CURRICULUM VITAE

DR. MOHAMAD FAIZ MUKHTAR GUNAM RESUL

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Education

- Ph.D. Chemical Engineering, 2020, Newcastle University, UK
- MSc. Chemical Engineering, 2012, Universiti Putra Malaysia (UPM), Selangor, Malaysia
- B.E. Chemical Engineering, 2007, Universiti Putra Malaysia (UPM), Selangor, Malaysia

Research Interest

- Process engineering
- Process intensification
- Process development
- Biomass epoxidation, biopolymer

Professional Membership

- Institution of Chemical Engineers (IChemE)
- Board of Engineers Malaysia (BEM)

Appointments

- Senior Lecturer, Dept. of Chemical and Environmental Engineering, UPM — 2020–to date
- Tutor, Dept. Chemical and Environmental Engineering, UPM — 2008–2020
- Research Assistant, Dept. Chemical and Environmental Engineering, UPM — 2008–2008
- Internship, Indah Water Konsortium — 2006–2006

Publications

- Elbidi, M., Salleh, M. A. M., Rashid, S. A., & **Resul, M. F. M. G**. (2024). The potential of thermally expanded graphite in oil sorption applications. RSC advances, 14(23), 16466-16485.
- Lyu, S., Abidin, Z. Z., Yaw, T. C. S., & **Resul, M. F. M. G.** (2024). Synthesis of surface-modified porous polysulfides from soybean oil by inverse vulcanization and its sorption behavior for Pb (II), Cu (II), and Cr (III). Environmental Science and Pollution Research, 31(20), 29264-29279.
- Elbidi, M., Salleh, M. A. M., **Resul, M. F. M. G.**, & Rashid, S. A. (2024). Synthesis and characterization of mesoporous expanded graphite modified with PA/H3PO4 for enhanced oil sorption efficiency. Journal of Porous Materials, 31(2), 497-509.

- Lyu, S., Abidin, Z. Z., Yaw, T. C. S., & **Resul, M. F. M. G.** (2024). Inverse vulcanization induced oxygen modified porous polysulfides for efficient sorption of heavy metals. Environmental Science and Pollution Research, 1-18.
- **Resul, M. F. M. G.**, Rehman, A., Saleem, F., Usman, M., Fernández, A. M. L., Eze, V. C., & Harvey, A. P. (2023). Recent advances in catalytic and non-catalytic epoxidation of terpenes: a pathway to bio-based polymers from waste biomass. RSC advances, 13(47), 32940-32971.
- Fernández, A. M. L., Rehman, A., Saleem, F., **Resul, M. F. M. G.**, Abbas, A., Ahmad, S., ... & Harvey, A. P. (2023). Environment-friendly epoxidation of limonene using tungsten-based polyoxometalate catalyst. Molecular Catalysis, 547, 113345.
- Elbidi, M., **Resul, M. F. M.**, Rashid, S. A., & Salleh, M. A. M. (2023). Preparation of eco-friendly mesoporous expanded graphite for oil sorption. Journal of Porous Materials, 30(4), 1359-1368.
- **Resul, M. F. M. G.**, Rehman, A., Fernández, A. M. L., Eze, V. C., & Harvey, A. P. (2022). Continuous Process for the Epoxidation of Terpenes using Mesoscale Oscillatory Baffled Reactors. Chemical Engineering and Processing-Process Intensification, 108998.
- **Resul, M. F. M. G.,** Rehman, A., Fernández, A. M. L., Eze, V. C., & Harvey, A. P. (2021). Development of rapid and selective epoxidation of α-pinene using single-step addition of H_2O_2 in an organic solvent-free process. RSC Advances, 11(52), 33027-33035.
- Alsofiany, A. A., & **Resul, M. F. M. G.** (2021, July). Epoxidation of Waste Cooking Palm Oil with Peracetic Acid Catalyzed by Sulfuric Acid. In 2021 International Congress of Advanced Technology and Engineering (ICOTEN), 1-5. IEEE.
- Rehman, A., Eze, V. C., **Resul, M. G.,** & Harvey, A. (2019). Kinetics and mechanistic investigation of epoxide/CO2 cycloaddition by a synergistic catalytic effect of pyrrolidinopyridinium iodide and zinc halides. Journal of Energy Chemistry, 37, 35-42.
- Durkin, A., Taptygin, I., Kong, Q., **Gunam Resul, M. F.**, Rehman, A., Fernández, A. M., ... & Guo, M. (2019). Scale-up and Sustainability Evaluation of Biopolymer Production from Citrus Waste Offering Carbon Capture and Utilisation Pathway. ChemistryOpen, 8(6), 668-688.
- Rehman, A., Resul, M. G., Eze, V. C., & Harvey, A. (2019). A kinetic study of Zn halide/TBAB-catalysed fixation of CO_2 with styrene oxide in propylene carbonate. Green Processing and Synthesis, 8(1), 719-729.
- Rehman, A., Fernández, A. M. L., **Resul, M. G.,** & Harvey, A. (2019). Highly selective, sustainable synthesis of limonene cyclic carbonate from bio-based limonene oxide and CO_2: A kinetic study. Journal of CO_2 Utilization, 29, 126-133.
- **Resul, M. F. M. G.,** Fernández, A. M. L., Rehman, A., & Harvey, A. P. (2018). Development of a selective, solvent-free epoxidation of limonene using hydrogen peroxide and a tungsten-based catalyst. Reaction Chemistry & Engineering, 3(5), 747-756.
- Rehman, A., Fernandez, A. M. L., **Resul, M. G.,** & Harvey, A. (2018). Kinetic investigations of styrene carbonate synthesis from styrene oxide and CO_2 using a continuous flow tube-in-tube gas-liquid reactor. Journal of CO2 Utilization, 24, 341-349.
- **Resul, M. F. M. G.,** Ghazi, T. I. M., & Idris, A. (2012). Kinetic study of jatropha biolubricant from transesterification of jatropha curcas oil with trimethylolpropane: effects of temperature. Industrial Crops and Products, 38, 87-92.
- **Resul, M. F. M. G.,** Ghazi, T. I. M., & Idris, A. (2011, February). Temperature dependence on the synthesis of jatropha biolubricant. In IOP Conference Series: Materials Science and Engineering (Vol. 17, No. 1, p. 012032). IOP Publishing.
- Ghazi, T. I. M., **Resul, M. F. G.,** & Idris, A. (2009). Bioenergy II: production of biodegradable lubricant from jatropha curcas and trimethylolpropane. International Journal of Chemical Reactor Engineering, 7(1).

- **Gunam Resul, M.F.M.,** Mohd Ghazi, T.I., Muhammad Syam, S.A., Idris, A. (2008). Synthesis of Biodegradable Lubricant from Jatropha Oil with High Content of Free Fatty Acids. AIChE Annual Meeting, Conference Proceedings.

Conference Proceedings / Academic Talks

- Engineering and Technology Week 2024 (ETW 2024)
- 2nd Int. Conference on Innovation in Chemical Engineering & Technology 2023 (ICICET 2023)
- World Research & Innovation Convention on Engineering & Technology 2023 (WRICET 2023)
- 1st Int. Conference on Innovation in Chemical Engineering & Technology 2021 (ICICET 2021)

Patents / Copyrights

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Research Grants

• Design and Utilization of a 3D Printed Mesoscale Oscillatory Baffled Reactor for Enhanced Epoxidation of Waste Cooking Oil **(leader)**	GP-IPM	2023 – 2025	RM 30,000

Community or Industry Projects / Grants

• Program Pemindahan Ilmu Trash to Treasure **(leader)**	2022	RM7,930
• Program Pemindahan Ilmu Pemprosesan Makanan Trans-Sempadan (TransFood) **(member)**	2022	RM21,996

Professional Services (Journal Reviewer, Editorial Works, etc.)

- **Editorial board member/associate editor**
- **Guest editor**
- **Journal reviewer**
- **Conference reviewer**
- **Conference committee**

2nd Int. Conference on Innovation in Chemical Engineering & Technology 2023	2023
1st Int. Conference on Innovation in Chemical Engineering & Technology 2021	2021

Teaching Experience

- ECH 4509 Toxic and Hazardous Waste Management
- ECH 3904 Engineering Lab II
- ECH 3905 Engineering Lab III
- ECH 3704 Reaction Kinetics and Reactor Design
- ECH 3124 Energy Balance

Academic Awards

- 3rd Best Presenter, Certificate, 2015, Newcastle University, UK
- PRPI Gold Medal, Gold Medal, 2008, Universiti Putra Malaysia, Malaysia
- IENA Special Award, Certificate, 2008, Universiti Putra Malaysia, Malaysia

References

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