Dr. Norazlianie Sazali

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Biography

Dr. Norazlianie earned her first degree from UMP in 2012 in the field of Mechanical Engineering with Manufacturing Engineering. She then pursued a master's degree from UTHM in Mechanical Engineering-Research mode and graduated in 2015. Later, she earned her Doctor of Philosophy in the field on Chemical-Gas engineering from UTM, which her graduated in 2018.

Education Background

2015 – 2018	Doctor of Philosophy *Faculty of Engineering, Universiti Teknologi Malaysia*
2013 – 2015	M.Eng. in Mechanical Engineering *Faculty of Mechanical and Manufacturing Engineering, Universiti Tun Hussein Onn Malaysia*
2008 – 2012	Bachelor's Degree in Mechanical with Manufacturing Engineering *Faculty of Mechanical Engineering, Universiti Malaysia Pahang*

Career/Academic Appointments

2018– present	Senior Lecturer *Faculty of Manufacturing Engineering, Universiti Malaysia Pahang*
2018 – present	Tutor *Faculty of Science and Technology, Open University Malaysia*
2013 - 2018	Assistant Engineer *Universiti Teknologi Malaysia*
2012 - 2013	Quality Engineer *N.K. Rubber (M) Sdn.Bhd.*

Courses Taught

BMM3643	Manufacturing Process
MME6184	Optimization Techniques
BMM3611	Manufacturing Process Laboratory
DMM1523	Material Engineering
DMM3663	CNC Technology
BMM1523	Material Engineering
DMM2633	Manufacturing Technology
BMM2521	Engineering Mechanics Lab 2

DMM1523	Engineering Materials
DMM1911	Mechanical Technology Lab 1

Professional Affiliation

Board of Engineers Malaysia (BEM)	Graduate Engineer (*GE91669A*)
Malaysia Board of Technologists (MBOT)	Graduate Technologist (GT19070402)
Malaysia Board of Technologists (MBOT)	Professional Technologist (PT20040035)

Research Interests

Material synthesize, Material characterization, Hydrogen purification, Gas separation performance, Carbon membrane, Polymeric membrane, Renewable energy, Multifunctional material, Manufacturing processes, Membrane technology, Direct Methanol Fuel Cell (DMFC) for automotive power systems, heavy metal removal, waste water treatment, and Test bed development for automotive ,

Postgraduate Supervision

Level	Name	Title	Status	Role
PhD	Safwan Shalbi	Development of Boron Neutron Capture Therapy Research Facility at Triga Mark-II Research Reactor	Active	Main Supervisor
MSc	Mohd Syafiq Sharip	Development of Matrimid 5218 Co-Polyimide-Based Carbon Membrane for Hydrogen Purification.	Active	Main Supervisor
MSc	Haziqatulhanis Ibrahim	Nanocellulose-Based Adsorbent for Heavy Metal Removal from Wastewater	Active	Main Supervisor
MSc	Muhammad Atif Mohamed Azmi	Improvement of Polyimide Precursor Based-Carbon Tubular Membrane for Helium Separations.	Active	Main Supervisor
MSc	Muhammad Amirul Asyraf Mohd Roslin	Gas Permeation Properties of BTDA-TDI/MDI (P84) Co-Polyimide in Preparation of Carbon Membranes for Carbon Dioxide/Methane Separation.	Active	Main Supervisor

Research Grants

Title	Type of Grant	Role	Amount (RM)	Status
Heavy Metal Removal Using Nanomaterial-Based Adsorbent for Water Remediation	Internal Grant	Leader	31,500.00	Active
Development of Direct Methanol Fuel Cell (DMFC) Portable Generator Prototype from Sulfonated Poly for Vehicle Applications	Seed Money	Leader	5,500.00	Active
Test Bed Development (TD) & Project Coordination and Dissemination	International Grant	Leader	226,000.00	Active
Synthesis of The Poly-Lactide Acid (PLLA) and Nanocellulose/N-doped TiO_2 as a Novel Polymeric Nanocomposite Biomaterial for Bone Scaffold	Collaborative Grant with UTM	Leader	20,000.00	Active
Analysis on Polyimide/Nanocrystalline Cellulosed-based Carbon Membrane for Hydrogen Purifications	FRGS-RACER	Leader	69,330.00	Active

Test Bed (TD) & Project Coordination and Dissemination	International Grant	Leader	234,080.00	Active
Development if Single Sensor Leak Detection System based on Pressure Transient for Field Testing	FRGS	Member	91,900.00	Active
A New Mechanism of Double-Negative Metamaterial-Based Anti-Reflective Coating towards VIS-Light and Near-Infrared (NIR) Solar Energy	FRGS	Member	122,450.00	Active
Lack of Fusion and Crack Growth Behavior Assessment for Additively Manufactured Glass-Filled Polyamide 12 Using Selective Laser Sintering	Internal Grant	Member	35,000.00	Active
A Portable Smart Sensor for Detection of BSR Oil Palm Disease	International Grant	Member	126,000.00	Active
Investigation of Microwave Inverse Scattering Nanomesh (MSN) Technique by Magnetite Polymeric-Composite Nanosensor for Disease Biomakers Detection	International Grant	Member	131,720.00	Active

Journal Publications

[1] Sazali, N., Salleh, W., Nordin, N., & Ismail, A. (2015). Matrimid-based carbon tubular membrane: Effect of carbonization environment. Journal of Industrial and Engineering Chemistry, 32, 167-171.

[2] Sazali, N., Salleh, W., Ismail, A., Nordin, N., Ismail, N., Mohamed, M., Jaafar, J. (2018). Incorporation of thermally labile additives in carbon membrane development for superior gas permeation performance. Journal of Natural Gas Science and Engineering, 49, 376-384.

[3] Sazali, N., Salleh, W., & Ismail, A. (2017). Carbon tubular membranes from nanocrystalline cellulose blended with P84 co-polyimide for H2 and He separation. International Journal of Hydrogen Energy, 42(15), 9952-9957.

[4] Ismail, N., Salleh, W., Sazali, N., Ismail, A., Yusof, N., & Aziz, F. (2018). Disk supported carbon membrane via spray coating method: Effect of carbonization temperature and atmosphere. Separation and Purification Technology, 195, 295-304.

[5] Ismail, N., Salleh, W., Sazali, N., & Ismail, A. (2018). Development and characterization of disk supported carbon membrane prepared by one-step coating-carbonization cycle. Journal of Industrial and Engineering Chemistry, 57, 313-321.

[6] Sazali, N., Salleh, W. N., Nordin, N. A., Harun, Z., & Ismail, A. F. (2015). Matrimid-based carbon tubular membranes: The effect of the polymer composition. Journal of Applied Polymer Science, 132(33).

[7] Sazali, N., Salleh, W., Ismail, A., Kadirgama, K., & Othman, F. (2018). P84 Co-Polyimide Based-Tubular Carbon Membrane: Effect of Heating Rates on Helium Separations. Solid State Phenomena, 280, 308-311.

[8] Sazali, N., Salleh, W. N., Ismail, A. F., Wong, K. C., & Iwamoto, Y. (2018). Exploiting pyrolysis protocols on BTDA-TDI/MDI (P84) polyimide/nanocrystalline cellulose carbon membrane for gas separations. Journal of Applied Polymer Science, 136(1), 46901.

[9] Ismail, N. H., Salleh, W. N., Sazali, Ismail, A. F. (2017). Effect of intermediate layer on gas separation performance of disk supported carbon membrane. Separation Science and Technology, 52(13), 2137-2149.

[10] Sazali, N., Salleh, W., Ismail, A., Ismail, N., Yusof, N., Aziz, F., Kadirgama, K. (2019). Influence of intermediate layers in tubular carbon membrane for gas separation performance. International Journal of Hydrogen Energy, 44(37), 20914-20923.

[11] Sazali, N., Salleh, W., Ismail, A., Kadirgama, K., Othman, F., Ismail, N. (2019). Impact of stabilization environment and heating rates on P84 co-polyimide/nanocrystaline cellulose carbon membrane for hydrogen enrichment. International Journal of Hydrogen Energy, 44(37), 20924-20932.

[12] Sazali, N., Salleh, W. W., Ismail, A., Ismail, N., Mohamed, M. A., Nordin, N. M., Honda, S. (2018). Enhanced gas separation performance using carbon membranes containing nanocrystalline cellulose and BTDA-TDI/MDI polyimide. Chemical Engineering Research and Design, 140, 221-228.

[13] Sazali, N., Salleh, W., Izwanne, M., Kardigama, K., Harun, Z. (2018). Precursor selection for carbon membrane fabrication: A review. Journal of Applied Membrane Science & Technology, 22(2).

[14] Sazali, N., Salleh, W., Ismail, A., Ismail, N., Aziz, F., Yusof, N., Hasbullah, H. (2018). Effect of stabilization temperature during pyrolysis process of P84 co-polyimide-based tubular carbon membrane for H2/N2 and He/N2 separations. IOP Conference Series: Materials Science and Engineering, 342(1), 012027.

[15] Ismail, N., Salleh, W., Sazali, N., Ismail, A. (2015). The Effect of Polymer Composition on CO2/CH4 Separation of Supported Carbon Membrane. Chemical Engineering Transactions, 45, 1465-1470.

[16] Sazali, N., Salleh, W., Ismail, A., Ismail, N., & Kadirgama, K. (2019). A brief review on carbon selective membranes from polymer blends for gas separation performance. Reviews in Chemical Engineering, 1.
[17] Ibrahim, I., Sazali, N., Ramasamy, D., Jamaludin, A., Sharip, M., & Ibrahim, H. (2019). Effect of Impregnate Nanocellulose With Ethylene Glycol for Car Radiator Application. Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 58, 43-50.
[18] Sazali, N., Salleh, W., Arsat, N., Harun, Z., Kadirgama, K. (2019). P84 Co-Polyimide-based tubular carbon membrane: Effect of pyrolysis temperature. Journal of Applied Membrane Science & Technology, 23(1).
[19] Sazali, N., Salleh, W., Ismail, A., Kadirgama, K., Moslan, M., Othman, F. (2018). Effect of heating rates on the microstructure and gas permeation properties of carbon membranes. Malaysian Journal of Fundamental and Applied Sciences, 14(3), 378-381.
[20] Sharip, M., Sazali, N., Jamaludin, A., Mohamed, M., Azmi, F., Salleh, W. (2019). Current advancement by membrane technology: A review. Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 59, 283-290.
[21] Shafie, S., Liew, W., Nordin, M., Hadi, N., Bilad, Sazali, N. (2019). CO2-Philic [EMIM][Tf2N] Modified Silica in Mixed Matrix Membrane for High Performance CO2/CH4 Separation. Advances in Polymer Technology.
[22] Rosman, N., Salleh, W., Mohamed, M., Ismail, N., Sazali, N., Jaafar, J. (2016). Electrospun nanofiber-coated membrane: A review. Jurnal Teknologi, 78(12).
[23] Sazali, N., Salleh, W., Nordin, N., Ismail, A. (2015). Matrimid-based carbon tubular membrane: Effect of carbonization environment. Journal of Industrial and Engineering Chemistry, 32, 167-171.
[24] Ibrahim, H., Sazali, N., Ibrahim, I. N., Sharip, M. S. (2019). Nano-structured Cellulose as Green Adsorbents for Water Purification: A Mini Review. Journal of Applied Membrane Science & Technology, 23(2).
[25] Ahmad, F., Sazali, N., Shah, A., Shaiful, M., Karim, A., Aziz, F., Salleh, W. (2019). Oxygen Separation Process using Ceramic-Based Membrane: A Review. Structure, 60(1), 1-9.
[26] Ibrahim, H., Sazali, N., Shah, A., Shaiful, M., Karim, A., Aziz, F., Salleh, W. (2019). A Review on Factors Affecting Heat Transfer Efficiency of Nanofluids for Application in Plate Heat Exchanger. Structure, 60(1), 187-196.
[27] Sazali, N., Salleh, W., Ismail, A., Mahyon, N., Kadirgama, K. (2018). Tubular Carbon Membrane Prepared from PI/NCC: Effects of Pyrolysis Atmosphere. Chemical Engineering Transactions, 72.
[28] Sazali, N., Salleh, W., Ismail, A., Kadirgama, K., Samykano, M., Najafi, G. (2018). PI/NCC-Based Tubular Carbon Membrane: Influence of Aging Times Towards Oxygen Separation Performance. Membranes, 51(2), 187-196.
[29] Sazali, N., Salleh, W., Nordin, N., Mohamed, M., Ismail, A., Yusof, N. (2017). Influence of Carbonisation Temperature on Gas Permeation Properties of Matrimid-based Carbon Membrane. Chemical Engineering Transactions, 56, 145-150.
[30] Ismail, N., Salleh, W., Sazali, N., Mohamed, M., Rosman, N., Yusof, N. (2017). EFFECT OF P84 (BTDA-TDI/MDI) COMPOSITION TOWARDS THE PERFORMANCE OF THE DISK SUPPORTED CARBON MEMBRANE. Jurnal Teknologi, 79, 1-2.
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[32] Sazali, N., Harun, Z., Salleh, W., Ismail, A., Nordin, N. (2020). The Effect of Carbonization Temperature on the Gas Permeation Properties. Int. J. Tech. Res. Appl., 36-38.
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[34] Sharip, M. S., Sazali, N. (2020). Tubular carbon membrane for Hydrogen separation: Effect of Pyrolisis condition. Journal of Modern Manufacturing Systems and Technology, 4(1), 60-67.
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[36] Sazali, N. (2020). A comprehensive review of carbon molecular sieve membranes for hydrogen production and purification. The International Journal of Advanced Manufacturing Technology, 1-19.
[37] Sazali, N., Mohamed, M., Salleh, W. (2020). Membranes for hydrogen separation: A significant review. The International Journal of Advanced Manufacturing Technology, 1-23.
[38] Sharip, M. S., Sazali, N., Ahmad, F. N. (2020). Effect of Polymer Concentration on Matrimid 5218 based-Carbon Membrane for H2 Separation. Journal of Applied Membrane Science & Technology, 24(1).
[39] Ahmad, S. Z., Salleh, W. N., Yusof, N., Yusop, M. Z., Hamdan, R., Awang, N. A., . . . Ismail, A. F. (2020). Pb(II) removal and its adsorption from aqueous solution using zinc oxide/graphene oxide composite. Chemical Engineering Communications, 1-15.
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[44] Shafie, S., Liew, W., Nordin, N., Bilad, M., Sazali, N., Putra, Z. (2019). CO2-Philic [EMIM][[Tf2] N] Modified Silica in Mixed Matrix Membrane for High Performance CO2/CH4 Separation. Advances in Polymer Technology.
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[46] Ismail, N., Salleh, W., Awang, N., Ahmad, S., Rosman, N., Sazali, N. (2019). PVDF/HMO ultrafiltration membrane for efficient oil/water separation. Chemical Engineering Communications, 1-11.
[47] Sazali, N., Sharip, M., Ibrahim, H., Wan, W. (2019). The performance of CO2/N2 separation on P84/NCC-based tubular carbon membrane under different carbonization conditions. Malaysian Journal of Fundamental and Applied Sciences, 15(3), 447-450.
[48] Sazali, N., Salleh, W. N., Ismail, A. F., Murakami, H., Iwamoto, Y. (2019). Oxygen separation through p84 copolyimide/nanocrystalline cellulose carbon membrane: Impact of heating rates. Chemical Engineering Communications, 1-11.
[49] Arifin, N., Zulkipli, N., Yusof, N., Ismail, A., Aziz, F., Salleh, Sazali, N. (2019). Preparation and Characterization of APTES-functionalized Graphene Oxide for CO2 Adsorption. System, 61(2), 297-305.
[50] Sazali, N., Salleh, W., Ismail, A. (2019). Microporous Carbon Membrane: Preparation, Characterization, and Applications. Current Trends and Future Developments on (Bio-) Membranes, 1-38.
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[52] Sazali, N., Salleh, W. N., Kadirgama, K. (2018). P84 Co-polyimide/Nanocrystalline Cellulose (NCC)-based Tubular Carbon Membrane: Effect of Drying Times for Carbon Dioxide Separation at Elevated Carbonization Temperature. Journal of Applied Membrane Science Technology, 22(1).
[53] Sazali, N., Salleh, W., Ismail, A., Ismail, N. (2018). CO2/CH4 Separation by Using Carbon Membranes. Current Trends and Future Developments on (Bio-) Membranes, 209-234.
[54] Sazali, N., Salleh, W., Ismail, A., Nordin, N., Harun, Z. (2016). CO2 Separation through Carbon Tubular Membranes: Effect of Polymer Composition. Advances in Renewable Energy (ARE), 3(1), 7-10.
[55] Salleh, W., Sazali, N., Hasbullah, H., Yusof, N., Jaafar, J., Ismail, A. F. (2015). Gas Permeation Study of Carbon Tubular Membrane by Manipulating Carbonization Temperature Profile. Advanced Materials Research, 1112, 145-148.
[56] Salleh, W., Sazali, N., Ismail, A. (2014). Separation of CO2/CH4 through Carbon Tubular Membranes: Effect of Carbonization Temperature. Journal of Membrane and Separation Technology, 3(4), 219-223.
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Conference Proceeding

[1] Sharip, M. S., Sazali, N., Razali, M. N., Aziz, F., Othman, M. H. (2019). Current Advances in Membranes for Competent Hydrogen Purification: A Short Review. Proceedings of the International Manufacturing Engineering Conference & The Asia Pacific on Manufacturing Systems.
[2] Ibrahim, H., Sazali, N., Jamaludin, A. S., Salleh, W. N., Othman, M. H. (2019). A Brief Review on Utilization of Hybrid Nanofluid in Heat Exchangers: Theoretical and Experimental. Proceedings of the International Manufacturing Engineering Conference & The Asia Pacific on Manufacturing Systems.
[3] Sharip, M. S., Sazali, N., Ibrahim, H., Jamaludin, A. S., Aziz, F. (2019). A Review on Effectiveness of Numerous Technologies by Utilizing Hydrogen. Proceedings of the International Manufacturing Engineering Conference & The Asia Pacific on Manufacturing Systems.
[4] Sazali, N., Sharip, M. S., Ibrahim, H., Jamaludin, A. S., Salleh, W. N. (2019). Dip-Coating Methods for Carbon Membrane Fabrication: Effects of Coating-Carbonization-Cycles on Hydrogen Separation Prepared from P84/NCC. Proceedings of the International Manufacturing Engineering Conference & The Asia Pacific on Manufacturing Systems.