

CURRICULUM VITAE



Dr. Mus'ab Abdul Razak
Jabatan Kejuruteraan Kimia dan Alam Sekitar, Universiti Putra Malaysia,
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Education

1. Ph. D. Chemical Engineering, 2013, The University of Queensland, Australia
2. B. S. Chemical Engineering, 2007, University of Delaware, USA.

Areas of Interest

1. Sub- and Supercritical Adsorption on Porous Materials
2. Molecular Simulations
3. Chemical Engineering
4. Process Safety and Reliability
5. Process Control and Instrumentation
6. Data Analytics in Chemical Engineering

Professional Qualification/ Membership/ Affiliation

1. Associate Member, Institution of Chemical Engineers (IChemE)
2. Graduate Member, Institution of Engineers, Malaysia (IEM)

Appointments

Position	Duration
1. Senior Lecturer, Department of Chemical and Environmental Engineering, Faculty of Engineering, UPM	October 2013 – Present
2. Lab Coordinator, Environmental Engineering Laboratory, Department of Chemical and Environmental Engineering, Faculty of Engineering, UPM	May 2014 – January 2015
3. Student Affair and Alumni Coordinator, Department of Chemical and Environmental Engineering, Faculty of Engineering, UPM	January 2015 – June 2018
4. Head of Student Affair Unit, Faculty of Engineering, UPM	June 2018 – Present
5. Associate Editor, Jurnal Kimia Sains & Aplikasi, Indonesia	January 2019 – Present
6. Student Affair and Alumni Coordinator, Department of Chemical and Environmental Engineering, Faculty of Engineering, UPM	January 2020 – Present

Publications

Journals (30 recent journals)

1. **Abdul Razak, M.a.**, D.D. Do, & G. Birkett, (2011) Evaluation of the interaction potentials for methane adsorption on graphite and in graphitic slit pores. *Adsorption*, 17(2): p. 385-394.
2. **Abdul Razak, M.a.**, V.T. Nguyen, L.F. Herrera, D.D. Do, & D. Nicholson, (2011) Microscopic analysis of adsorption in slit-like pores: layer fluctuations of particle number, layer isosteric heat and histogram of particle number. *Molecular Simulation*, 37(12): p. 1031-1043.
3. Fan, C., **M.a. Abdul Razak**, D.D. Do, & D. Nicholson, (2012) On the identification of the sharp spike in the heat curve for argon, nitrogen, and methane adsorption on graphite: Reconciliation between computer simulation and experiments. *The Journal of Physical Chemistry C*, 116(1): p. 953-962.

4. Wang, Y., **M.a. Abdul Razak**, D.D. Do, T. Horikawa, K. Morishige, & D. Nicholson, (2012). A computer simulation and experimental study of the difference between krypton adsorption on a graphite surface and in a graphitic hexagonal pore. *Carbon*, 50(8): p. 2908-2917.
5. **Abdul Razak, M.a.**, D.D. Do, T. Horikawa, K. Tsuji, & D. Nicholson. (2013). On the description of isotherms of CH₄ and C₂H₄ adsorption on graphite from subcritical to supercritical conditions. *Adsorption*, 19(1): p.131-142.
6. Nguyen, V. T., Fan, C., **Razak, M. A.**, Do, D. D., Nicholson, D., & Ustinov, E. (2013). Development of kinetic Monte Carlo and Bin-Monte Carlo schemes for simulation of mixtures - vapor-liquid equilibria and adsorption. *Chemical Engineering Science*, 102, 220–226.
7. Prasetyo, L., **Abdul Razak, M.**, Do, D. D., Horikawa, T., Nakai, K., & Nicholson, D. (2017). On the resolution of constant isosteric heat of propylene adsorption on graphite in the sub-monolayer coverage region. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 512, 101–110.
8. Lim, J. W., Lee, K. F., Chong, T. S. Y., Abdullah, L. C., **Razak, M. A.**, & Tezara, C. (2017). Phosphorus removal by electric arc furnace steel slag adsorption. *IOP Conference Series: Materials Science and Engineering*, 257(1).
9. Jin Wei, L., Teng Haan, O., Choong Shean Yaw, T., Chuah Abdullah, L., **Abdul Razak, M.**, Cionita, T., & Toudehdeghghan, A. (2018). Heavy metal recovery from electric arc furnace steel slag by using hydrochloric acid leaching. *E3S Web of Conferences*, 34.
10. Mageed, A. K., Dayang Radiah, A. B., Salmiaton, A., Izhar, S., & **Razak, M. A.** (2018). Study the Thermal Stability of Nitrogen Doped Reduced Graphite Oxide Supported Copper Catalyst. *Journal of Cluster Science*, 29(4), 709–718.
11. Mashaida Md Sharif & **Musab Abdul Razak**, (2018) Consequence modelling and analysis of hydrogen release from methyl ester hydrogenation plant using PHAST. *Journal of Occupational Safety and Health*, 15(2) p. 35-46
12. Lee, S. H., Choong, T. S. Y., Abdullah, L. C., **Razak, M. A.**, & Ban, Z. H. (2019). Experimental and CFD Modelling: Impact of the inlet slug flow on the horizontal gas-liquid separator. *Energies*, 12(1).
13. Mageed, A. K., Dayang Radiah, A. B., Salmiaton, A., Izhar, S., & **Abdul Razak, M.** (2019). Nitrogen doped graphene-supported trimetallic CuNiRu nanoparticles catalyst for catalytic dehydrogenation of cyclohexanol to cyclohexanone. *Journal of King Saud University - Science*, 31(4), 878–885

Conference Proceedings (30 recent Conference Proceedings)

1. Fan, C., **M.a. Abdul Razak**, & D.D. Do, (2009). Evaluation of the adsorption potentials of argon and methane on the adsorption behavior on carbon surfaces. *Asia Pacific Coal bed Methane Symposium 24-26, September 2009, Xuzhou, Jiangsu, China*.
2. **Abdul Razak, M.a.**, Z. Liu, L.F. Herrera, & D.D. Do, (2011). Evaluation of characterizing coal structure using molecular simulation. *Asia Pacific Coal bed Methane Symposium 3-6, May 2011, Brisbane, Australia*.
3. **Abdul Razak, M.a.**, & D.D. Do, (2016). On the description of the unusual isosteric heat versus loading for propylene adsorption on graphite. *Chemeca Conference 25-28 September 2016, Adelaide, Australia*.
4. Jin Wei, L., Teng Haan, O., Choong Shean Yaw, T., Chuah Abdullah, L., **Abdul Razak, M.**, Cionita, T., & Toudehdeghghan, A. (2018). Heavy metal recovery from electric arc furnace steel slag by using hydrochloric acid leaching. *E3S Web of Conferences*, 34.
5. Nur Khairunnisa Binti Abd Halim, **Abdul Razak, M.** & Hussain, S.A., (2018). Hydrodynamical studies of sparger design on gas holdup profile in quadrilateral bubble column. *International UNIMAS STEM 11th Engineering Conference 12-14, September 2018, Kuching, Sarawak, Malaysia*.
6. Nur Khairunnisa Binti Abd Halim, **Abdul Razak, M.** & Hussain, S.A., (2018). Impact of sparger design on air-sparged quadrilateral bubble column. *31st Symposium of Malaysian Chemical Engineers 5-6, December 2018, Kuala Lumpur, Malaysia*.

Books (If any)

Chapter in Books (If any)

Research Grants

No	Project Title	Amount (RM)	Year	Source of Fund
1	Simulation Studies on Hydrocarbon Adsorption under Sub- and Supercritical Conditions on Carbonaceous Solid for Natural Gas Storage	58,000	2016-2018	Putra Grant (IPM)

Awards/Recognition (Current)

Num	Name of awards	Title	Award Authority	Award Type	Year
1					

Professional Services/Consultation

No	Year	Title	Authority	Amount
1	2014-2015	COMPASS Market Risk – Value at Risk – Monte Carlo	Triaset Sdn. Bhd.	RM 15,000

Student Supervision

PhD (Main Supervisor)

No.	Name	Title	Status
1	Ahmad Fauzi Sagap	A Combination of Conventional Reliability and Fuzzy Approach using Monte Carlo Simulation and Integration to Supply Chain Management in Petrochemical Process Plant	Ongoing

MS with thesis (Main Supervisor)

No.	Name	Title	Status
1	Leila Moeenizadeh	Mixing Profile in Fixed Bed Aeration Tank: Applying Computational Fluid Dynamic	Ongoing
2	Ng Rong Jang	A Molecular Simulation Study of Adsorption on Carbon Coated Monolith	Ongoing

MS without Thesis (Main Supervisor)

No.	Name	Title	Status
1.	Abdul Fattah b. Ab Razak	Design Study on Temperature Abuse Reduction In Raw Material Cold Storage	Graduated
2.	Siti Norfaidah Jastinawani bt. Jasmi	Design Study on Temperature Abuse on Surimi-Based Products	Graduated
3	Nur Faheza binti Mohd Yusor	Design Safety and Analysis of Pressure Valve	Graduated
4	Vasudevan Varadan	Quantitative Risk Assessment for Refinery Storage Tank Failing	Graduated
5	Mohd Abu Holek bin Mohd Noor	A Baseline Study on Safety Perceptions of Solar Turbines Inc Employees	Graduated
6	Nor Mahfuzah Abdul Rahman	Prevalence of Possible Carpal Tunnel Syndrome and Its Related Factors Among Office Worker at Company A	Graduated
7	Abdullah Masoud Saif al-Obaidani	Emergency Response Planning Network during Gonu Cyclone Disaster in Muscat City of Oman 2007	Graduated

No.	Name	Title	Status
8	Mohd Tarmizi bin Mohd Ali	Life Data Analysis of Crude Oil Transfer Pump (COTP) on an Offshore Central Processing Platform off the coast of Sabah, Malaysia	Graduated
9	Mashaida Md Sharif	Consequence Modelling and Analysis of Hydrogen Release from Methyl Ester Hydrogenation Plant Using PHAST	Graduated
10	Norauji Syazwi Binti Norzalli	Evaluation Of Safety Barriers Performance At The Ammonia Storage Tank	Graduated
11	Muhammad Haziq Bin Muhd Nor Han	Safety assessment in chemical industries: Comparison of fault tree analysis (FTA) and Bayesian networks (BNs) approaches at splitting column of an Oleo-chemical Company	Graduated
12	Kumaran a/l Shanmugam	Assessment on process safety maturity level among major hazard installations (mhi) in malaysia	Graduated
13	Amalina binti Hamdani	Reliability analysis of hydrocarbon gas facility using fault tree analysis and monte carlo simulation	Ongoing
14	Ishataheera binti Mahmood	Quantitative Risk Assessment Study	Ongoing