

PERSONAL DETAILS

Name Siti Salwa Binti Alias
Department Department of Physics, Faculty of Science
University Universiti Teknologi Malaysia, 81030, Skudai, Johor.
Tel. Number +6013-9985597
E-mail Address siti.salwa@utm.my | ssalias86@gmail.com



ACADEMIC QUALIFICATION

- 2017-2019: Postdoctoral (Materials Engineering), Advanced Manufacturing and Materials Centre, Universiti Tun Hussein Onn Malaysia (UTHM)
Title Project:
“Antifouling Enhancement of Biosynthesized Membrane for Water Separation”
- 2012-2016: Ph.D. (Materials Engineering), School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia (USM).
Thesis Title:
“Preparation and Characterization of Porous Chitosan Membrane Soaked in Ammonium Acetate Electrolyte for Proton Batteries”
- 2008-2011: M.Sc. (Materials Engineering), School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia, (USM).
Thesis Title:
“Synthesis Gel Polymer Electrolyte and Zinc Oxide for Photoelectrochemical Cell”
- 2005-2008: B. Appl. Sc. (Physics Electronics & Instrumentations), Physics Department, Universiti Malaysia Terengganu (UMT).
Final Year Project Title:
“Designing of Water Level Sensor and Its Monitoring System”

EXPERIENCES

- 23 Apr–13 July 2007: Industrial Training, Quality Assurance and Reliability Department (ST Microelectronics Sdn. Bhd.)
Training Project:
Design water level sensor in HERAEUS HC4033 Climatic Chamber.
Achievement:
Award for Best Quality Suggestion-2008 ST Microelectronics Sdn. Bhd.
- 1 Nov 2008–31 Jan 2009: Research Assistant, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
Research title:
Electrochemical Properties of Zinc–Air Battery Based on Hydroponic Gel.
- 1 Feb–30 Apr 2009: Research Assistant, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.

- 13 July–23 Oct 2009: Research title:
Development of Porous Zinc Alloy Anode for Rechargeable Zinc–Air Batteries.
Laboratory Demonstrator, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
Lab:
EBB 325/2 (Microscopy Laboratory)
Title of Experiment:
Quantitative Metallography.
- 28 Dec 2009–17 Apr 2010: Laboratory Demonstrator, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
Lab:
EBB 317/2 (Materials Processing Laboratory)
Title of Experiment:
Weldability Test.
- 1 Mar–31 May 2011: Research Assistant, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
Research title:
Oxygen Consumption in Gel Polymer Electrolyte Based Alkaline Fuel Cells.
- 1 June–30 Nov 2011: Research Assistant, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
Research title:
Development of Sn–9Zn–Based Solder Alloy With High Corrosion Resistance to Alkaline Electrolyte.
- 1 Dec 2011–29 Feb 2012: Research Assistant, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
Research title:
Air–Cathode as Cathode Electrode in Synthesis of Oxide Film.
- 1 Jan 2013–31 Dec 2015: Editorial Office of International Journal of Electroactive Materials (e-ISSN: 2289-8360)
- 1 June–31 Aug 2015: Research Assistant, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
Research title:
Improvement of Mechanical Properties and Corrosion Resistance of Sn–Ag–Cu Solder by TiO₂ Nanoparticles.
- 18 June 2017–17 June 2019 Postdoctoral, Advanced Manufacturing and Materials Centre, Universiti Tun Hussein Onn Malaysia (UTHM)
- 2017–Now Advisory Board of International Journal of Electroactive Materials (e-ISSN: 2289-8360)

AREA OF EXPERTISE

Polymer Electrolyte, Batteries, Metal Oxide, Photoelectrochemical Cell, Membrane for separation, Photocatalysis

ACADEMIC AWARDS

Persada Kencana Award, Publication Category, 2009, 2010, 2012, 2016 and 2018 (Universiti Sains Malaysia).

PUBLICATIONS

Google Scholar: https://scholar.google.com.sg/citations?user=s_vG-MAAAAJ&hl=en

Books

Siti Salwa Alias and Ahmad Azmin Mohamad, Synthesis of Zinc Oxide by Sol–Gel Method for Photoelectrochemical Cells, SpringerBrief, Springer (2014).

Referred Papers

1. C.K. Yap, W.C. Tan, S.S. Alias, A.A. Mohamad, *Synthesis of zinc oxide by zinc–air system*, Journal of Alloys and Compounds, 484 (2009) 934-938.
2. S.S. Alias, A.B. Ismail, A.A. Mohamad, *Effect of pH on ZnO nanoparticle properties synthesized by sol–gel centrifugation*, Journal of Alloys and Compounds, 499 (2010) 231-237.
3. A.L. Tan, L.J. Khoo, S.S. Alias, A.A. Mohamad, *ZnO nanoparticles and poly (acrylic) acid-based polymer gel electrolyte for photo electrochemical cell*, Journal of Sol-Gel Science and Technology, 64 (2012) 184-192.
4. W.C. Tan, S.S. Alias, A.B. Ismail, A.A. Mohamad, *Effect of styrene–acrylonitrile content on 0.5 M NaI/0.05 M I₂ liquid electrolyte encapsulation for dye-sensitized solar cells*, Journal of Solid State Electrochemistry, 16 (2012) 2103-2112.
5. S.S. Alias, A.A. Mohamad, *Effect of NH₄I and I₂ concentration on agar gel polymer electrolyte properties for a dye-sensitized solar cell*, Ionics, 19 (2013) 1185-1194.
6. S.S. Alias, Z.M. Ariff, A.A. Mohamad, *Porous membrane based on chitosan–SiO₂ for coin cell proton battery*, Ceramics International, 41 (2015) 5484-5491.
7. S.S. Alias, Z.M. Ariff, A.A. Mohamad, *Morphology, Structural and Electrochemical Properties of Porous Chitosan Membrane*, International Journal of Electroactive Materials, 3 (2015) 33-37.
8. S.S. Alias, Z.M. Ariff, A.A. Mohamad, *Characterization and Performance of Porous Chitosan Membrane for Proton Batteries*, International Journal of Electroactive Materials, 4 (2016) 33-38.
9. S.S. Alias, S.M. Chee, A.A. Mohamad, *Chitosan–ammonium acetate–ethylene carbonate membrane for proton batteries*, Arabian Journal of Chemistry, 10 (2017) S3687-S3698.
10. S.S. Alias, Z. Harun, I.S.A. Latif, *Characterization and performance of porous photocatalytic ceramic membranes coated with TiO₂ via different dip-coating routes*, Journal of Materials Science, 53 (2018) 11534-11552.
11. K.N. Yusof, S. S. Alias, Z. Harun, H. Basri, F. H. Azhar, *Parkia speciosa as Reduction Agent in Green Synthesis Silver Nanoparticles*, ChemistrySelect, 3 (2018) 8881-8885.
12. S.S. Alias, Z. Harun, M.F. Shohur, *Effect of monovalent and divalent ions in non-solvent coagulation bath-induced phase inversion on the characterization of a porous polysulfone membrane*, Polymer Bulletin, (2019) 1-23.
13. S.S. Alias, Z. Harun, N.F. Ismail, *Microstructure and physical characterization of alumina-sintered body via hot isostatic pressing*, Journal of the Australian Ceramic Society, (2019) 1-7.
14. S.S. Alias, Z. Harun, F. H. Azhar, K. N. Yusof, M. R. Jamalludin, S. K. Hubadillah, S. N. Basri, M. A. Al-Harathi, *Enhancing the performance of a hybrid porous polysulfone membrane impregnated with green Ag/AgO additives derived from the Parkia speciosa*, Vacuum, 163 (2019) 301-311.
15. R. A. R. Ahmad, Z. Harun, M. H. D. Othman, H. Basri, M. Z. Yunos, A. Ahmad, S. H. M. Akhair, .I. Q. A. Rashid, F. H. Azhar, S. S. Alias, A. R. Ainuddin, *Biosynthesis of zinc oxide nanoparticles by using fruits extracts of Ananas Comosus and its antibacterial activity*, Malaysian Journal of Fundamental and Applied Sciences, 15 (2019) 268-273.
16. S.S. Alias, Z. Harun, N. H. Kamarudin, *Morphology and Physical Properties of Ceramic Hollow Fiber Membrane: Effect of Different Bore Fluid Flow Rate*, Sains Malaysiana 48, (2019) 1529–1537.
17. S.S. Alias, Z. Harun, N. Manoh, M.R. Jamalludin, *Effects of temperature on rice husk silica ash additive for fouling mitigation by polysulfone–RHS ash mixed-matrix composite membranes*, Polymer Bulletin, (2019) 1-33.
18. S.S. Alias, Z. Harun, F.H. Azhar, S.A. Ibrahim, B. Johar, *Comparison between commercial and synthesised nano*

flower-like rutile TiO_2 immobilised on green super adsorbent towards dye wastewater treatment, *Journal of Cleaner Production* 251 (2020) 119448.

19. S.S. Alias, Z. Harun, S.A. Mansor, *Characterization and performance of rice husk as additive in green ceramic water filter fabricated by slip-casting*, *World Journal of Engineering* (2020).

Selected Proceeding / Seminar

1. W. M. W. Mariam, A. R. Salisa, S. S. Alias, *The Development of Water Level Sensor*, **National Physics Conference (PERFIK)** Kuala Terengganu, Malaysia, 26–28 Dec 2007.
2. Siti Salwa Alias, *Designing of Water Level Sensor and Its Monitoring System*, **National Research & Innovation Competition (NRIC)**, Universiti Sains Malaysia, Pulau Pinang, 2008.
3. S.S. Alias, A.A. Mohamad. *Synthesis of ZnO powder by sol-gel route*, in a Book of Abstracts, **National Workshop on Functional Materials (NWFM)**, Centre of Ionics Materials, Universiti Malaya, 20–21 June 2009.
4. S. S. Alias, A. A. Mohamad. *The gel polymer electrolyte based on agar + NH_4I + I_2 for Photoelectrochemical cell*, **10th National Symposium on Polymeric Materials (NSPM)**, Langkawi, Malaysia, 8–10 Nov 2010.
5. S. S. Alias and A. A. Mohamad, *Improved Potato Batteries*, **International Conference of Young Research on Advanced Materials (ICYRAM 2012)**, Singapore, 1–6 July 2012.
6. S. S. Alias and A. A. Mohamad, *Preparation and Characterization of Porous Chitosan Membrane for Proton Battery*, **International Conference on Materials For Advanced Technologies (ICMAT 2013)**, Singapore, 30 June–5 July 2013.
7. S. S. Alias, Z. M. Ariff, and A. A., Mohamad, *Preparation and Characterization of Porous Silica-Chitosan Membrane for Proton Batteries*, **Asia Pasific Conference on Electrochemical Energy Storage and Conversion (APEnergy)**, Brisbane, Australia, 3–9 Feb 2014.
8. Z. Harun, S. S. Alias, and N. A. Sharkawi, *The Potential of Green Super Adsorbent Embedded with Nano Flower-Like TiO_2 /RGO for Dye Wastewater Treatment*, **The International Conference on Ocean, Engineering Technology and Environmental**, Kuala Terengganu, Malaysia, 5–7 Aug 2019.
9. F. H. Azhar, Z. Harun, S. S. Alias, K. N. Yusof, *Effect of Bio-Silver Nanoparticles (AgNPs) in Polysulfone Mixed Matrix Membranes towards Improving Water Separation*, **International Conference of Sustainable Environmental Technology (ISET2019)**, Johor Bahru, Malaysia, 20–22 Aug 2019.

GRANTS

- | | |
|-----------|---|
| 2012-2014 | Exploratory Research Grant Scheme (ERGS). <i>Investigation of chitosan-SiO_2-NH_4CH_3COO membranes for proton batteries application</i> . RM 139,000 (GRA). |
| 2019-2021 | UTM Encouragement Grant (UTMER). <i>Synthesis and Characterization of ZnO-RGO Embedded with Green Super Adsorbent for Dye Wastewater Treatment</i> . RM 30,000. (Principle Investigator). |
| 2019-2021 | UTM Tier. Structural And Mechanical Properties of Sodium Tantalum Boroaluminosilicate Glass For Solid Oxide Fuel Cells Applications. (Members). |

RESEARCH GROUP

Advanced Optical Materials Research Group (AOMRG), Department of Physics, Faculty of Science, Universiti Teknologi Malaysia, 81030, Skudai, Johor.

JOURNAL REVIEWER

1. Vacuum-Elsevier
2. ChemBioEng Reviews-Wiley
3. International Journal of Electroactive Materials
4. Journal of Chemical Technology & Biotechnology-Wiley

5. Materials Research Express-IOP
6. Journal of Advanced Manufacturing Technology (MyJurnal)
7. Nanoscience and Nanotechnology Letters

TRAINING/WORKSHOP

- 2008 Research Design and Methodology Scientific Writing Workshop, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
- 2009 Occupational Safety and Health Course for Post-Graduate Students, Engineering Campus, Universiti Sains Malaysia.
- 2009 Post-Graduate Seminar Interpersonal Skills, Engineering Campus, Universiti Sains Malaysia.
- 2012 Occupational Safety and Health Course for Post-Graduate Students, Engineering Campus, Universiti Sains Malaysia.
- 2012 Workshop on FTIR Spectroscopy: Application in Polymer Electrolytes, Department of Physics, Faculty of Science, Universiti Malaya.
- 2012 Tabletop SEM and EDS Workshop, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
- 2013 Seminar on X-Ray Diffraction, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
- 2014 Seminar on Materials Characterization by X-Ray Fluorescence and X-Ray Diffraction, School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia.
- 2017 Materials Processing, Inspection, and Testing (Institute of Materials, Malaysia), Universiti Teknologi Malaysia
- 2018 Patent Drafting Course, Registrar Office, Universiti Tun Hussein Onn Malaysia.
- 2018 Writing Book and Management Course, Registrar Office, Universiti Tun Hussein Onn Malaysia.
- 2018 Excellent Thesis Writing Courses and Mandeley Articles Management, Registrar Office, Universiti Tun Hussein Onn Malaysia.
- 2018 Writing Thesis and Scientific Articles Workshop for Postgraduate Students, Universiti Tun Hussein Onn Malaysia (Invited Speaker).
- 2018 Basic Workshop on XRD Fitting and Analysis, Advanced Manufacturing and Materials Centre (AMMC), Institute Integrated Engineering (I2E), Universiti Tun Hussein Onn Malaysia
- 2019 Basic Mandarin Language Class, Academic Development & Training Center, Universiti Tun Hussein Onn Malaysia.
- 2019 Interactive Lecture Course, Academic Development & Training Center, Universiti Tun Hussein Onn Malaysia.
- 2019 Short Course on Membrane Technology (Universiti Teknologi PETRONAS)
- 2019 High Impact Journal Writing Course, Publisher Office, Universiti Tun Hussein Onn Malaysia.
- 2019 Creative Writing Seminar, Universiti Tun Hussein Onn Malaysia.

REFEREES

ASSOC. PROF. DR. AHMAD AZMIN MOHAMAD

School of Materials and Mineral Resources Engineering, Engineering Campus, Universiti Sains Malaysia, 14300 Nibong Tebal, Pulau Pinang, Malaysia.

Email: aam@usm.my

Tel: 04-5996118

Fax : 04-5941011

DR. MUHAMMAD FIRDAUS NAZERI

School of Materials Engineering, Kompleks Pusat Pengajian Jejawi 2, Universiti Malaysia Perlis, Taman Muhibbah, 02600 Jejawi, Arau, Perlis, Malaysia

Email: firdausnazeri@unimap.edu.my

Tel: 04-979 8154 / 8193

Fax: 04-979 8178