

CURRICULUM VITAE



MOHAMAD SYAZARUDIN BIN MD SAID

Department of Chemical & Environmental Engineering,
Faculty of Engineering,
Universiti Putra Malaysia,
43400 UPM Serdang, Selangor

syazarudin@upm.edu.my
syazarudin.said@yahoo.com

Education

1. PhD Chemical Engineering, 2018, University of Sheffield, United Kingdom.
Thesis title: Experimental Study and Numerical Modelling of Lithium-ion Battery Thermal Runaway Behaviour
2. BE (Hons) Chemical and Materials Engineering, 2012, University of Auckland, New Zealand.

Areas of Interest

Hazard quantification, combustion, lithium-ion battery

Professional Qualification / Membership / Affiliation

1. Graduate Member, Board of Engineers Malaysia (BEM)

Appointments

Position	Duration
1. English Editor, Committee of Media and Publicity, Faculty of Engineering, UPM	1 November 2021 – present
2. Advisor, Committee of Occupational Safety and Health, Faculty of Engineering, UPM	1 January 2021 – present
3. Committee of Technical Assessment for Tender and Quotation	1 July 2020 – present
4. Committee of Technical and Specification for Tender and Quotation Procurement	1 July 2019 – present
5. Acting, Department Safety Officer, Department of Chemical & Environmental Engineering, Faculty of Engineering, UPM	1 January 2020 – present
6. Development Coordinator II, Department of Chemical & Environmental Engineering, Faculty of Engineering, UPM	1 January 2020 – present
7. Development Coordinator, Department of Chemical & Environmental Engineering, Faculty of Engineering, UPM	September 2019 to 31 December 2019
8. Research Associate, Sustainable Process Engineering, Research Centre, UPM	1 January 2019 – present
9. Lecturer, Department of Chemical & Environmental Engineering, Faculty of Engineering, UPM	October 2018 to date
10. Research Assistant, Department of Chemical and Biological Engineering, University of Sheffield	October 2017 to November 2017

- | | |
|---|--------------------------------|
| 11. Junior Academic, Department of Chemical & Environmental Engineering, Faculty of Engineering, UPM | April 2014 to March 2018 |
| 12. Tutor, Somali Community and Culture Centre, Sheffield, United Kingdom | March 2016 to July 2017 |
| 13. Teaching Assistant, Department of Chemical & Environmental Engineering, Faculty of Engineering, UPM | February 2013 to February 2014 |

Publications

Journals

1. Mohammad Afif Abdul Aziz, **Mohamad Syazarudin Md Said**. ALARP demonstration in management of change using quantitative Bowtie analysis risk assessment tool for an offshore gas platform. Process Safety Progress 2023.
2. **Mohamad Syazarudin Md Said** and Mohd Zahirasri Mohd Tohir. Visual and Thermal Imaging of Lithium-Ion Battery Thermal Runaway Induced by Mechanical Impact. Journal of Loss Prevention in the Process Industries 2022, 104854.
3. Mohd Rashid Ramali, Nur Aliah Fatin Mohd Nizam Ong, **Mohamad Syazarudin Md Said**, Hamdan Mohamed Yusoff, Mohd Rafee Baharudin, Ahmad Faiz Tharima, Farid Wajdi Akashah & Mohd Zahirasri Mohd Tohir. A Review on Safety Practices for Firefighters During Photovoltaic (PV) Fire. Fire Technology 2022.
4. Nur Aliah Fatin Mohd Nizam Ong, Mohd Zahirasri Mohd Tohir, Mays Mahmood Mutlak, Muhammad Adnan Sadiq, Rozita Omar, **Mohamad Syazarudin Md Said**. BowTie Analysis of Rooftop Grid-Connected Photovoltaic Systems. Process Safety Progress 2022, e12338.
5. Khoo Kar Hoo, **Mohamad Syazarudin Md Said**. Simulation of air gasification of Napier grass using Aspen Plus. Sustainable Energy Technologies and Assessments 2022, 101837.
6. Nur Aliah Fatin Mohd Nizam Ong, Mohd Zahirasri Mohd Tohir, **Mohamad Syazarudin Md Said**, Mohammad Shakir Nasif, Aidi Hizami Alias, Mohd Rashid Ramali. Development of fire safety best practices for rooftops grid-connected photovoltaic (PV) systems installation using systematic review methodology. Sustainable Cities and Society 2022, 103637.
7. Nur Aliah Fatin Mohd Nizam Ong, Muhammad Adnan Sadiq, **Mohamad Syazarudin Md Said**, Grunde Jomaas, Mohd Zahirasri Mohd Tohir, Jens Steemann Kristensen. Fault Tree Analysis of Fires on Rooftops with Photovoltaic Systems. Journal of Building Engineering 2022, 103752.
8. **Mohamad Syazarudin Md Said**, Atiyyah Ameenah Azni, Wan Azlina Wan Abdul Karim Ghani, Azni Idris, Mohamad Fakri Zaky Ja'afar, Mohamad Amran Mohd Salleh. Production of biochar from microwave pyrolysis of empty fruit bunch in an alumina susceptor. Energy 2022, 122710.
9. Hamdan Mohamed Yusoff, Lau Kia Li, Shamsul Izhar Siajam, **Mohamad Syazarudin Md Said**. Simulation of acetone-water explosion in hydrothermal extraction reactor. Case Studies in Thermal Engineering 2021, 101631.
10. Xiaoju Li, Luqman Chuah Abdullah, Shafreeza Sobri, **Mohamad Syazarudin Md Said**, Siti Aslina Hussain and Tan Poh Aun. Overview of Air Pollution in Typical Basin of China Under the Target of Carbon Neutrality. International Journal of Environmental Research 2021.
11. **Mohamad Syazarudin Md Said** and Mohd Zahirasri Mohd Tohir. Characterisation of thermal runaway behaviour of cylindrical lithium-ion battery using Accelerating Rate Calorimeter and oven heating. Case Studies in Thermal Engineering 2021, 28, 101474.
12. Khoo Kar Hoo and **Mohamad Syazarudin Md Said**. Air gasification of empty fruit bunch: An Aspen Plus model. Bioresource Technology Reports 2021, 16, 100848.

13. Caleb Michealangelo Gian, Mohd Zahirasri Mohd Tohir, **Mohamad Syazarudin Md Said**, Ahmad Faiz Tharima, Nur Aliah Fatin Mohd Nizam Ong, Mohd Rashid Ramali. Effectiveness of travel time during evacuation in high-rise residential buildings: a case study in Selangor, Malaysia. *International Journal of Emergency Services*, 2021.
14. Xiaoju Li, Siti Aslina Hussain, Shafreeza Sobri and **Mohamad Syazarudin Md Said**. Overiewing the air quality models on air pollution in Sichuan Basin, China. *Chemosphere* 2021, 271, 129502.
15. Nadly Aizat Nudri, Wan Azlina Wan Abdul Karim Ghani, Robert Thomas Bachmann, B.T. Hang Tuah Baharudin, Denny K.S.Ng and **Mohamad Syazarudin Md Said**. Co-combustion of oil palm trunk biocoal/sub-bituminous coal fuel blends. *Energy Conversion and Management: X* 2020, 100072.
16. **Mohamad Syazarudin Md Said** and Mohd Zahirasri Mohd Tohir. The effect of ultraviolet coating on containment and fire hazards of phase change materials impregnated wood structure. *Journal of Energy Storage* 2020, 32, 101727.
17. **Mohamad Syazarudin Md Said**, Wan Azlina Wan Abdul Karim Ghani, Tan Hong Boon and Denny Ng Kok Sum. Prediction and optimisation of syngas production from air gasification of Napier grass via stoichiometric equilibrium model. *Energy Conversion and Management: X* 2020, 100057.
18. **Mohamad Syazarudin Md Said** and Mohd Zahirasri Mohd Tohir. Prediction of Lithium-ion Battery Thermal Runaway Propagation for Large Scale Applications Fire Hazard Quantification. *Processes* 2019, 7, 703.
19. Abdul Khalid, N.; Mohd Tohir, M.Z.; **Md Said, M.S.** Consequence Simulation of Jet Fire due to Leakage of Pipelines in a Natural Gas Power Plant in Malaysia. *PERINTIS eJournal* 2019, 9, 1.
20. **Md Said, M.S.**; Wan Abdul Karim Ghani, W.A.; Hong Boon, T.; Hussain, S.A.; Ng, D.K.S. Thermochemical Conversion of Napier Grass for Production of Renewable Syngas. *Processes* 2019, 7, 705.
21. Tajudin, M.A.S.; Tohir, M.Z.M.; and **Said, M.S.M.** Probabilistic assessment of off-the-shelf fire sprinkler Head activation time through laboratory experiments. *IOP Conference Series: Materials Science and Engineering* 2020, 778.
22. Ong Huoy Ying and **Mohamad Syazarudin Md Said**. Perception Study and Evaluation of Process Safety Management Implementation in an Oil Field Services Company. *Journal of Occupational Safety and Health* 2020, 17.

Conference Proceedings

1. Yajue Wu, **Mohamad Syazarudin Md Said** (2016). Thermal Runaway Propagation Model for Vehicle Fires, Seventh International Symposium on Tunnel Safety and Security. Montreal, Canada.
2. Yoganathan Palaniandy, **Mohamad Syazarudin Md Said**, Mohd Halim Shah Ismail, Mohd Yusof Harun and Nor Mariah Adam (2021). Design the Steam Ejector and Identify the Changes in Morphological Characteristics of Excess Steam from Sterilizer Based on CFD Simulation. 14th AUN/SEED-Net Regional Conference on Chemical Engineering 2021 (RCChE2021), Selangor Darul Ehsan, Malaysia.

Academic Talks

1. "Evaluation of Napier Grass as Potential Renewable Energy Resource in Malaysia" presented at 2018 International Conference on the Biomass-Environment-Food-Energy-Water (BEFEW) Nexus, Putrajaya, Malaysia.

Teaching Duty

2018/2019	ECH3115	Energy Balance
2018/2019	ECH5502	Hazard Identification and Risk Assessment
2019/2020	ECH3902	Chemical Engineering Laboratory 1
2019/2020	ECH5502	Hazard Identification and Risk Assessment
2019/2020	ECC3011	Engineering Mathematics 1
2019/2020	ECH3119	Numerical Method and Process Optimisation
2019/2020	ECH3111	Optimisation and Process Simulation
2020/2021	ECC3011	Engineering Mathematics 1
2020/2021	ECH5502	Hazard Identification and Risk Assessment
2020/2021	ECH3115	Energy Balance
2021/2022	ENG3001	Engineering Mathematics 1
2021/2022	ECH5502	Hazard Identification and Risk Assessment
2021/2022	ECH3115	Energy Balance
2022/2023	ENG3001	Engineering Mathematics 1
2022/2023	ECH5517	Consequence Analysis

Research Grants

No.	Project Title	Year	Source of Fund	Role
1.	3-Dimensional Modelling of Peat Thermal Decomposition for Prediction and Hazard Mitigation of Peat Forest Fire Propagation	2020 – 2023	Fundamental Research Grant Scheme, Ministry of Higher Education Malaysia	Leader
2.	Thermal characterization and fire hazard assessment of polyurethane (PU) fire-retardant coating using bamboo aerogel mixtures as additives	2020 - 2021	Matching – Geran Putra	Member
3.	Thermorheological behavior of polyamide blends and composites	2019 - 2021	Matching – Geran Putra	Member
4.	Fire Risk Analysis of Rooftop Photovoltaic (PV) Modules Installed on Building Structures	2020 - 2022	Akaun Amanah Industri Bekalan Elektrik, Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim	Member
5.	Investigation of Crystal Nucleation, Diffusion and Sorption Properties of Isostructural Dual-Linker SOD Zeolitic-Imidazolate Frameworks Crystal	2021 – 2023	Fundamental Research Grant Scheme, Ministry of Higher Education Malaysia	Member

Honours and Awards

1. Silver Award, Putra Innovative Carnival of Teaching and Learning PICTL 2019.
2. Excellent Service Award (2019-2021).
3. Recipient of Ministry of Education Scholarship for PhD study in United Kingdom (2014 – 2017).

4. Recipient of Public Service Department Malaysia Scholarship for undergraduate study in New Zealand (2009 – 2012).
5. Recipient of University of Auckland Summer Research Scholarship (2011).

Students Supervision

PhD (Main Supervisor)

- | | |
|---|----------|
| 1. Yoganathan a/l Palaniandy
(GS56006) | On-going |
|---|----------|

PhD (Co-supervisor)

- | | | |
|---|--|----------|
| 1. Li Xiaojun
(GS56006) | CFD Modelling of Dense Gas Dispersion Over Complex Terrain | On-going |
| 2. Noumeur Abdelmoutaleb | Fire risk assessment of photovoltaic (PV) solar panels installed on building premises | On-going |
| 3. Dayang Nur Sakinah Binti Musa | Smouldering Peat Fire Behaviour and Extinction Mechanism | On-going |
| 4. Nur Aliah Fatin Binti Mohd Nizam Ong | Fire risk analysis of rooftop Photovoltaic (PV) system installation and fire behaviour investigation of PV system components | On-going |
| 5. Muhammad Seif Bin Abdullah | | On-going |
| 6. Iffah Umairah Zulmajdi | | On-going |

MS with thesis (Co-supervisor)

- | | | |
|--|-------------------------|----------|
| 1. Mohd Shahril Kamarudin
(GS55394) | Air Pollution Modelling | On-going |
|--|-------------------------|----------|

MS without thesis (Main supervisor)

- | | | |
|--------------------------------------|--|-----------|
| 1. Ong Huoy Ying
(GS51048) | Evaluation of Process Safety Management Implementation in Oil Field Services Company | Graduated |
| 2. Ammar Khairan Kalil
(GS53052) | Awareness, Attitude & Implementation of Safety Cultures among Students in Teaching and Research Laboratories | Graduated |
| 3. Taha Mohammad Sharif
(GS55908) | Hazard Consequence Analysis of Lithium-Ion Battery Failure | Graduated |

4.	Thien Yee Kiong (GS57954)	H ₂ S Dispersion Modelling: A Guide For Natural Gas Offshore Platform & Onshore Plant	Graduated
5.	Mohammad Afif Abdul Aziz (GS59406)	ALARP Demonstration in Management of Change (MOC) Using Quantitative Bowtie Analysis Risk Assessment Tool for an Offshore Gas Platform	Graduated
6.	Nornadiah Roslan (GS58774)	Evaluation Of Risk Towards Ototoxicity-Noise Induce Hearing Impairment Among Workers At Electronic Manufacturing Plant	Defer

Final year undergraduate projects

1.	Rubini Krishnan	Photocatalytic Properties of Zinc Oxide Bentonite in Removing Amoxicillin	Graduated
2.	Foo Seok Peng	Hydrodeoxygenation of Oleochemical Waste Oil into Paraffins	Graduated
3.	Mohd Saiful Ridzuan	Hazard Consequence Analysis of PV System Fire	Graduated
4.	Mohd Norman Mahdzar	Development of Numerical Modelling for Prediction of Thermal Runaway in PV Cell	Graduated
5.	Khoo Kar Hoo	Development and Validation of Thermodynamic Equilibrium Model for Prediction of Syngas Production from Air Gasification of Napier Grass	Graduated
6.	Mohd Syadid Mohd Hatta	Assessment of Self-Heating and Spontaneous Combustion of Napier Grass Using Thermogravimetric Analysis	Graduated
7.	Muhammad Aliff Ikhmal Zulkafli	Volatility and Flammability of Commercial Vehicle Fuels	Graduated
8.	Yuvaraj Kunalan	Fire Hazard of Solid Biofuel	Graduated
9.	Hesham Sadeq Obaid Qatan	Kinetic Modelling for Prediction of Hydrogen Production	Graduated
10.	Nur Izzah Nadiah Binti Iskandar Syah	Synergistic Effects Of Polymeric Flame Retardants In Phase Change Materials Impregnated Gypsum Wallboard	On-going
11.	Thilagan Goby Krishnan	Fire Hazard of Peat Soil	On-going

Professional Services

Journal Reviewer

No.	Journal	Publisher	Year
1.	Journal of Chemistry	Hindawi	2019
2.	Journal of Science and Technology	Universiti Putra Malaysia	2020
3.	Applied Nanoscience	Springer	2020
4.	Journal of Thermal Analysis and Calorimetry	Springer	2020
5.	Journal of Asian Architecture and Building Engineering	Taylor & Francis Online	2020
6.	High Temperatures-High Pressures	Old City Publishing	2021
7.	Material and Energy Engineering for Sustainable Advancement 2021 (MEESA 2021) Conference	Universiti Malaysia Sabah	2021
8.	International Journal of Hydrogen Energy	Elsevier	2021
9.	UNIVERSITI PUTRA MALAYSIA – KYUSHU INSTITUTE OF TECHNOLOGY INTERNATIONAL SYMPOSIUM ON APPLIED ENGINEERING AND SCIENCES (SAES2021)	Universiti Putra Malaysia and Kyushu Institute of Technology	2021
10.	Biomass Conversion and Biorefinery	Springer	2022
11.	Sustainability (Basel)	Multidisciplinary Digital Publishing Institute (MDPI)	2022
12.	ASM Science Journal	Academy of Sciences Malaysia	2022
13.	International Journal of Energy Research	Wiley	2022
14.	Clean Energy	Oxford Academic	2023

Viva

Master				
No.	Student	Thesis title	Role	Year
1.	Lau Kia Li	Performance Of Amidoxime-Modified Poly(Acrylonitrile-Co-Acrylic Acid) For The Removal Of Boron In Aqueous Solution	Co-chairperson	2019
2.	'atiyyah Ameenah binti Azni	Efb-Derived Biochar From Microwave-Assisted Pyrolysis As Potential Renewable Solid Fuel For Power Generation	Co-chairperson	2020

3.	Nur Atikah binti Ali	Bimetallic Ag-Au Nanoparticles Decorated Reduced Graphene Oxide For Non-Enzymatic Glucose Detection	Co-chairperson	2020
4.	Sanggithapriya Mahandran	Transformation Of Oil Palm Mesocarp Fiber (OPMF) To Convertible Materials In Water At Subcritical State	Co-chairperson	2020
5.	Veknesh Arumugam	EFFECT OF ADDITIVE ORGANISMS IN FOOD WASTE COMPOSTING ON SOIL FERTILITY, NUTRIENT DYNAMICS AND PLANT GROWTH OF CAPSICUM ANNUUM L.	Co-chairperson	2022

PhD				
No.	Student	Thesis title	Role	Year
1.	Nur Hidayah binti Zainan	Production Of Amino Acids From Microalgae Nannochloropsis Sp. Biomass Using Subcritical Water Technology	Co-chairperson	2020
2.	Shiva Rezaei Motlagh	Extraction Of Lipids And Eicosapentaenoic Acid (Epa) From Nannochloropsis Oceanica Biomass Using Ionic Liquids Based Microwave Assisted (II-Mae) Method	Co-chairperson	2020
3.	Nurliyana binti Abdul Raof	Study Of Characteristics Of Polyol Ester For The Use As Transformer Insulating Oil	Co-chairperson	2021
4.	Nuruldiyanah binti Kamarudin	Phenol Formaldehyde Resol Resins With Plant-Based Tannin For Composite Laminate Applications	Co-chairperson	2021
5.	Nur Izzah Nabilah binti Haris	Development Of Oil Palm Empty Fruit Bunch Tablet As Corrosion Inhibitor For Mild Steel Acid Corrosion	Co-chairperson	2021
6.	Sulaiha binti Ali	Fire Performance Assessment of Six Malaysian Wood Species	Co-chairperson	2021
7.	Rose Fadzilah binti Abdullah	Synthesis of Biomass Based Catalysts for Biodiesel Production from Waste Cooking Oil	Co-chairperson	2021

Referees	
Ir. Dr. Shamsul Izhar Siajam Associate Professor, Dept. of Chemical & Environmental Engineering, Faculty of Engineering, UPM. shamizhar@upm.edu.my	Dr. Mohd Amran Mohd Salleh Associate Professor, Dept. of Chemical & Environmental Engineering, Faculty of Engineering, UPM. asalleh@upm.edu.my