



CURRICULUM VITAE

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ResearchGate : Mohamad Rezi Abdul Hamid
Website : <https://mohamadrezialdha.wixsite.com/mysite>

Education

- Ph.D. Chemical Engineering, 2019, Texas A&M University, College Station, TX, USA
- B. E. Chemical Engineering, 2012, Stevens Institute of Technology, Hoboken, NJ, USA

Research Interest

- Materials engineering
- Porous materials e.g., metal-organic frameworks, zeolitic-imidazolate frameworks, zeolites
- Separation technologies, membranes, gas separation
- Process simulation
- Energy

Professional Membership

- American Institute of Chemical Engineers (AIChE)
- North American Membrane Society (NAMS)
- Board of Engineers Malaysia (BEM)

Appointments

- Senior Lecturer, Dept. of Chemical and Environmental Engineering, UPM 2020 – to date
- Teaching Assistant, Dept. Chemical and Environmental Engineering, UPM 2014 – 2015
- Operation Executive, AG Resources Sdn. Bhd. Blackhem Holdings 2013 – 2014

Publications

- NH Harun, ZZ Abidin, UA Majid, **MRA Hamid**, AH Abdullah, R Othaman, MY Harun. Adopting Sustainable Jatropha Oil Bio-Based Polymer Membranes as Alternatives for Environmental Remediation. *Polymers*. 2022. 14. **(IF 4.967)**
- NAB Kamaruddin, WAWAK Ghani, **MRA Hamid**, AB Alias, AB Shamsudin. Simulation And Analysis of Calorific Value for Biomass Solid Waste as A Potential Solid Fuel Source for Power Generation. *Journal of Applied Science and Engineering*. 2022.
- **MRA Hamid**, Y Qian, R Wei, Z Li, Y Pan, Z Lai, HK Jeong. Polycrystalline metal organic framework (MOF) membranes for molecular separations: engineering prospects and challenges. *Journal of Membrane Science*. 2021. 640. **(IF 10.530)**

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- **MRA Hamid**, TCS Yaw, MZ Mohd Tohir, WAWAK Ghani, PD Sutrisna, HK Jeong, Zeolitic imidazolate framework membranes for gas separations: current state-of-the art, challenges, and opportunities. *Journal of Industrial and Engineering Chemistry*. 2021. 98 (IF 6.760)
 - F Hillman, **MRA Hamid**, P Krokidas, S Moncho, EN Brothers, IG Economou, HK Jeong. Delayed-linker addition (DLA) synthesis for hybrid SOD ZIFs with unsubstituted imidazolate linkers for propylene/propane and n-butane/i-butane separations. *Angewandte Chemie International Edition*. 2021. 60. (IF 16.823)
 - S Berens, F Hillman, **MRA Hamid**, HK Jeong, S Vasenkov. Influence of 2-ethylimidazole linker-doping in ZIF-8 crystals on intracrystalline self-diffusion of gas molecules by high field diffusion NMR. *Microporous and Mesoporous Materials*. 2021. 315 (IF 5.876)
 - **MRA Hamid**, HK Jeong. Flow synthesis of polycrystalline ZIF-8 membranes on polyvinylidene fluoride hollow fibers for recovery of hydrogen and propylene. *Journal of Industrial and Engineering Chemistry*. 2020. 88 (IF 6.760)
 - AB Makama, A Salmiaton, TSY Choong, **MRA Hamid**, N Abdullah, E Saion. Influence of parameters and radical scavengers on the visible-light-induced degradation of ciprofloxacin in ZnO/SnS₂ nanocomposite suspension: identification of transformation products. *Chemosphere*, 2020. 253 (IF 8.943)
 - **MRA Hamid**, S Park, JS Kim, YM Lee, HK Jeong. In-situ formation of zeolitic-imidazolate framework thin films & composites using modified polymer substrates. *Journal of Materials Chemistry A*. 2019. 7 (IF 14.511)
 - **MRA Hamid**, S Park, JS Kim, YM Lee, HK Jeong. Synthesis of ultrathin zeolitic-Imidazolate framework ZIF-8 membranes on polymer hollow fibers using a polymer modification strategy for propylene/propane separation. *Industrial Engineering Chemistry Research*. 2019. 58 (IF 4.326)
 - S Park, **MRA Hamid**, HK Jeong. Highly propylene-selective mixed-matrix membranes by in-situ metal-organic framework formation using a polymer-modification strategy. *ACS Applied Materials & Interfaces*, 2019, 11 (IF 10.383)
 - MJ Lee, **MRA Hamid**, J Lee, JS Kim, YM Lee, HK Jeong. Ultrathin zeolitic-imidazolate framework ZIF-8 membranes on polymeric hollow fibers for propylene/propane separation. *Journal of Membrane Science*. 2018. 559 (IF 10.530)
 - **MRA Hamid**, HK Jeong. Recent advances on mixed-matrix membranes for gas separation: opportunities & engineering challenges. *Korean Journal of Chemical Engineering*. 2018. 35 (IF 3.146)
 - F Hillman, JM Zimmerman, SM Paek, **MRA Hamid**, WT Lim, HK Jeong. Rapid microwave-assisted synthesis of hybrid zeolitic-imidazolate frameworks with mixed metals & mixed linkers. *Journal of Materials Chemistry A*. 2017. 5 (IF 14.511)
 - ZZ Abidin, FM Yassin, MR Harun, MY Harun, HS Zainuddin, **MRA Hamid**, MAM Salleh. Video as e-learning approach for enhancing laboratory teaching in biochemical engineering - a Malaysia case study. *7th World Eng. Edu. Forum*, 2017, 222

Conference Proceedings/Academic Talks

- **MRA Hamid** and HK Jeong. Polymer supported zeolitic imidazolate framework ZIF-8 molecular sieve membranes exhibiting high hydrogen permeability. 16th International Conference in Inorganic Membrane (ICIM16). 28-06-2022 - 30-06-2022. Taiwan. International
 - **MRA Hamid**. Aspen Plus Simulation on Distillation & Adsorption Process Unit. Postgraduate guest lecture Separation Technologies & Processes course. 23 Dec 2021. Xiamen University Malaysia.
 - S Ali, TI Mohd Ghazi, **MRA Hamid**, MFM Gunam Resul. 1st International Conference on Innovation in Chemical Engineering and Technology (ICICET2021), Non-Citation-Indexed. International. 9789672659709. 1-168. 2021
 - NH Harun, AH Abdullah, **MRA Hamid**, MY Harun, ZZ Abidin. A comparative study between various vegetable oil-based polyurethane membranes. 14th Regional Conference in Chemical Engineering
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and 1st International Conference on Innovation in Chemical Engineering and Technology. Abstract. 97896726597. 165 – 166. 2021

- **MRA Hamid**, F Hillman, HK Jeong. Polymer supported zeolitic imidazolate framework ZIF-8 molecular sieve membranes exhibiting high hydrogen permeability. 14th Regional Conference on Chemical Engineering 2021 (RCChE2021) and 1st International Conference on Innovation in Chemical Engineering and Technology. 30-11-2021 - 01-12-2021. International
- F Hillman, **MRA Hamid**, HK Jeong. Linker doping strategy for hybrid ZIFs and membranes for tunable gas separations. AIChE Annual Conference 2019. Orlando. Florida. USA
- **MRA Hamid**, HK Jeong. A scalable method to synthesize zeolitic-imidazolate framework ZIF-8 membranes on polymer hollow fibers for propylene/propane separation. AIChE Annual Conference 2018. Pittsburgh. Pennsylvania. USA
- **MRA Hamid**, MJ Lee, JM Lee, JS Kim, YM Lee, HK Jeong. Ultrathin zeolitic-imidazolate framework ZIF-8 membranes on polymer hollow fibers for propylene/propane separation. North American Membrane Society 2018 Conference. Lexington. Kentucky. USA
- MJ Lee, **MRA Hamid**, JM Lee, JS Kim, YM Lee, HK Jeong. Preparation of ZIF-8 membranes supported on polymer hollow fibers using microwave-assisted seeding and secondary growth. AIChE Annual Conference 2017. Minneapolis. Minnesota. USA

Patents

- HK Jeong, **MRA Hamid**. In-situ fabrication of metal-organic framework films and mixed-matrix membranes. US Patent App. 2019. US 2021/0053015 A1

Research Grants

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| • Vapor phase synthesis of molecular sieve hybrid zeolitic imidazolate framework (ZIF) membranes for H ₂ purification and light hydrocarbon separations | Leader | GP-IPM | 2020 – 2023 | RM 49,882 |
| • Investigation of crystal nucleation, diffusion and sorption properties of isostructural dual-linker SOD zeolitic-imidazolate frameworks crystal | Member | FRGS | 2021 – 2023 | RM 110,000 |

Industry Projects

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| • Design and optimization of solid waste incinerator using Aspen Plus. Hijau Kitar Semula Sdn. Bhd. (Member) | 2020 | RM5,000 |
| • Palm oil mill modeling and simulation (phase 1). Sime Darby Plantation Research Sdn. Bhd. (Member) | 2021 | RM79,275 |
| • Palm oil mill modeling and simulation (phase 2). Sime Darby Plantation Research Sdn. Bhd. (Leader) | 2022 | RM99,750 |

Professional Services (Journal Reviewer, editorial works, etc.)

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| • Editorial board member/associate editor
Journal of Applied Science and Engineering | 2022 |
| • Guest editor
Journal of Applied Science and Engineering | 2021/2022 |
| • Journal reviewer
Korean Journal of Chemical Engineering | 2022 |
| Korean Journal of Chemical Engineering | 2021 |
| Korean Journal of Chemical Engineering | 2020 |

Malaysian Journal of Analytical Science	2021
Pertanika Journal of Science and Technology	2021

- **Conference reviewer**

1st Int. Conference on Innovation in Chemical Engineering & Technology 2021	2021
Kyushu Institute of Technology International Symposium on Applied Engineering and Sciences	2021

- **Conference committee**

1st Int. Conference on Innovation in Chemical Engineering & Technology 2021	2021
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Teaching Experience

- Materials Science
- Computer Aided Chemical Engineering Drawing
- Computer Aided Engineering Drawing
- Process Safety Laboratory
- Process and Plant Design
- Aspen Plus Process Simulation (Guest Lecture, Xiamen University Malaysia)

References

Hae-Kwon Jeong, PhD Professor Artie McFerrin Department of Chemical Engineering, Texas A&M University, College Station, Texas, United States hjeong7@gmail.com	Febrian Hillman, PhD Research Fellow Dept. of Chemical and Biomolecular Engineering National University of Singapore Singapore fhillman@gmail.com
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