CURRICULUM VITAE

DR. DAYANG RADIAH AWANG BIAK

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Academic Qualifications

- B.Sc. Chemical Engineering, 1996, Case Western Reserve University, Cleveland, Ohio. USA
- PhD. Chemical Engineering, 2001. University of Birmingham, United Kingdom.

Area of Interest

- Chemical Engineering
- Process Engineering
- Product Development
- Nanotechnology
- Nanomaterials
- Biomaterial

Appointment

- Senior Lecturer, Department of Chemical & Environmental Engineering, Faculty of Engineering, UPM
- Approved Signatory (Technical Officer), Material Characterization Laboratory, UPM
- Academic Coordinator, Department of Chemical & Environmental Engineering, Faculty of Engineering, UPM
- Committee Members for Master of Process Safety & Loss Prevention Programme
- Committee, Nanotechnology Standard for Environment, Malaysia
- Head of Academic & Laboratory for Biochemical Engineering Unit, Department of Chemical & Environmental Engineering
- Teaching Assistant, Chemical Engineering Department, University of Canterbury, New Zealand
- Head of Biochemical Engineering Unit, Department of Chemical & Environmental Engineering
- Member, Academic Student Advisory Board, Faculty of Engineering
- Coordinator, Hazardous Material Laboratory, UPMKB

Professional Qualification/ Membership/ Affiliation

- American Institute of Chemical Engineers (AIChE)
- Malaysian Society for Engineering & Technology (MySET), Malaysia
- Graduate Member, Board of Engineers Malaysia (BEM)

Scientific Experience and Specialisation

Organisation	Position	Start Date	End Date	Expertise
Department of Standards Malaysia	Working committee for nanotechnology and safety	2008	Ongoing	Nanotechnology, environment & safety
Rice University	Visiting scholar	Sept. 2015	Dec. 2015	Material Science and Nanotechnology

Publications

Journals

1. A. A., Muataz, A. Fakhru'l-Razi, A. K. Masrom, D. R. A. Biak, E. Mahdi, A. H. Hashim, F. M. Yasin, M. F. AlKhatib, & M. H. S. Ismail. (2003). Production of carbon nanotubes over Ni as substrate catalyst. Proc. 12th Scientific Conference and 13th Annual General Meeting Electron Microscopy Society of Malaysia, 673 - 678.
2. A. Fakhru'l-Razi, M. A. Atieh, N. Girun, T. G. Chuah, M. El-Sadig, & D. R. A. Biak (2005). Multiwall carbon nanotubes /Natural rubber composite. Online J. of Nanotechnology, 1, 1 - 11.
3. A. Fakhru'l-Razi, M. A. Atieh, N. Girun, T. G. Chuah, M. El-Sadig, & D. R. A. Biak (2006). Effect of multiwall carbon nanotubes on the mechanical properties of natural rubber. Composite Structure. 75. 496 - 500.
4. S. Kamarudin, D. R. Awang Biak, M. Kalil & B. T. Tey. (2008). Optimised maintenance medium of Acetobacter xylinum for bacterial cellulose production. Jurnal Gading UiTM Pahang, 12 (1), 11 - 18.
5. F. Danafar, A. Fakhru'l-Razi, M. A. M. Salleh, & D. R. A. Biak (2009). Fluidized bed catalytic chemical vapour deposition synthesis of carbon nanotubes - A review. Chemical Engineering Journal. 155, 37-48.
6. F. Danafar, A. Fakhru'l-Razi, M. A. M. Salleh, & D. R. A. Biak (2009). An innovative procedure for large-scale synthesis of carbon nanotubes by fluidized bed catalytic vapor deposition techniques. Fullerenes Nanotubes and Carbon Nanostructures, 17 (6), 652 - 663.
7. A Fakhru'l-Razi, A Pendashteh, LC Abdullah, DRA Biak, SS Madaeni (2009). Review of technologies for oil and gas produced water treatment. Journal of hazardous materials 170 (2-3), 530-551
8. F. Danafar, A. Fakhru'l-Razi, M. A. M.Salleh, & D. R. A. Biak (2011). Influence of catalytic particle size on the performance of fluidized-bed chemical vapor deposition synthesis of carbon nanotubes. Chemical Engineering Research and Design. 89, 214-223.
9. M. S. Vishkaei, M. A. M. Salleh, R. Yunus, D. R. A. Biak, F. Danafar, & F. Mirjalili (2011). Effect of short carbon fiber surface treatment on composite properties. Journal of Composite Materials, 45 (18), 1885 - 1891.
10. M.R. Atiyah, D.R.A. Biak, F. Ahmadun, I.S. Ahamad, F.M. Yassin & H.M. Yusoff (2011). Low temperature growth of vertically aligned carbon nanotubes via floating catalyst chemical vapor deposition method. Journal of Material Science & Technology, 27 (4), 296-300.
11. Rashid, M. A., A.B. Dayang Radiah, Z. A. Zurina, & A. Fakhru'l-Razi. (2011). Low-temperature synthesis of carbon nanotbues via floating catalyst chemical vapor deposition method. Fullerenes Nanotubes and Carbon Nanostructures, 19 (6), 522-531.
12. N. Hassan, D. R. A. Biak, & S. Kamarudin. (2012). Application of bacterial cellulose (BC) in natural facial scrub. Int. Journal of Adv. Science, Engineering Information Technology, 2(4), 1-4.
13. S. Adnan, D. Radiah Awang Biak. (2012). The effect of acetylation on the crystallinity of BC/CNTs nanocomposite. Journal of Chemical Technology & Biotechnology, 87 (3), 431 - 435.
14. M. N. Shahera, A. B. D. Radiah, S. S. tean, A. Sharmeen, K. Suryani, & M. Y. Faizah. (2017). Biocellulose (BC) impregnated with carbon nanotubes (CNTs) for Zinc air fuel cell application. Jurnal Fizik Malaysia, 38 (1), 10044 - 10054.

15. DRA Biak, MR Harun, R Omar, WAWAK Ghani (2017). Integrating Facilitative Teaching in Design Based Course. 7th World Engineering Education Forum (WEEF), 216-221
16. OAH Al-Musawi, AA Khadom, BA Fakhru'l-Razi, DR Biak (2018). Water distillation in a combined solar still and solar pond system: Iraq as a case study. Euro-Mediterranean Journal for Environmental Integration 3 (1), 20
17. S. Lotfiman, D. R. Awang Biak, T. B. Ti, S. Kamarudin, & S. Nibkin. (2018). Influence of date syrup as a carbon source on bacterial cellulose production by Acetobacter Xylinum 046. Advances in Polymer Technology, 37 (4), 1085 - 1091.
18. A. K. Mageed, A. B. D. Radiah, A. Salmiaton, S. Izhar, & M. A. Razak. (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.
19. N. Kamarudin, D.R. Awang Biak, Z. Zainal Abidin, F. Cardona, SM Sapuan (2020). Rheological Study of Phenol Formaldehyde Resole Resin Synthesized for Laminate Application. Materials 13 (11), 2578
20. M.S. Shoushtari, S. George, A.B.D. Radiah, D. Hoey, N. Abdullah, & S. Kamarudin (2022). Synthesis of bioactive glass using cellulose nano fibre template. Journal of the Mechanical Behavior of Biomedical Materials, 130, 105174.
21. M.S. Shoushtari, Y. S. Leow, A.B.D. Radiah, N. Abdullah, S. Alijantabar Aghouzi, D. Hoey, S. Kamarudin & HS Zainuddin (2023). Evaluation of bioactivity and antibacterial properties of biogass fabricated using cellulose nano fibre template. Materials Chemistry and Physics, 304, 127863.
22. Shoushtari, M.S., Hoey, D., Biak, D.R.A. et al. Sol–gel-templated bioactive glass scaffold: a review. Res. Biomed. Eng. (2024). https://doi.org/10.1007/s42600-024-00342-x

Chapter in Books

1. Yunus, R, Omar, R, Abidin, Z.Z. Dayang Radiah, A.B. (2012). Oil Palm As Bioenergy Feedstock in Palm Oil: Production, Processing, Characterization & Uses. AOCS
2. Abidin, Z.Z., Dayang Radiah, A.B., Yusoff, H.M. & Harun, M.Y. (2013). Solid-Liquid Extraction for Biorefinery in Biorefineries. Wiley.
3. DR Awang Biak et al. (2021). Using Systematic Integrated Design to Scaffold Capstone Project in Chemical Engineering. In High Impact Educational Practices (HIEPS): The Malaysian Higher Education Experience, Vol. 2, JPT. Ministry of Higher Education, Malaysia.

Past Research Projects

Project No	Project Title	Role	Year	Source of Fund	Status
1.	Selective Deposition and Mechanism of Growth Study of CNP on a substrate via FC-CVD Technique	Leader	2007-2009	UPM	Completed
2.	Theoretical Modelling of Pretreatment Methods for Potential Lignocellulosic Biomass Resources for Bioethanol Production in Malaysia	Leader	2007-2009	KPT	Completed
3.	Influences of dispersion states of CNTs on properties of acetyl BC-CNT Nanobiocomposites	Leader	2010-2012	KPT	Completed

4.	Formulation of Natural Facial Scrub with Bacterial Cellulose/Methylated Bacterial Cellulose Bead Exfoliants	Leader	2012-2014	KPT	Completed
5.	Study of oil/water Interphase Behaviour in a Clarifier	Leader – sub project	2012-2017	KPT	Completed
6.	Kinetics behavior & Selective Formation of CNT Bundles & GO In a Co-Synthesis Method at ambient condition	Leader	2014-2016	KPT	Completed
7.	Fractionation of Algae extract	Leader-subproject	2016-2018	UPM	Completed
8.	Bioglass for bone scaffolding	Leader-subproject	2018-2023	UPM	Completed
9.	Binders for bioglass for bone scaffold	Leader - incentive grant	2023-2025	UPM	Ongoing

Honours and Awards

Name of Awards	Title	Award Authority	Award Type	Year
Academic Awards	CICHE Scholarship	British Council	Scholarship	1997-1999
Academic Awards	CICHE Awards	British Council	Visiting Scholars - Sheffield	2001
Academic Awards	CiCHE Awards	British Council	Visiting Scholars - UMIST	2002
Academic Awards	Excellent Teaching Award	UPM	Teaching Award	2008-2023
Non-Academic Awards	Anugerah Kualiti Perdana Menteri 2004	Prime Minister Department	Innovation and Excellence	2003
Awards of Merit	Excellent Service Award	UPM	Service Award	2008-2023

Language Proficiency

- English (Excellent, 5/5)
- Malay (Excellent, 5/5)

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