Pung, C.C. Tee, K.L. Choy and X. Hou, "Growth mechanism of Au-catalyzed ZnO NWs: VLS or VS-VLS?", *Advanced Materials Research* 364 (2012) 333-337. (Scopus cited).
55. S.Y. Pung, K.L. Choy and X. Hou, "Structural and optical properties of ZnO nanostructures", *ASEAN Engineering Journal B* **1** (2012) 46-56.
56. S.Y. Pung, W.P. Lee, and A. Azizan, "Kinetic study of organic dye degradation using ZnO particles with different morphologies as a photocatalyst", *International Journal of Inorganic Chemistry*, (2012) doi:10.1155/2012/608183, (Scopus cited).
57. L.N. Protasova, E.V. Rebrov, K.L. Choy, S. Y. Pung, V. Engels, M. Cabaj, A.E.H. Wheatley and J.C. Schouten "ZnO based nanowires grown by chemical vapour deposition for selective hydrogenation of acetylene alcohols", *Catalyst Science Technology* **1** (2011) 92-101 (ISI cited, impact factor: 3.753).
58. S.Y. Pung, K.L. Choy and X. Hou, "Tip-growth mode and base-growth mode of Au-catalyzed ZnO nanowires by Chemical Vapour Deposition technique", *Journal of Crystal Growth*, **312** (2010) 2049-2055 (ISI cited, impact factor: 1.737).

59. S.Y. Pung, K.L. Choy, Evgeny A. Vinogradov, Nadezhda N. Novikova, and Vladimir A. Yakovlev, “Structural and Infrared analysis of ZnO film and nanowires”, *Journal of Crystal Growth*, **312** (2010) 2220-2225 (ISI cited, impact factor: 1.737).
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1. M.T. Thein, S.Y. Pung, A. Aziz and M. Itoh, “Effect of excitation sources on the photodegradation of RhB solution using Ni embedded ZnO nanorods as photocatalyst” *Enjinier* (2015) **17** (1) 10-12.
2. S.Y. Pung, C.H. Tan, M.N. Ahmad Fauzi and, S.R. Kasim, “Effect of sintering temperature on the optical property of Sr₂MgSi₂O₇ phosphor” *Enjinier* (2014) **15** (2) 7-9.
3. C.K. Wong, S.Y. Pung, W.H. Ng, M.N. Ahmad Fauzi and S.R. Kasim “Effect of activator concentration on the optical property of YAG phosphor”, *MicroSoM* **12** (2) (2013) 8-11.

Conference proceeding (Abstract)

1. A.T. Le and S.Y. Pung “Reusability of zinc oxide particles collected after heavy metal ions removal”, 28th Scientific Conference of the Microscopy Society Malaysia (28th SCMSM 2019), Kuantan, Pahang, Malaysia, (18-20 Dec 2019).
2. S.L. Chiam and S.Y. Pung “Heavy metal ions removal using β -MnO₂ particles under UV irradiation”, The 3rd International Postgraduate Conference on Materials, Minerals & Polymer (MAMIP) 2019, Penang, Malaysia (31 Oct – 1 Nov 2019).
3. M.Z. Toe, A. Matsuda, S.S. Han, K. Aisha and S.Y. Pung “Effect of annealing temperature on the performance of zinc oxide thin film-based dye sensitized solar cell”, The 3rd International Postgraduate Conference on Materials, Minerals & Polymer (MAMIP) 2019, Penang, Malaysia (31 Oct – 1 Nov 2019).
4. A.T. Le, S.Y. Pung, S.L. Chiam, N.A.H.N. Josoh, T.Y. Koay, J.S. Lee and N.B. Mustar, “Photocatalytic performance of titanium dioxide particles in degradation of various organic dyes under visible and UV light irradiation”, The 3rd International Postgraduate Conference on Materials, Minerals & Polymer (MAMIP) 2019, Penang, Malaysia (31 Oct – 1 Nov 2019).
5. M. Ahmadipour, M. Arjmand, M.F. Fadzil Ain, Z.A.A. Ahmad and S.Y. Pung “Synthesis and characterization of CaCu₃Ti₄O₁₂ nanoparticles towards photodegradation of organic pollutant in water under UV light illumination”, Conference on Advanced Materials Characterization Techniques, Kangar, Perlis, Malaysia (23-24 July 2019).
6. N. Sian Tanchu, Y.F. Pung, S.Y. Pung, O. Taku and J. Hobman, “Mechanism underlying the antimicrobial activity of Zinc oxide (ZnO) nanoparticles against Gram-positive and Gram-negative bacteria”, 30th Intersity Biochemistry Seminar University of Nottingham Malaysia, Kuala Lumpur, Malaysia (4 May 2019).
7. M.Z. Toe, N.A.H. Nik Jusoh, A. Matsuda, S.S. Han, K. Yaacob, W.K. Tan and S.Y. Pung, “Effect of ZnO seed layer on the growth of ZnO nanorods on silicon substrates”, Conference proceeding of 6th International Conference on Recent Advances in Materials, Minerals & Environment (RAMM), Penang, Malaysia (27-29 Nov 2018).
8. Y.L. Ying, S.Y. Pung, M.T. Ong and Y.F. Pung, “Structural and antibacterial activity of WO_x/ZnO nanocomposites against pathogenic bacteria”, Conference proceeding of 6th International Conference on Recent Advances in Materials, Minerals & Environment (RAMM), Penang, Malaysia (27-29 Nov 2018).

9. S.Y. Pung, S.N.Q.A. Abd Aziz, M.T. Thein, Y.L. Ying, L.A. Thi, and Y.F. Pung, "Synthesis, characterization and photocatalytic performance of ZnO based nanomaterials", Conference proceeding of BIT's 7th Annual World Congress of Advanced Materials (WCAM-2018), Xiamen, China (13-15 Sep 2018).
10. J.S. Ho, Y.L. Ying, N.D.N. Diem, S.Y. Pung, Y.F. Pung, "Comparative study on the antifungal properties of the in-house synthesized ZnO, WO_x and ZnO/WO_x nanoparticles and the nano hybrids on *Rhodotorula mucilaginosa*", Conference proceeding of 29th Intersivity Biochemistry Seminar Taylor's University, Kuala Lumpur, Malaysia (12 May 2018).
11. H.Y. Chew, Y.F. Pung, N.D. Diem, Y.L. Ying, S.Y. Pung, "Comparing antibacterial activities of newly engineered Zinc oxide nanoparticles, Tungsten oxide nanoparticles and Zinc oxide-Tungsten oxide nanohybrids against *Staphylococcus aureus*", 29th Intersivity Biochemistry Seminar Taylor's University, Kuala Lumpur, Malaysia (12 May 2018).
12. Y.L. Ying, S.Y. Pung, M.T. Ong and Y.F. Pung, "Inactivation of bacterial by WO_x/ZnO particles", Regional Conference on Materials and ASEAN Microscopy Conference 2017 (RCM & AMC 17), Penang, Malaysia (12-13 Dec 2017).
13. S.Y. Pung, C.H. Chang, M.N. Ahmad Fauzi and S.R. Kasim, "Effect of co-dopant on the phase structure and photoluminescence properties of Sr₂MgSi₂O₇: Eu²⁺ phosphors", Regional Conference on Materials and ASEAN Microscopy Conference 2017 (RCM & AMC 17), Penang, Malaysia (12-13 Dec 2017).
14. M.T. Thein and S.Y. Pung, "Processing Temperature dependent morphologies and Photocatalytic activity of ZnO nanorods", Regional Conference on Materials and ASEAN Microscopy Conference 2017 (RCM & AMC 17), Penang, Malaysia (12-13 Dec 2017).
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16. Y.L. Ying, S.Y. Pung, M.T. Ong and Y.F. Pung, "Antibacterial study of tungsten oxide particles on Staphylococcus Aureus and Pseudomonas Aeruginosa", 4th Postgraduate Colloquium for Environmental Research 2017 (POCER 2017), Melaka, Malaysia (25 - 27 July 2017).
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18. Y.C. Wong, D.N.D. Nguyen, S.Y. Pung, M. William, and Y.F. Pung, "Ultrafine particle induces oxidative stress and impairs the ability of peripherals blood mononuclear cells to differentiate into circulating angiogenic cells", 28th Intersivity Biochem Seminar, University Pertanian Malaysia, Malaysia, (14 May 2017).
19. K. Disha, Y.L. Ying, S.Y. Pung, and Y.F. Pung, "Assessing antimicrobial properties of newly synthesized WO_x and ZnO/ WO_x Nanoparticles", 28th Intersivity Biochem Seminar, University Pertanian Malaysia, Malaysia, (14 May 2017).
20. L.A. Thi, S.Y. Pung, S. Sreekantan, A. Matsuda and H.D. Phu, "Synthesis and characterization of ZnO particles with different morphology as potential UV shielding agent in textile industry", International Corrosion Prevention Symposium for Research Scholars (CORSYM 2017), Kuala Lumpur, Malaysia, (3-4 May 2017).
21. Y.L. Ying, S.Y. Pung, T.H. Ong and Y.F. Pung, "A Comparison between ZnO Nanorods and WO₃/ZnO Nanorods Photocatalysts in RhB Dye Removal", 25th Scientific Conference of the Microscopy Society Malaysia (25th SCMSM 2016), Putrajaya, Malaysia, (7-9 Dec 2016).
22. M.T. Thein, S.Y. Pung, L.S. Chuah, Y.F. Pung, "Photodegradation efficiency of ZnO nanorods in removal of different types of organic dyes", Advances in Materials and Processing Technologies Conference 2016 (AMPT 2016), (8-11 Nov 2016).

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38. S.Y. Pung, C.H. Tan, M.N. Ahmad Fauzi, S.R. Kasim. “Effects of synthesis parameters on the luminescence of Sr₂MgSi₂O₇ phosphor prepared by solid state reaction”, Conference Proceeding of International Conference on the Advancement of Materials and Nanotechnology 2013 (ICAMN III 2013), Penang, Malaysia (19-21 November 2013).
39. S.N.Q.A. Abd Aziz and S.Y. Pung, Z. Lockman. “Growth of Fe-doped ZnO nanorods using aerosol assisted-chemical vapour deposition via *in-situ* doping”. Mini Symposium USM-NUT (Nagaoka University Technology), Universiti Sains Malaysia, Penang, Malaysia (21-22 Oct. 2013).
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49. Nur Atiqah binti Hamzah, S.Y. Pung, Srimala Sreekantan and Siti Nor Qurratu Aini binti Abd Aziz, “Synthesis and growth mechanism of catalyst-free ZnO nanowires using chemical vapour deposition”, International Conference on X-Rays & Related Techniques & Industry 2012 (ICXRI 2012), Penang, Malaysia (3-5 Jul 2012).

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53. S.Y. Pung, X.H. Hou and K.L. Choy, "Controlled growth of ZnO nanowires using ZnO seed layers" Proceeding of Joint Research Seminar between USM and Nagaoka University of Technology, Malaysia (17 Oct. 2011).
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55. S.Y. Pung, K.L. Choy, X. Hou and C. Shan, "Growth of Au-catalyzed and self-catalyzed ZnO nanowires using chemical vapour deposition technique", *Proceedings of 2010 International Conference on Enabling Science and Nanotechnology (ESciNano)*, (2011) 1-2 (ISBN: 978-1-4244-8853-7) (IEEE).
56. S.Y. Pung, K.L. Choy and X.H. Hou, "Homoepitaxial growth of vertically aligned ZnO NWs by CVD technique", *Proceedings of 216th ECS Meeting, Vienna, Austria* (4-9 Oct 2009).
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Book chapter (International)

1. S.Y. Pung, K.L. Choy, X. Hou and C. Shan, in: *Crystal Growth: Theory, Mechanisms and Morphology*, edited by N.A. Mancuso and J.P. Issac, "Growth and morphology evolution of ZnO nanowires synthesized by chemical vapor deposition", Nova Science Publisher, Inc., New York, 155-212 (2012) (ISBN: 978-1-61324-529-3).
2. L.B. Hussain and S.Y. Pung, "Influence of chlorine and humidity on mechanical strength of tin lead solders", *Proceedings of Processing and fabrication of advanced materials VIII (2001)* 41-49, doi: 10.1142/9789812811431_0005.

Patent

1. Y.Q. Jiang, M. Ancheta, S.Y. Pung, W.K. Cheou, "Manufacturing method of liquid crystal cells for liquid display used in computer, involves assembling, liquid crystal material dispensing, aligning and adhering processes under substantially atmospheric conditions" (Publication number: WO/2005/036248, US2005105040-A1, EP1676171-A1, JP2007507756-W, KR2006108645-A, CN1890598-A, IN200602401-P1, US7349059-B2).

Trade secret

1. S.Y. Pung "PRG-P3" (Publication number: TS/IO/2020/080), Jan 2020.

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1. W.S. Chow, K. Lim and S.Y. Pung, “Ultraviolet-protective transparent poly(lactic acid) nanocomposite packaging film”, 2020
2. S.Y. Pung, “Training Modules (Volume 1): Statistic and Design of Experiments for Material Engineering”, May 2019
3. S.Y. Pung, “ZROD particles”, Intellectual Property Corporation of Malaysia”, CRLY0013290, Apr 2019.
4. S.Y. Pung, “ZDISK particles”, Intellectual Property Corporation of Malaysia”, CRLY0013291, Apr 2019.

INVITED TALK

1. Invited speaker, Shimadzu Seminar on Material Characterisation and Analysis Techniques, “Identification of deposits on ZnO particles using XPS”, Penang, Malaysia (7 Aug 2019).
2. Invited speaker, BIT’s 7th Annual World Congress of Advanced Materials (WCAM-2018), “Synthesis, characterization and photocatalytic performance of ZnO based nanomaterials”, Xiamen, China (13-15 Sep 2018).
3. Invited speaker, Nano-Micro Conference 2017, “Highly effective ZnO based nanocomposites for organic dyes removal”, Shanghai, China, 19-23 June 2017.
4. Keynote speaker, Advances in Materials and Processing Technologies Conference 2016 (AMPT 2016), Kuala Lumpur, Malaysia, 8-11 Nov 2016. “Photodegradation efficiency of ZnO nanorods in removal of different types of organic dyes”.
5. Invited speaker, Energy Materials Nanotechnology (EMN) 2016 Qingdao Meeting, “Sunlight driven semiconductor photocatalyst for organic dyes removal”, Qingdao, China, 7-10 June 2016.
6. Nanostructures & Nanomaterials; synthesis, properties and application (5-6 July 2012), School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia. “Engineering of ZnO nanomaterials”.
Participants: Prof. Dr. Md. Aminul Islam and Prof. Dr. A.K.M. Bazlur Rashid, Dept. of Materials and Metallurgical Engineering, Bangladesh University of Engineering and Technology, Bangladesh.

IN-HOUSE TRAINING/SHARING

1. Introduction to statistics (1 Aug 2019), Speakers: Dr Sivakumar and Assoc. Prof. Ir. Dr Pung Swee Yong, Audiences: postgraduate students of School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
2. Engineering Statistics (29 & 31 Jan 2019), Speakers: Dr Sivakumar and Assoc. Prof. Ir. Dr Pung Swee Yong, Audiences: postgraduate students of School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
3. Control Chart Basic Training (27 Apr 2018), Speaker: Assoc. Prof. Ir. Dr Pung Swee Yong, Audiences: Staffs (MS ISO/IEC 17025) of Science & Engineering Research Centre (SERC), Universiti Sains Malaysia.
4. Introduction to Minitab 17 (11 Oct 2017), Speakers: Dr Sivakumar and Assoc. Prof. Ir. Dr Pung Swee Yong, Audiences: Academic staffs and postgraduate students of School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
5. Effective teaching for Outcome-Based-Higher-Education (12 Feb 2015), Speaker: Dr Pung Swee Yong, Audiences: Academic staffs of School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.

CONFERENCES/WORKSHOPS/OTHERS

1. 28th Scientific Conference of the Microscopy Society Malaysia (28th SCMSM 2019), Kuantan, Pahang, Malaysia, (18-20 Dec 2016).
Oral presentation: “Reusability of zinc oxide particles collected after heavy metal ions removal”, A.T. Le and S.Y. Pung.
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 - (i) Oral presentation: “Heavy metal ions removal using β -MnO₂ particles under UV irradiation”, S.L. Chiam and S.Y. Pung.
 - (ii) Oral presentation: “Effect of annealing temperature on the performance of zinc oxide thin film-based dye sensitized solar cell”, M.Z. Toe, A. Matsuda, S.S. Han, K. Aisha and S.Y. Pung, and
 - (iii) Oral presentation: “Photocatalytic performance of titanium dioxide particles in degradation of various organic dyes under visible and UV light irradiation”, A.T. Le, S.Y. Pung, S.L. Chiam, N.A.H.N. Josoh, T.Y. Koay, J.S. Lee and N.B. Mustar.
3. Conference on Advanced Materials Characterization Techniques, Kangar, Perlis, Malaysia (23-24 July 2019)
Poster presentation: “Microstructure and mechanical behavior of CCTO ceramics hollow fiber fabricated using dry/wet spinning method”, M. Ahmadipour, M. Arjmand, M.F. Fadzil Ain, Z.A.A. Ahmad, S.Y. Pung.
4. 30th Intersociety Biochemistry Seminar University of Nottingham Malaysia, Kuala Lumpur, Malaysia (4 May 2019)
Oral presentation: “Mechanism underlying the antimicrobial activity of Zinc oxide (ZnO) nanoparticles against Gram-positive and Gram-negative bacteria”, N. Sian Tanchu, Y.F. Pung, S.Y. Pung, O. Taku and J. Hobman.
5. 6th International Conference on Recent Advances in Materials, Minerals & Environment (RAMM), Penang, Malaysia (27-29 Nov 2018).
 - (i) Oral presentation: “Effect of ZnO seed layer on the growth of ZnO nanorods on silicon substrates”, M.Z. Toe, N.A.H. Nik Jusoh, A. Matsuda, S.S. Han, K. Yaacob, W.K. Tan and S.Y. Pung
 - (ii) Poster presentation: “Structural and antibacterial activity of WO_x/ZnO nanocomposites against pathogenic bacteria”, Y.L. Ying, S.Y. Pung, M.T. Ong and Y.F. Pung.
6. Regional Conference on Materials and ASEAN Microscopy Conference 2017 (RCM & AMC 17), Penang, Malaysia (12-13 Dec 2017).
 - (i) Oral presentation: “Effect of co-dopant on the phase structure and photoluminescence properties of Sr₂MgSi₂O₇: Eu²⁺ phosphors”, S.Y. Pung, C.H. Chang, M.N. Ahmad Fauzi and S.R. Kasim,
 - (ii) Oral presentation: “Processing Temperature dependent morphologies and Photocatalytic activity of ZnO nanorods”, M.T. Thein and S.Y. Pung.
 - (iii) Poster presentation: “Effectiveness of heavy metals removal by ZnO nanorods under UV irradiation”, L.A. Thi, S.Y. Pung, S. Sreekantan, A. Matsuda and H.D. Phu.
 - (iv) Poster presentation: “Inactivation of bacterial by WO_x/ZnO particles”, Y.L. Ying, S.Y. Pung, M.T. Ong and Y.F. Pung.
7. 29th Intersociety Biochemistry Seminar Taylor’s University, Kuala Lumpur, Malaysia (12 May 2018).
 - (i) “Comparative study on the antifungal properties of the in-house synthesized ZnO, WO_x and ZnO/WO_x nanoparticles and the nano hybrids on *Rhodotorula mucilaginosa*”, J.S. Ho, Y.L. Ying, N.D.N. Diem, S.Y. Pung, Y.F. Pung
 - (ii) “Comparing antibacterial activities of newly engineered Zinc oxide nanoparticles, Tungsten oxide nanoparticles and Zinc oxide-Tungsten oxide nanohybrids against *Staphylococcus aureus*”, H.Y. Chew, Y.F. Pung, N.D. Diem, Y.L. Ying, S.Y. Pung.

8. 4th Postgraduate Colloquium for Environmental Research 2017 (POCER 2017), Melaka, Malaysia (25 - 27 July 2017).
Oral presentation: “Antibacterial study of tungsten oxide particles on Staphylococcus Aureus and Pseudomonas Aeruginosa”, Y.L. Ying, S.Y. Pung, M.T. Ong and Y.F. Pung.
9. 28th Intersarsity Biochem Seminar, University Pertanian Malaysia, Malaysia, (14 May 2017),
 - (i) Poster presentation: “Ultrafine particle induces oxidative stress and impairs the ability of peripherals blood mononuclear cells to differentiate into circulating angiogenic cells”, Y.C. Wong, D.N.D. Nguyen, S.Y. Pung, M. William, and Y.F. Pung.
 - (ii) Poster presentation: “Assessing antimicrobial properties of newly synthesized WO_x and ZnO/ WO_x Nanoparticles”, K. Disha, Y.L. Ying, S.Y. Pung, and Y.F. Pung.
10. International Corrosion Prevention Symposium for Research Scholars (CORSYM 2017), Kuala Lumpur, Malaysia, (3-4 May 2017).
Poster presentation: “Synthesis and characterization of ZnO particles with different morphology as potential UV shielding agent in textile industry”, L.A. Thi, S.Y. Pung, S. Sreekantan, A. Matsuda and H.D. Phu.
11. 25th Scientific Conference of the Microscopy Society Malaysia (25th SCMSM 2016), Putrajaya, Malaysia, 7-9 Dec 2016.
Oral presentation: “A Comparison between ZnO Nanorods and WO₃/ZnO Nanorods Photocatalysts in RhB Dye Removal”, Y.L. Ying, S.Y. Pung, T.H. Ong and Y.F. Pung.
12. Advances in Materials and Processing Technologies Conference 2016 (AMPT 2016), 8-11 Nov 2016.
Oral presentation: “The photocatalytic activity in removal of organic dye by tungsten oxide layer grown on polyethylene terephthalate fibers”, S.N.Q.A. Abd Aziz, R.A. Kamazahruman, S. Sreekantan, M.T. Ong, G. Sahgal, S.Y. Pung.
13. 27th Intersarsity Biochem Seminar, University Pertanian Malaysia, Malaysia, (14 May 2016),
Poster presentation: “Assessing antifungal activity of zinc oxide nanoparticles against *Saccharomyces Cerevisiae*”, S.G. Ling, M.T. Thien, C.F. Le, Y. Zailan, Y.H. Leong, T.S. Mohammad, S.Y. Pung and Y.F. Pung.
14. International Conference of Global Network for Innovative Technology 2016 (IGNITE 2016), Penang, Malaysia, 26-29 Jan 2016.
 - (i) Oral presentation: “Effect of calcination temperature on the photodegradation efficiency of NiO coupled ZnO rods”, M.T. Thein, S.Y. Pung, A. Aziz, Z. Lockman, and M. Itoh.
 - (ii) Poster presentation: “The photocatalytic activity of tungsten oxide layer grown on polyethylene terephthalate fiber”, S.N.Q.A.A. Aziz, R.A. Kamazahruman, S.Y. Pung, S. Sreekantan, M.T. Ong and G. Sahgal.
15. The 24th Scientific Conference of The Microscopy Society Malaysia (SCMSM 2015), Melaka, Malaysia (2-4th Dec 2015)
Oral presentation: “Photocatalytic study of WO₃ particles in removal of organic dye”, S.Y. Pung, R.A. Kamazahruman, S. Sreekantan, M.T. Ong and G. Sahgal.
16. 11th International Conference of Pacific Rim Ceramic Societies (PacRim-11), Jeju Island, Korea, (30 Aug – 4 Sep 2015).
Oral presentation: “Burstein-Moss effect and band gap narrowing in ZnO”, K.G. Saw, N.M. Aznan, F.K. Yam, S.S. Ng, S.Y. Pung.
17. 5th International Conference on Recent Advances in Materials, Minerals & Environment (RAMM) & 2nd International Postgraduate Conference on Materials, Mineral and Polymer (MAMIP), Penang, Malaysia (4-6 Aug 2015).
Oral presentation: “The role of polyvinylpyrrolidone (PVP) in the synthesis of stacked ZnO nanorods using solution precipitation method” M.T. Thein, S.Y. Pung, A. Aziz, M. Itoh.

18. The Second International Conference on Nano-Electronic Technology Devices and Materials (IC-NET 2015), Shah Alam, Malaysia, (27 Feb. - 2 Mar 2015)
Oral presentation: "Insights on semiconductor-metal transition in indium-doped zinc oxide from X-ray photoelectron spectroscopy, time-of-flight secondary ion mass spectroscopy and X-ray diffraction", K.G. Saw, N.M. Aznan, F.K. Yam, S.S. Ng, S.Y. Pung.
19. International Conference of Global Network for Innovative Technology (IGNITE 2014) Penang, Malaysia (15-16 Dec 2014).
Oral presentation: "Synthesis of ZnO nanomaterials and their application as photocatalyst for organic pollutant removal", S.Y. Pung, Y.L. Chan, W.P. Lee, M.T. Thein and S.N.Q.A. Abd Aziz.
20. Malaysia Toray Science Foundation Research Grant Symposium 2014 (MTSF Symposium 2014), Kuala Lumpur, Malaysia (3 December 2014).
Oral presentation: "Photocatalytic study of manganese oxide nanowires with different polymeric phase", S.Y. Pung and F.Y. Yeo.
21. International Science, Technology and Engineering Conference 2014 (ISTEC 2014), Langkawi, Malaysia (19-21 September 2014).
Oral presentation: "Preparation of a blue light emitting $\text{Sr}_2\text{MgSi}_2\text{O}_7$ -based photoluminescent phosphor", S.Y. Pung, C.H. Tan, M.N. Ahmad Fauzi, S.R. Kasim.
22. International Conference on X-Rays & Related Techniques & Industry 2014 (ICXRI 2014), Johor Bahru, Malaysia (11-13 August 2014).
Poster presentation: "Effect of Excitation Wavelength on the Blue Emitting $\text{Sr}_2\text{MgSi}_2\text{O}_7$ Phosphor", C.H. Chang, S.Y. Pung, M.N. Ahmad Fauzi and S.R. Kasim.
23. 4th International Conference on Environmental Pollution and Remediation (ICEPR 2014), Prague, Czech Republic (11-13 August 2014).
Oral presentation: "Fe-doped ZnO nanorods prepared by aerosol-assisted chemical vapour deposition (*in-situ* doping) and their photocatalytic activity of in degradation of RhB dye", S.Y. Pung and S.N.Q.A. Abd Aziz and Z. Lockman.
24. International Conference on the Advancement of Materials and Nanotechnology 2013 (ICAMN III 2013), Penang, Malaysia (19-21 November 2013).
 - (i) Poster presentation: "Growth mechanism of ZnO hexagonal nanodisks synthesized using sol-gel technique", M.T. Thein, S.Y. Pung, A. Aziz, M. Itoh.
 - (ii) Poster presentation: "Effects of synthesis parameters on the luminescence of $\text{Sr}_2\text{MgSi}_2\text{O}_7$ phosphor prepared by solid state reaction", S.Y. Pung, C.H. Tan, M.N. Ahmad Fauzi, S.R. Kasim.
25. Mini Symposium USM-NUT (Nagaoka University Technology), Universiti Sains Malaysia, Penang, Malaysia (21-22 Oct. 2013).
Poster presentation: "Growth of Fe-doped ZnO nanorods using aerosol assisted-chemical vapour deposition via *in-situ* doping". S.N.Q.A. Abd Aziz and S.Y. Pung, Z. Lockman.
26. 223rd ECS Meeting, Toronto, Ontario, Canada (May 12-16, 2013)
Poster presentation: "ZnO-MnO₂ Core-Shell Nanocomposites as a Promising Visible-Light Driven Photocatalyst for Pollutants Removal", Y.L. Chan, S.Y. Pung, S. Sreekantan and F.Y. Yeoh.
27. NANO-SciTech 2013, Shah Alam, Malaysia (1-4 Mar 2013).
Oral presentation: "Ultraviolet photoresponse properties of zinc oxide on heavily boron-doped diamond heterojunction", K.G. Saw, S.S. Tneh, S.Y. Pung, S.S. Ng, F.K. Yam and Z. Hassam.

28. Mesoporous hydroxyapatite derived from surfactant-templating system for p-Cresol adsorption: Physicochemical properties, formation process and adsorption performance The 5th Regional Conference on Materials Engineering and the 5th Regional Conference on Natural Resources and Materials 2013 (RCM5 & RCNRM5), Penang, Malaysia (21-23 Jan 2013).
 - (i) Oral presentation: “Structural and optical properties of Fe-doped ZnO nanorods”, S.N.Q.A. Abd Aziz, S.Y. Pung, Z. Lockman, N.A. Hamzah, and Y.L. Chan.
 - (ii) Poster presentation: “Comparative Study Of ZnO And V₂O₅ Nanoparticles As Heterogeneous Photocatalysts In Degrading Organic Pollutants”, Y.L. Chan, S.Y. Pung and S. Sreekantan.
29. The 3rd ISESCO International Workshop and Conference on Nanotechnology (IWCN 2012), Kuala Lumpur, Malaysia (5-7 Dec 2012)
 - (i) Poster presentation: “Synthesis and characterization of Cu-doped of ZnO nanorods”, S.Y. Pung, C.S. Ong, K. Mohd Isha and M.H. Othman.
 - (ii) Oral presentation: “Degradation of Rhodamine B using Semiconductor Nanoparticles with Different Bandgap Energy as photocatalyst”, Y.L. Chan, S.Y. Pung, F.Y. Yeo, S. Sreekantan and N.S. Hussain
 - (iii) Poster presentation: “Effect of CVD synthesis parameters on the growth of catalyst-free ZnO NRs”, N.A. Hamzah, S.Y. Pung, S. Sreekantan and S.N.Q.A. Abd Aziz
 - (iv) Poster presentation: “Ex-situ doping of ZnO nanorods using spray pyrolysis technique”, S.N.Q.A. Abd Aziz, S.Y. Pung, Z. Lockman, N.A. Hamzah, and Y.L. Cham.
30. Workshop on Nanostructures & Nanomaterials; synthesis, properties and application (5-6 July 2012), School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Malaysia.
Oral presentation: “Engineering of ZnO nanomaterials”.
31. International Conference on X-Rays & Related Techniques & Industry 2012 (ICXRI 2012), Penang, Malaysia (3-5 Jul 2012)
 - (i) Poster presentation: “Efficiency of ZnO particles with different morphology in degrading organic dye”, S.Y. Pung, W.P. Lee and A. Aziz.
 - (ii) Poster presentation: “Synthesis and growth mechanism of catalyst-free ZnO nanowires using chemical vapour deposition”, Nur Atiqah binti Hamzah, S.Y. Pung, Srimala Sreekantan and Siti Nor Qurratu Aini binti Abd Aziz.
32. 2012 International Conference on Applied Materials & Electronics Engineering (AMEE 2012), Hong Kong, (18-19 Jan 2012), S.Y. Pung and K.L. Choy.
Oral presentation: “Growth of vertically aligned ZnO nanowires on iron oxide layer”.
33. 3rd International Workshop on Nanotechnology & Application 2011 (3rd IWNA 2011), Vung Tau, Vietnam, (10-12 Nov 2011), S.Y. Pung, X.H. Hou and K.L. Choy.
Oral presentation: “Structural and optical properties of ZnO thin films deposited using atomic layer deposition technique”.
34. 4th AUN/SEED-Net Regional Conference on Natural Resources and Materials (RC-NRM) and MetCon 2011, Olongapo City, Zambales, Philippines (27-28 Oct. 2011) S.Y. Pung, K.L. Choy and X.H. Hou.
Oral presentation: “Structural and Optical Properties of ZnO nanostructures”.
35. Joint Research Seminar between USM and Nagaoka University of Technology, Malaysia (17 Oct. 2011)
Poster presentation: “Controlled growth of ZnO nanowires using ZnO seed layers”, S.Y. Pung, X.H. Hou and K.L. Choy.
36. The International Conference for Nanomaterials Synthesis and Characterization (INSC 2011), Kuala Lumpur, Malaysia, (4-5 Jul 2011), S.Y. Pung and C.C. Tee.
Oral presentation: “Growth mechanism of Au-catalyzed ZnO NWs: VLS or VS-VLS?”

37. 22th North American Meeting: "Driving Catalyst Innovation", Detroit, Michigan, USA (5-10 Jun 2011), E.Rebrov, L.N. Protasova, J.C. Schouten, K.L. Choy, S.Y. Pung, V. Engels, M. Cabaj, and A.E.H. Wheatley.
Oral presentation: "CVD deposited Pd/ZnO nanowires for selective hydrogenation of acetylene alcohols".
38. Nanotech Malaysia 2010: International Conference on Enabling Science and Nanotechnology, Kuala Lumpur, Malaysia (1-3 Dec 2010), S.Y. Pung, K.L. Choy and X.H. Hou.
Oral presentation: "Growth of Au-catalyzed and Self-catalyzed ZnO Nanowires using Chemical Vapor Deposition Technique".
39. Proceedings of the XIth Netherlands Catalysis and Chemistry Conference (NCCC XI), Noordwijkerhout, Netherlands (1-3 Mar 2010), L.N. Protasova, E.Rebrov, J.C. Schouten, K.L. Choy, S.Y. Pung, V. Engels, M. Cabaj, and A.E.H. Wheatley.
Oral presentation: "Zinc oxide nanowires doped with Pd nanoparticles for selective hydrogenation of acetylene alcohols".
40. 216th ECS Meeting, Vienna, Austria (4-9 Oct 2009), S.Y. Pung, K.L. Choy and X.H. Hou
Oral presentation: "Homoepitaxial growth of vertically aligned ZnO NWs by CVD technique".
41. 2009 NSTI Nanotechnology Conference and Trade Show, Houston, USA (3-7 May 2009), S.Y. Pung and K.L. Choy
Oral presentation: "Aluminium doped ZnO films by a modified chemical vapour deposition technique".
42. International workshop on Advanced Nanostructured Materials and Thin films for industry applications, Nottingham, United Kingdom (10-13 Nov 2008).
Poster presentation: "Structural and IR analysis of ZnO films and nanowires" - S.Y. Pung, K.L. Choy, Evgeny A. Vinogradov, Nadezhda N. Novikova and Vladimir A. Yakovlev.
 - (i) "Photoluminescence properties of ZnO films and nanowires" – S.Y. Pung, K.L. Choy, A.J. Kent and A. Andrey.
 - (ii) "Controlled growth of ZnO nanowires by self-catalyzed approach" – S.Y. Pung, K.L. Choy and X.H. Hou
43. 1st International on Functional Nanocoatings, Budapest, Hungary (28 Mar – 2 Apr 2008), S.Y. Pung, C.X. Shan, X.H. Hou and K.L. Choy.
Oral presentation: "Controlling of preferential growth of ZnO seed layers by the atomic layer deposition technique for vertically aligned growth of ZnO nanowires".
44. 8th International Conference on Processing and Fabrication of Advanced materials (PFAMVIII), Singapore (8-10 Sep. 1999), L.B. Hussain and S.Y. Pung.
Oral presentation "Influence of chlorine and humidity on mechanical strength of tin lead solders".
45. 3rd European XFEL Users' meeting, Hamburg, Germany (28-29 Jan 2009), S.Y. Pung, K.L. Choy and X.H. Hou
Poster presentation: "Controlled growth of ZnO nanowires by self-catalyzed approach"
46. I-Nano Summer School "Nanomaterials and Nanosynthesis", Århus, Denmark (9-16 June 2007), S.Y. Pung, K.L. Choy and X.H. Hou.
Poster presentation: "Growth of ZnO nanorods by aerosol assisted chemical vapour deposition method".
47. Nano Malaysia Summit & Expo 2011 (14-16 Jun 2011) S.Y. Pung, K.L. Choy and X.H. Hou.
Poster presentation "Controlled growth of ZnO nanowires using seed layers".
48. Fuel and Power Technology Research Division, Faculty of Engineering, University of Nottingham, U.K. (1 Apr 2009), S.Y. Pung, K.L. Choy and X.H. Hou.
Oral presentation "Controlled growth of ZnO nanowires by self-catalysed approach".

REVIEWER FOR BOOK CHAPTER

1. Jul 2015, book chapter in “*Two-Dimensional Nanostructures for Energy Related Applications*” Science Publishers).

REVIEWER FOR JOURNALS

1. Chemical Engineering Journal
2. Journal of Hazardous Materials
3. Journal of Materials Chemistry C
4. Dyes and pigments
5. Ceramics International
6. Nanotechnology
7. RSC Advances
8. Semiconductor Science and Technology
9. Journal of Physics D: Applied Physics
10. Chemical Vapour Deposition
11. Polymer Composites
12. The Korean Journal of Chemical Engineering Physical Scripta
13. Materials Science in Semiconductor Processing
14. Journal of Materials Science: Materials in Electronics
15. Polymer Composites
16. Materials Characterization
17. Materials Research Express
18. International Journal of Environmental Analytical Chemistry
19. Fullerenes, Nanotubes and Carbon Nanostructures
20. Materials Today: Proceeding
21. IETE Journal of Research
22. Environmental Engineering Science
23. Current Nanoscience
24. American Chemical Science Journal
25. Journal of Water Process Engineering
26. Advances in Natural Sciences: Nanoscience and Nanotechnology
27. Advanced Materials Research
28. International Journal of Organic Chemistry
29. Journal of Physical Science
30. Journal of Materials Research
31. Advanced Materials Characterization Technique
32. ASEAN Engineering Journal
33. Journal of Mechanical Material Engineering

REVIEWER FOR CONFERENCE PAPERS

1. Proceedings of The 9th International Conference on Key Engineering Materials (ICKEM 2019), University of Oxford, United Kingdom, 29 Mar – 1 Apr 2019.
2. Proceedings of The 6th International Conference on Recent Advances in Materials, Minerals & Environment (RAMM), Penang, 27-29 November, 2018.
3. Proceedings of The ninth International Conference on Science and Engineering 2018 (9th ICSE 2018), Myanmar, December, 2018.
4. Proceedings of The 3rd International Conference on New Material and Chemical Industry (NMCI), Sanya, China, 17-19 November 2018.
5. Journal of Physics: Conference Series, Proceedings of Regional Conference on Materials and ASEAN Microscopy Conference 2017 (RCM & AMC 17), Penang, Malaysia (12-13 Dec 2017).

6. Proceedings of The 8th International Conference on Nanotechnology: Fundamentals and Applications, Marid, Spain, 21-23 August, 2018.
7. Proceedings of 5th Annual International Conference on Materials Science, Metal & Manufacturing (M3 2018) Singapore, 12 - 13 March 2018.
8. Proceedings of the Research Scholar's Corrosion Symposium 2017 (CROSYM'17), Perak, Malaysia, 3-4 May 2017.
9. Proceedings of the 2nd International Conference on Advanced Functional Materials (ICAFM 2017), Los Angeles, United States, 4-6 August 2017.
10. Proceedings of the 3rd World Congress on New Technologies (NewTech'17), Rome, Italy, 6-8 June 2017.
11. Proceedings of the 25th Scientific Conference of the Microscopy Society Malaysia 2016 (SCMSM 2016), Putrajaya, Malaysia.
12. Proceedings of International Conference on X-Ray & Related Techniques in Research and Industry, Putrajaya, Malaysia, August 2016.
13. Proceedings of the 2nd World Congress on New Technologies (NewTech'16) Budapest, Hungary, August 19 – 20, 2016.
14. Proceedings of the International Conference of Global Network for Innovative Technology 2016 (IGNITE 2016), Penang, Malaysia, 26-29 Jan 2016.
15. Proceedings of the International Conference on Material Technology and Environmental Engineering (MTEE 2015), Shanghai, China, 14-15 Aug 2015.
16. Proceedings of the 5th International Conference on Recent Advances in Materials, Minerals & Environment (RAMM), Penang, 4-6 August, 2015.
17. Proceedings of The 6th International Conference on Nanotechnology: Fundamentals and Applications, Barcelona, Spain, 15-17 July, 2015.
18. Proceedings of The Engineering Technology International Conference 2015 (ET 2015), Surabaya, Indonesia, 31st Jul – 1st Aug 2015.
19. Proceedings of The 23rd Scientific Conference of the Microscopy Society Malaysia 2014 (SCMSM 2014), Tronoh, Perak, Malaysia.
20. Proceedings of the International Conference on Advanced Material Engineering & Technology 2013 (ICAMET 2013), Bandung, Malaysia.
21. Proceedings of The 3rd International Malaysia-Ireland joint Symposium on Engineering, Science and Business 2013, Penang, Malaysia.
22. Proceedings of the Second International Conference on Advances In Materials Processing and Characterization (AMPC 2013), Chennai, India.
23. Proceedings of The 2nd International Conference on Chemical, Material and Metallurgical Engineering (ICCMME 2012).
24. Proceedings of the International Conference on Advanced Material Engineering & Technology 2012.

REVIEWER FOR RESEARCH GRANT

1. IPT grant evaluation panel (FRGS) (National level) (4/2/2020 -).
2. YUTP Fundamental Research Grant (FRG) 2020, University Technology Petronas (UTP) (26 Aug 2019 – 25 Aug 2024).
3. YUTP Fundamental Research Grant (FRG) 2020, University Technology Petronas (UTP) (23 Aug 2019).
4. Short Term Grant (Cluster: Engineering), USM (30 Jan 2019).
5. IPT grant evaluation panel (FRGS) (UMK) (11/2/2018 to 13/3/2018).
6. IPT grant evaluation panel (PRGS) (USM) (19/02/2018 to 26/02/2018)
7. Research University (RUI) Grant, Science Cluster, USM (17 Nov 2016).
8. Geran Sangkutan Penyelidikan, USM (2011).

REVIEWER FOR MyTalent USM

1. MyTalent USM (30/7/2018).
2. MyTalent USM (23/7/2019).

AUDITOR

1. Assessor (membership) of Malaysia Board of Technologist (Apr 2019 – Apr 2021).
2. Assessor (Technology and Technical Accreditation Council, TTAC) of Malaysia Board of Technologist (2020 -)

EXAMINER

(a) Master (Internal examiner, Mixed mode)

1. Sarasijah A/P Arivalakan, “Fabrication of iron oxide nanoparticles modified electrode for heavy metal detection”, (Supervisor: Prof. Dr Khairunisak Abdul Razak), 31 July 2019.
2. Ilias Ait Tayeb, “Development of gold nanoparticles modified electrodes for the electrochemical detection of mercury and lead”, (Supervisor: Assoc. Prof. Dr Khairunisak Abdul Razak) 7 Aug 2017.
3. Nurhuda bt Marzuki, “Synthesis and characterization of CCTO/CuO laminate layers ceramic”, (Supervisor: Prof. Dr. Hj. Zainal Arifin Ahmad, Co-supervisor: Dr Shah Rizal Kasim) 20 Jul 2016.
4. Suriyati bt Mohamed Ansari, “Formation of zirconia nanotube sheets in the presence of carbonates by anodization of zirconium”, (Supervisor: Assoc. Prof. Dr Zainovia Lockman) 4 Aug 2014.
5. Norlailatullaili bt Mazuki, “Effect of aluminium (Al) and nickel (Ni) addition on formation of titanium silicon carbide (Ti_3SiC_2) via arc melting”, (Supervisor: Dr Julie Juliewatty bt Mohamed, Co-supervisor: Prof. Dr. Hj. Zainal Arifin Hj. Ahmad) 17 Jul 2012.

(b) Master (Internal examiner, Research mode)

1. Muhammad Balyan, “Energy harvesting from water vapour using chitosan film”, (Supervisor: Prof. Dr. Hj. Zainal Arifin Ahmad), 30 Dec 2019.
2. Nurhafizi Zakaria, “Reliability study on the effectiveness of sacrificial anode cathodic protection (SACP) on corrosion protection for Royal Malaysian Navy (RMN) ships”, (Supervisor: Assoc. Prof. Ahmad Badri, co-supervisor: Assoc. Prof. Dr. Nurulakmal bt Mohd Sharif), 18 Sep 2018.
3. Chan Yi Hoong, “Formation of nanowire WO_3 for dynamic/electro-chromic window application”, (Supervisor: Assoc. Prof. Zainovia Lockman) 12 Feb 2018.
4. Tuan Nur Izzah bt Tuan Ab Rashid, “Lead zirconate titanate (PZT) doped produced in solid state reaction method” (Supervisor: Assoc. Prof. Dr Hasmaliza Mohamad, co-supervisor: Prof. Zainal Arifin Ahmad) 8 Feb 2018.
5. Maliha Siddiqui, “Effect of Li_2CO_3 addition on the piezoelectric and dielectric properties of $Pb_{0.93}La_{0.02}Sr_{0.05}(Zr_{0.52}Ti_{0.48})O_2$ ceramics”, (Supervisor: Prof. Zainal Arifin Ahmad, Co-supervisor: Dr Shah Rizal Kasim) 17 Jul 2016.
6. Faizal Budiman, “The formation of iron oxide nanowires by thermal oxidation for Cr (VI) removal by adsorption, (Supervisor: Assoc. Prof. Zainovia Lockman) 22 Sep 2015.
7. Syazwani bt Mohd Zaki, “Studies on the effect of Cu incorporation TiO_2 nanotubes arrays for heavy metal removal”, (Supervisor: Assoc. Prof. Srimala Sreekantan) 26 Nov 2013.
8. Nur Syafnaz bt Ridhuan, “Feasibility study of ZnO nanorods for gas sensor application”, (Supervisor: Assoc. Prof. Khairunisak) 29 Jan 2013.

(c) Master (External examiner, Research mode)

1. Lee Wai Hong, “WO₃-loaded TiO₂ nanotubes via electrochemical anodization technique for efficient photocatalytic removal of mercury”, University of Malaya, Malaysia (Supervisor: Dr Lai Chin Wei, Prof. Dr. Sharifah Bee Abd Hamid) 3 Nov 2015.
2. Kalyani Nadarajah, “Fundamental properties of zinc oxide nanostructures and their photovoltaic application”, University Malaya, Malaysia (Supervisor: Dr Chin Yern Chee) 7 June 2014.

(d) PhD (Internal examiner)

1. Hay Mar Aung Kyaw, “Electrophoretic deposition of nanoparticles for quantum dot sensitized solar cell (QDSSC)”, (Supervisor: Assoc. Prof. Dr Khatijah Aisha Yaacob, co-supervisor: Prof. Dr. Ahmad Fauzi), 8 Nov 2019.
2. Noorhashimah binti Mohamad Nor, “Development of iron oxide nanoparticles modified electrodes for glucose biosensor applications”, (Supervisor: Prof. Dr. Khairunisak) 7 Sep 2018.
3. Mohsen Ahmadipour, “Fabrication, characterization and humidity sensing property of radio frequency magnetron sputtered calcium copper titanate (CCTO) thin film”, (Supervisor: Prof. Dr. Zainal Arifin Ahmad) 14 May 2018.
4. Mohd Nizam bin Ishak, “Formation and characterization of CdSe quantum-dot films deposited by electrophoretic deposition for quantum dots sensitised solar cell”, (Supervisor: Dr Khatijah Aisha Yaacob, co-supervisor: Prof. Dr. Ahmad Fauzi) 13 Feb 2018.
5. Mohd Fariz bin AB Rahman, “Dielectric properties modification of CaCu₃Ti₄O₁₂ (CCTO) by various glasses addition for dielectric resonator antenna (DRA) application”, (Supervisor: Prof. Dr. Zainal Arifin Ahmad) 28 Aug 2017.
6. Nyein Nyein, “Characterization of silver modified TiO₂ nanotube arrays from solar cell applications”, (Supervisor: Assoc Prof. Zainovia Lockman) 31 Mar 2017.
7. Quah Hock Jin, “Investigation of RF-Magnetron sputtered Y₂O₃Al₂O₃ 2-dimensional nanostructure on silicon and gallium nitride substrates”, (Supervisor: Assoc Prof. Ir Cheong Kuan Yew) 24 Apr 2014.

(e) PhD (External examiner)

1. Siew Qi Yan, “One-step green hydrothermal synthesis of biocompatible graphene/titanium dioxide nanocomposites: Towards the development of highly sensitive and selective electrochemical immunosensor for dengue diagnosis”, University of Nottingham, Malaysia Campus, 17 Jan 2020.
2. Ibrahim Khalil, “Solar selective performance, opto-dielectric and mechanical characteristics of vacuum fabricated metal nitride thin film coatings”, (Supervisor: Dr Zhong-Tao Jiang) Murdoch University, Perth, Australia, May 2018.
3. Vidhya S.N., “Deposition and characterization of telluride, sulfide and oxide thin films for various technological applications”, Research And Development Centre, Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India, Mar 2018.
4. Gobinathan L, “Synthesis, crystal growth and characterization of hydrochloride, cobalt chloride and barium chloride based glycine complexes”, Anna University, India, Sep 2017.
5. Srinivasan N, “Synthesis, characterization and antimicrobial investigation of pure ZnO and some doped ZnO nanoparticles”, Anna University, India, Oct 2015.

SUPERVISING RESEARCH PROJECTS

(a) Post doctoral

1. Dr. Mohsen Ahmadipour, “Development of metal oxide nanoparticles by direct heating technique”, Oct 2018 – Sep 2020.

(b) Postgraduate (PhD) (Main supervisor)

1. Le Anh Thi, “Synthesis and characterization of ZnO nanorods based nanogenerator grown by localized heating technique”, (2019 -) (co-supervisor: Prof. Ir. Dr Cheong Kuan Yew) (in progress).
2. Chiam Sin Ling, “Ultra rapid direct heating synthesis of MnO₂ nanorods for the efficient degradation of Rhodamine-B”, (2018 -) (co-supervisor: Assoc. Prof. Dr Yeoh Fei Yee) (in progress).
3. May Zin Toe, “Impacts of ZnO electron transport layer on photocurrent enhancement of organic photovoltaic cells”, (2017-) (co-supervisor: Prof. Dr. Atsunori Matsuda, Dr Khatijah Yaacob) (in progress).
4. Siti Nor Qurratu Aini Binti Abd Aziz, “Synthesis and characterization of doped ZnO nanowires” (2015-) (co-supervisor: Assoc. Prof. Dr. Zainovia Lockman) (in progress).
5. Myo Thuya Thein, “Synthesis and characterization of WO_x/ZnO nanocomposites grown on PET fibre for photocatalytic application” (2012-2016). (co-supervisors: Assoc. Prof. Dr. Zainovia Lockman, Prof. Dr. Azizan bin Aziz, Prof. Mitsuru Itoh) (Completed).

(c) Postgraduate (PhD) (Co-supervisor)

1. Alnajati Ibrahim Ali Hameed (student #): Design of a piezoelectric energy harvester for application in flexible systems (2020 -) (main supervisor: DR. Chan Keng Wai) (In progress).
2. Oii Chee Heong (student #): Functionalized of Nanoporous Materials for Urea Adsorption (2015 - 2019) (main supervisor: Assoc. Prof. Dr Yeoh Fei Yee) (Completed).
3. Nelvi Sutanto (student #): Photodegradation performances of low density polyethylene (LDPE) composites loaded with photocatalysts (2015 - 2019) (main supervisor: Prof. Ir. Dr Srimala Sreekantan) (Completed).

(d) Postgraduate (Master, Research mode) (Main supervisor)

1. Ying Yuet Lee, “Synthesis and characterization of semiconductor coupling photocatalyst for inactivation of bacteria”, (2016 - 2018) (co-supervisor: Dr Ong Ming Thong) (Completed).
2. Le Anh Thi, “Reusability of ZnO nanoparticles for organic dyes removal after heavy metal deposition”, (2016 - 2018) (co-supervisor: Prof. Ir Dr. Srimala Skreetan, Assoc. Prof. Dr. Huynh Dai Phu, Prof. Dr. Atsunori Matsuda) (Completed).
3. Siti Nor Qurratu Aini Binti Abd Aziz, “Synthesis and characterization of doped ZnO nanowires” (2011- 2014) (co-supervisor: Assoc. Prof. Dr. Zainovia Lockman) (Completed).
4. Chan Yim Leng, “Synthesis of semiconductor nanomaterials for photocatalytic study”, (2012 - 2014) (co-supervisor: Assoc. Prof. Dr. Srimala Sreekantan) (Completed).

(e) Postgraduate (Master, Research mode) (Co-supervisor)

1. Lim Keemi, “Poly(lactic acid)/holloysite nanotube loaded zinc oxide for UV resistance film applications”, (2017 - 2019) (Supervisor: Prof. Dr. Chow Wen Shyang) (Completed).

(f) Postgraduate (Master, Mixed mode) (Main supervisor)

1. Rabiatul Adawiyah Kamazahruman, "Synthesis and characterization of WO₃ layer grown on PET fiber" (2014- 2015) (co-supervisor: Assoc. Prof. Ir. Dr. Srimala Sreekantan, Dr Ong Ming Thong) (Completed).

(g) Undergraduate (Degree) (Main supervisor)

1. Chan Huan Quan, "Synthesis and characterisation of MnO₂/CNT hybrid particles for photocatalytic activity", (2019/2020) (In progress).
2. Teo Lim Wey, "Synthesis and characterization of CCTO/FMWCNTs hybrid particles", (2019/2020) (In progress).
3. Soo Qian Yee, "Synthesis and characterization of TiO₂ nanotubes grown by direct heating technique", (2018/2019) (Completed).
4. Nurul Syuhada Binti Samsuddin, "Effect of pH on the photocatalytic performance of ZnO particle in removal of Rhodamine B", (2018/2019) (Completed).
5. Wong Chee Leong, "Synthesis and characterization of manganese dioxide nanoparticles via direct heating method", (2017/2018) (Completed).
6. Nik Anis Hafiza Nik Jusoh, "Effect of ZnO seed layer on the growth of ZnO nanorods on Si substrate via solution precipitation method", (2017/2018) (Completed).
7. Soo Sock Kuan, "Synthesis and characterization of metal-couple ZnO nanocomposites with plasmonic effect", (2016/2017) (Completed).
8. Nur Atiqah Binti Saharuddin, "Synthesis and characterization of core-shell semiconductor nanocomposites using sol-gel method", (2016/2017) (Completed).
9. Wong Si Min, "Site specific growth of ZnO nanorods using LPCVD", (2015/2016) (Completed).
10. Low Jiong Xiong, "Synthesis and characterization of manganese oxide nanoparticles for organic dye removal", (2015/2016) (Completed).
11. Maizatul Syima Nur Bt Noraini, "Heavy metals and organic dye removal using ZnO nanoparticles", (2015/2016) (Completed).
12. Muhammad Azim B. Zulkifli, "Identification of defects in silicon wafers using copper deposition technique", (2015/2016) (Completed).
13. Goh Theng Tyng, "Synthesis and characterization of ZnO particles for bacteria inactivation" (co-supervisor: Assoc. Prof. Ir. Dr Srimala, Dr Ong Ming Thong) (2014/2015) (Completed).
14. Chim Jia Ern, "Synthesis of tungsten oxide coated zinc oxide particles and their photocatalytic study in removal of RhB dye", (2014/2015) (Completed).
15. Siti Nur Hajar Bt. Abdul Salim, "Synthesis of green phosphors using solid state reaction for LED application" (2014/2015) (Completed).
16. Chang Chi Hsiung, "Synthesis of phosphor material with long afterglow property using solid state reaction" (2013/2014) (Completed).
17. Aida Fitri Samsuddin, "Photocatalytic study of silver/silver oxide coated zinc oxide nanorods in degradation of RhB dye" (2013/2014) (Completed).
18. Tan Chuan Hwai "Synthesis and characterization of Sr₂MgSi₂O₇:Eu:Dy phosphors" (2012/2013) (Completed).
19. Nurul Najiah binti Ramli, "Synthesis and characterization of ZnO NRs grown on iron wires" (2012/2013) (Completed).
20. Wong Chee Ken, "Effect of YAG phosphor on LEDs' optical performance" (Co-supervisor: Mr. Ng Wai Hoo, SILQ (Malaysia) Sdn. Bhd., Prof. M. Nazarov) (2012/2013) (Completed).
21. Wong Sok Han, "Bias assisted deposition of titanium film on the backside of n-type silicon wafers" (Infineon Malaysia Sdn. Bhd., co-supervisor: Lee Kok Eng, (2011/2012) (Completed).
22. Ong Cheng Shian, Synthesis and characterization of Cu-doped ZnO nanostructures (2011/2012) (Completed).

23. Chan Yim Leng, Synthesis and characterization of ZnO nanostructures via Sol-gel method for photocatalytic study (2011/2012) (Completed).
24. Nur Syafiqah Binti Hussain, Synthesis and characterization of manganese dioxide nanowires (2010/2011) (Completed).
25. Thee Chee Chee, Synthesis and characterization of zinc oxide nanostructures (2010/2011) (Completed).
26. Lee Wen Pei, Control of zinc oxide nanoparticles morphology using solution approach (2010/2011) (Completed).

(h) Undergraduate (Degree) (Co-supervisor)

1. Ngo Jia Yoeng, "Optimizing Mn-TiO₂ particles performance used as filler in LED's encapsulation using Design of Experiment (DOE) and Response Surface Model (RSM), (Main supervisor: Dr Sivakumar A/L Ramakrishnan) (2019/2020) (In progress).
2. Tan Zhi Hui, Assessing optical and photocatalytic properties of metal coupled TiO₂ particles using Design of Experiment (DOE), (Main supervisor: Dr Sivakumar A/L Ramakrishnan) (2018/2019) (Completed)
3. Atiikah binti Ishak, Assessing optical and photocatalytic properties of metal coupled TiO₂ particles, (Main supervisor: Dr Sivakumar A/L Ramakrishnan) (2017/2018)(Completed)

TEACHING SUBJECTS

1. SHE 101/2: Ethnic relationship: 2010, 2011, 2012, 2013, 2014, 2015, 2016
2. EBB 113/3 Engineering Materials: 2010, 2011, 2012
3. EBB 115/2 Introduction to Engineering Materials laboratory (Exp. 3: Porosity and density of materials) : 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019
4. EBB 250/2 Computer methods for engineer: 2010, 2011, 2012, 2013, 2014, 2015, 2016
5. EBB 300/2 Engineering Statistics: 2013, 2014, 2015, 2016, 2017, 2018, 2019
6. EBB 316/3 Corrosion and degradation: 2010, 2011, 2012, 2013, 2014, 2015, 2016
7. EBB 317/2 Materials Processing Laboratory
 - (i) Exp. 8: Cathodic protection: 2010, 2011, 2012
 - (ii) Semiconductor related experiments (open ended) (solders, semiconductor photocatalysts, copper deposition technique): 2013, 2014, 2015, 2016, 2017, 2018
8. EBB 323/3 Semiconductor fabrication technology: 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019
9. EBB 338/3 Process control: 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018
10. EBB 522/3 Corrosion and prevention: 2017, 2018, 2019

MEMBER OF PROFESSIONAL BODY

1. Professional Technologist of Malaysia Board of Technologist (Membership #: PT18050222) (2018 -)
2. Graduate Technologist of Malaysia Board of Technologist (Membership #: GT18051617) (2018 -)
3. Professional Engineer of Board of Engineer Malaysia (Membership #: 18347) (2017 -)
4. Member of the Institution of Mechanical Engineers (Chartered Engineer) (Membership #: 80179207) (2013 – 2019).
5. Graduate member of Board of Engineer Malaysia (2010 –)
6. Member of Nanotechnology Malaysia Association (2011/2012)
7. Student member of Electrochemical Society (2009/2010)

EDITORS

1. Editorial board, *Enjinier*, Bulletin for the SMMRE (2016-2018).
2. Editors: S.Y. Pung, M. Jaafar, Z. Hussain, Programme book and Abstract book of International Conference of Global Network for Innovative Technology (IGNITE 2016) Penang, Malaysia (27-29 Jan 2016).
3. Editorial board, *Enjinier*, Bulletin for the SMMRE (2013-2015)
4. Guest Editors: R. Othman, N. Baharun, S.Y. Pung, “Frontier in Materials and Mineral Engineering”, *Advanced Materials Research*, Vol. 858 (2014).
5. Editors: R. Othman, N. Baharun, S.Y. Pung, Conference proceeding of The 5th Regional Conference on Materials Engineering and the 5th Regional Conference on Natural Resources and Materials 2013 (RCM5 & RCNRM5), Penang, Malaysia (21-23 Jan 2013).
6. Editors: Z.A. Ahmad, Z. Lockman, K.A. Razak, S.Y. Pung, N.S. Abdullah, S.R. Kasim, M.A. Sulaiman, A.Z.A. Azhar, A.R. Jamaludin, W.F.F Wan Ali, M.F.A. Rahman, M.J. Abu, S.A.S Salim, N. Mazuki, 2012, Programme & Proceeding Book International Conference on X-Rays and Related Techniques in Research and Industry 2012 (ICXRI 2012).

SERVICES TO SOCIETY

1. Session chair of 28th Scientific Conference of the Microscopy Society Malaysia (28th SCMSM 2019), Kuantan, Pahang, Malaysia, (18-20 Dec 2016).
2. Committee member, 2nd International Conference on Mechanical, Electrical and Material Application (MEMA2019), Xi'an, China (25-27 Oct 2019).
3. Committee member (Promotion), NACE Corrosion Camp 2019, organized by USM NACE Student Chapter, School of Materials and Mineral Resources Engineering, USM, Penang, Malaysia (20-22 Sep 2019).
4. Scientific Committee of International Conference on Nanotechnology: Fundamentals and Applications 2019 (ICNFA'19), Lisbon, Portugal (18-20 Aug 2019).
5. Technical Committee of 9th International Conference on Key Engineering Materials (ICKEM 2019), University of Oxford, United Kingdom (29 Mar – 1 Apr 2019).
6. Organizing Committee, Cathodic Protection Training UTHM, School of Materials and Mineral Resources Engineering, USM, Penang, Malaysia (3-4 Dec 2018).
7. Scientific Committee of International Conference on Nanotechnology: Fundamentals and Applications 2018 (ICNFA'18), Marid, Spain (19-21 Aug 2018).
8. Technical Committee of 3rd International Conference on Advanced Functional Materials (ICAFM 2018), San Francisco, United States (3-5 Aug 2018).
9. Technical Programme Committee of 5th Annual International Conference on Materials Science, Metal & Manufacturing (M3 2018) Singapore (12 - 13 March 2018).
10. Co-advisor, NACE Corrosion Camp 2018, organized by USM NACE Student Chapter, School of Materials and Mineral Resources Engineering, USM, Penang, Malaysia (23-25 Jan 2018).
11. Advisor, USM NACE Student Chapter, School of Materials and Mineral Resources Engineering, USM, Penang, Malaysia, 2015/2016, 2016/2017, 2017/2018.
12. Session chair of the Regional Conference on Materials and ASEAN Microscopy Conference 2017 (RCM & AMC 17), Penang, Malaysia (12-13 Dec 2017).
13. Transport and Logistic Committee of Regional Conference on Materials and ASEAN Microscopy Conference 2017 (RCM & AMC 17), Penang, Malaysia (12-13 Dec 2017).
14. Scientific Committee of International Conference on Nanotechnology: Fundamentals and Applications 2017 (ICNFA'17), Rome, Italy (7-8 June 2017).
15. Session chair of the Advances in Materials and Processing Technologies Conference 2016 (AMPT 2016), Kuala Lumpur, Malaysia (8-11th November 2016).
16. Scientific Committee of International Conference on Nanotechnology: Fundamentals and Applications 2016 (ICNFA'16), Budapest, Hungary (Aug 2016).

17. Scientific Committee of the 2016 International Conference on Research Progress of Material Science and Engineering (RPMSE 2016), Guangzhou, China (Aug 2016).
18. Visit to Permatang Tinggi Old Folk Home (Penang), School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Penang, Malaysia (2 Feb 2016).
19. Poster judge of the International Conference of Global Network for Innovative Technology (IGNITE 2016) Penang, Malaysia (27-29 Jan 2016).
20. Session chair of the International Conference of Global Network for Innovative Technology (IGNITE 2016) Penang, Malaysia (27-29 Jan 2016).
21. Co-Chairman of International Conference of Global Network for Innovative Technology (IGNITE 2016) Penang, Malaysia (27-29 Jan 2016).
22. Scientific Committee of International Conference on Nanotechnology: Fundamentals and Applications 2015 (ICNFA'15), Barcelona, Spain (Jul. 2015).
23. Facilitator, Short course on “One dimensional materials towards a new dimension of nanotechnology world”, NanoMIG, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Penang, Malaysia (22-24 Apr 2015).
24. Treasurer, Short course on “One dimensional materials towards a new dimension of nanotechnology world”, NanoMIG, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Penang, Malaysia (22-24 Apr 2015).
25. Judge, “Encouraging science education through innovative science camps”, NanoMig, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Penang, Malaysia (26 Sep. 2014).
26. Organizing committees, “Encouraging science education through innovative science camps”, NanoMig, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, Penang, Malaysia (Oct. 2014).
27. Reviewer of International Conference on X-Rays & Related Techniques & Industry 2014 (ICXRI 2014), Johor Bahru, Malaysia (11-13 August 2014).
28. Session chair of the 4th International Conference on Environmental Pollution and Remediation (ICEPR 2014), Prague, Czech Republic (11-13 August 2014).
29. Organizing committees (Conference website) of 3rd International Conference On The Advancement Of Materials and Nanotechnology 2013 (ICAMN III 2013), Penang, Malaysia (19-22 Nov 2013).
30. Session Chair of 3rd International Conference On The Advancement Of Materials and Nanotechnology 2013 (ICAMN III 2013), Penang, Malaysia (19-22 Nov 2013).
31. Organizing committees, Mini Symposium USM-NUT (Nagaoka University Technology), Universiti Sains Malaysia, Penang, Malaysia (21-22 Oct. 2013).
32. Treasurer, Young Persons' Lecture Competition (USM level) (May 2013).
33. Technical and Organizing committee, International Conference on Advanced Material Engineering & Technology 2013 (ICAMET 2013), Penang, Malaysia.
34. Member of 2013 National Science Challenge Young Scientist Network – Academic of Science Malaysia (YSN-ASM) Question Committee, Feb 2013.
35. Organizing committees (Scientific section) of The 5th Regional Conferences on Materials Engineering (RCM-5) and Natural Minerals & Materials (RCNMM-5), Penang, Malaysia (21-23 Jan 2013).
36. Technical and Organizing committee, International Conference on Advanced Material Engineering & Technology 2012 (ICAMET 2012), Penang, Malaysia.
37. Treasurer of workshop “Nanostructures & Nanomaterials; synthesis, properties and application” (5-6 July 2012), School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
38. Panel of judges, poster presentation of International Conference on X-ray and related techniques (ICXRI) 2012, Penang, Malaysia (3-5 Jul 2012).
39. Session chairman of International Conference on X-ray and related techniques (ICXRI) 2012, Penang, Malaysia (3-5 Jul 2012).
40. Committee (scientific) of International Conference on X-ray and related techniques (ICXRI) 2012, Penang, Malaysia (3-5 Jul 2012).

41. Treasurer of NanoMig workshop on: “Nanotechnology: Through old-school approach Part II, Break the barriers: Micro to Nano world”, Universiti Sains Malaysia, Penang, Malaysia (14-16 Feb 2012).
42. Treasurer of Joint Research Seminar between USM-NUT (Nagaoka University Technology), Universiti Sains Malaysia, Penang, Malaysia (17 Oct. 2011).
43. Committee of Young Persons' Lecture Competition (National level) (Mar 2011).
44. Committee of Young Persons' Lecture Competition (USM level) (Mar 2011).

SERVICES TO USM

1. MSc Mix-mode research proposal evaluation panel, SMMRE (22 Jan 2020).
2. Chair of viva session, MSc, Muhamad Sharafee Shamsudin, “Thin adsorbent coating for the removal of contaminant of emerging concern”, Chemical Engineering (7 Nov 2019).
3. Judge, Industry training poster presentation (3rd students, Materials Programme) SMMRE (23 Oct 2017).
4. Chair of viva session, MSc, Lim Yong Liang, “An improved wavelet methods with Discrete Cosine Transform for PAPR reduction in OFDM systems”, Electronic and Electrical Engineering (8 Oct 2019).
5. Chemical safety officer (Materials Programme), SMMRE (2019/2021).
6. Chair of viva session, MSc, Julianiza Binti Ariffin, Characterization Of Quaternary Deposits In Seberang Perai Selatan, Pulau Pinang Using Combined Shear Wave Velocity (Vs) With Cpt, Civil engineering (8 Apr 2019).
7. Committee member of OSHA, SMMRE (2019/2021).
8. MSc Mix-mode research proposal evaluation panel, SMMRE (25 Feb 2019).
9. Member of Higher Degree and Research Committee, School of Materials and Mineral Resources Engineering (2019/2020).
10. Head and Quality Manager of Materials Testing Laboratory, ISO/IEC 17025 Committee, School of Materials and Mineral Resources Engineering (2019/2020).
11. Examiner for Assessment form and COSHH form of final year project, SMMRE, Nov 2018.
12. Assisted school in obtaining accredited status for MS ISO/IEC 17025:2005, acted as Head, Quality Manager and Signatory of Materials Testing Laboratory, School of Materials and Mineral Resources Engineering, 26 Nov 2018.
13. As representative of SMMRE to attend 56th convocation USM (Main Campus, 25 Oct 2018).
14. Judge, Industry training poster presentation (3rd students, Materials Programme) SMMRE (3 Oct 2018).
15. Materials Engineering Programme representative, COSHH form inspection (FYP) (29 Nov 2017, SMMRE).
16. Judge, Industry training poster presentation (3rd students, Materials Programme) SMMRE (4 Oct 2017).
17. MSc Mix-mode research proposal evaluation panel, SMMRE (8 Mac 2017).
18. As representative of SMMRE to attend 54th convocation USM (Main Campus, 27 Oct 2016).
19. USM representative for AUN/SEED-Net's Promotional Visit to Cambodia, Laos, Myanmar and Vietnam (CLMV), 7-10 Sep 2016.
20. Member of Engineering Accreditation Council (EAC) Committee, School of Materials and Mineral Resources Engineering (2016/2018).
21. Chairman and Quality Manager, ISO/IEC 17025 Committee, School of Materials and Mineral Resources Engineering (2016/2018).
22. Scientific Advisory Committee of Science and Engineering Research Centre (SERC), Engineering Campus, USM (2016).
23. Panel of judges, Industrial Training Poster Presentation, SMMRE, USM (7 Oct 2015).
24. Treasurer, Quality day of School of Materials and Mineral Resources Engineering, USM, (12 Sep 2015).

25. As representative of SMMRE to attend Majlis Sambutan Siswa, Engineering Campus (3 Sep 2015).
26. Treasurer, Sports and Recreation Club of School of Materials and Mineral Resources Engineering, USM, (1 Apr 2015 – 31 Mar 2017).
27. Representative of SMMRE to attend “The 3rd AUN/SEED-net Working Group Meeting”, Bangkok, Thailand (9-10 Jul 2015).
28. Interviewer of Mock Job Interview organized by USM Engineering Campus as pre-event for Career Fair 2015 (11 Mar 2015, PUMA Hall, USM Engineering Campus).
29. MSc Mix-mode research proposal evaluation panel, SMMRE USM (25 Feb 2015).
30. Panel of judges, USM Staffs Day 2014, (15 Nov 2014).
31. Panel of judges, Industrial Training Poster Presentation, SMMRE, USM (15 Oct 2014).
32. Committee member of Engineering Accreditation Council (EAC) for SMMRE (2014/2015).
33. Committee of Self-Assessment Report for Engineering Accreditation Council (EAC), SMMRE (2014/2015).
34. Interviewer of Mock Interview organized by USM Engineering Campus as pre-event for Career Fair 2014 (12 Mar 2014, PUMA Hall, USM Engineering Campus).
35. Committee of Final Year Project, SMMRE (2013-2015).
36. Panel of judges, Industrial Training Poster Presentation, SMMRE, (25 Sep 2013).
37. Chemical safety officer, SMMRE, 2013/2014.
38. Committee of Self-Assessment Report for Engineering Accreditation Council (EAC), SMMRE (Mar-Apr 2012).
39. Committee of Energy Usage Management, SMMRE (2012)
40. Group leader of zone 2 safety officer, OSHA Committee, SMMRE (2011/2012).
41. Committee of Alumni for Celebration of 25th Anniversary of School of Materials and Mineral Resources Engineering (2011).
42. Committee of ICT for Celebration of 25th Anniversary of School of Materials and Mineral Resources Engineering (2011).
43. Deputy Quality Manager of ISO/IEC 17025 Committee, School of Materials and Mineral Resources Engineering (2010/2011).
44. Committee of OSHA, School of Materials and Mineral Resources Engineering (2010/2011).
45. Committee of Publicity Kit Preparation, School of Materials and Mineral Resources Engineering (2010/2011).

EXHIBITION

1. Students Innovation Showcase in conjunction with Career Fair 2016, product titled: “Visible light responsive metal oxide photocatalyst for organic compounds removal”, Siti Nor Qurratu Aini Binti Abd Aziz, Pung Swee Yong, Engineering Campus, Universiti Sains Malaysia, 16 Mac 2016.
2. Inventor 2015 organized by Ministry of Higher Education, Malaysia, product entitled: “Sunlight activated metal oxide photocatalysts for organic pollutant removal”, Siti Nor Pung Swee Yong, Qurratu Aini Binti Abd Aziz, Myo Thuya Thien, Srimala Skreetan and Chan Yim Leng, Kuala Lumpur Conventional Centre, Kuala Lumpur, 4-6 Dec 2015.

AWARDS

1. Anugerah Kualiti 2018, Universiti Sains Malaysia (on behalf of Materials Testing Laboratory, obtained MS ISO/IEC 17025 accredited status) (22 Sep 2019).
2. Hadiah Sanjung 2018, Universiti Sains Malaysia (Journal: Antibacterial activity of WO_x nanoparticles against Gram-positive bacteria and Gram-negative bacteria”, *Journal of Industrial and Engineering Chemistry*, 67 (2018) 437-447, Corresponding author) (22 Sep 2019).
3. Recognition award: Publication, SMMRE 2017/2018, 15 Dec 2018.

4. Best Ad-hoc Committee (MS ISO/IEC 17025) of SMMRE 2017/2018, 15 Dec 2018.
5. Sanggar Sanjung 2017, Universiti Sains Malaysia (Journal: Highly UV light driven WO_x/ZnO nanocomposites synthesized by liquid impregnation method”, *Journal of Industrial and Engineering Chemistry*, 46 (2017) 119-129, Corresponding author) (22 Oct 2018).
6. Sanggar Sanjung 2016, Universiti Sains Malaysia (Journal: Effect of cetyl trimethyl ammonium bromide concentration on structure, morphology and carbon dioxide adsorption capacity of calcium hydroxide based sorbents”, *Applied Surface Science* 363 (2016) 586–592, co-author).
7. Recipient of Excellent service award of USM 2016 (10 Apr 2017).
8. Bronze medal under category of Agriculture, Aquaculture and Environmental, Inventor 2015, “Sunlight activated metal oxide photocatalysts for organic pollutant removal”, Kuala Lumpur Conventional Centre, Malaysia 4-6 Dec 2015.
9. Research proposal entitled “Wastewater purifier driven by sunlight” is selected as Top 53 Proposals in the Green and Sustainable Chemistry Challenge organized by Elsevier 2015 (Total research proposal 495) One-year free access to Knowel data base system was given by Elsevier.
10. “Outstanding Reviewer” awarded by “Materials Science in Semiconductor Processing”, Elsevier, 2014.
11. 9th International Materials Technology Conference and Exhibition (IMTCE 2014) Green Materials Award entitled “Solar Photocatalytic Waste Water Purifier” Category: Development of Green Materials / Others, PWTC, Kuala Lumpur (14 May 2014).
12. “Recognized Reviewer” awarded by “Materials Science in Semiconductor Processing”, Elsevier, 2013.
13. Best poster presentation, “Synthesis and characterization of Cu-doped of ZnO nanorods”, The 3rd ISESCO International Workshop and Conference on Nanotechnology (IWCN 2012), Kuala Lumpur, Malaysia (5-7 Dec 2012).
14. Travel grant (TPLN) 2012, Universiti Sains Malaysia to attend 2012 International Conference on Applied Materials & Electronics Engineering (AMEE 2012) at Hong Kong, 18-19 Jan 2012.
15. Travel grant (TPLN) 2011, Universiti Sains Malaysia to attend 3rd International Workshop on Nanotechnology & Application 2011 (IWNA 2011) at Vung Tau, Vietnam, 10-12 Nov 2011.
16. Hadiah Sanjungan 2010, Universiti Sains Malaysia (Journal: Tip-growth mode and base-growth mode of Au-catalysed ZnO NWs using CVD technique, *J. Crys. Growth*)
17. Hadiah Sanjungan 2010, Universiti Sains Malaysia (Journal: Structural and IR properties of ZnO film and nanowires, *J. Crys. Growth*)
18. Travel grant from Fuel and Power Technology Research Division, Faculty of Engineering, University of Nottingham, to attend 2009 NSTI Nanotechnology Conference and Trade Show, Houston, USA (2009) [University of Nottingham].
19. Travel grant to attend 3rd European XFEL Users’ meeting, Hamburg, Germany (2009) [XFEL].
20. 2nd prize, “ZnO garden: flowers & grass”, Wolfson Micrograph Competition 2007 [University of Nottingham].
21. University Research Studentship (2006/2009) [University of Nottingham].
22. Academic Staff Training Fellowship (2006/2009) [Universiti Sains Malaysia].
23. Potential Student Award of School of Material Engineering and Mineral Resources Engineering (1996/1997) [Universiti Sains Malaysia].