



CURRICULUM VITAE

ASSOC. PROF. TS. DR. MOHD RAZIF HARUN

**Department of Chemical & Environmental
Engineering, Faculty of Engineering, UPM**



ASSOC. PROF. TS. DR. MOHD RAZIF HARUN

Department of Chemical & Environmental Engineering,

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BEng Chemical Eng.,
UTM (2006)
PhD, Monash Univ., Melbourne,
Australia (2012)
Postdoctoral Fellow,
Institut national de la recherche
agronomique (INRA), France
(2014-2016)

Appointments

Research Coordinator (2022-Present)
Head of Department (2020-2022)
Academic Coordinator II (2015-2017)
Academic Coordinator II (2017-2018)
Academic Coordinator I (2018-2019)
HEPA Coordinators (2012-2014)

Research Areas:

Renewable Energy, Biochemical Engineering (Upstream & Downstream Processing of Microalgae, Bioconversion of biomass, Bioremediation)

Publications

Scopus h-index: 25
Google Scholar: 29
Total Article: 96
Citation Index Journal: 54*
Proceedings: 40*
Book Chapter: 10*
Others: 6*
* senior author

Teaching

127 Credit Hours

9 different courses

>5 T&L innovations

Supervision (Chairman)

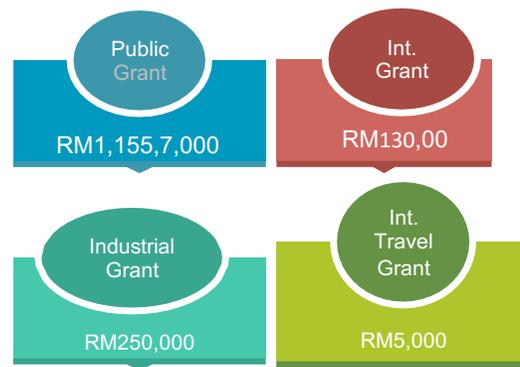
Graduated Students:
7 PhD, 4 MSc, 10 MSKK,
20 FYP Projects

**On-going Postgraduate
Students:** 4 PhDs

Intellectual Properties

1 Patent Filing & 2 Copyrights

Research Grants (PI)



Industrial Linkages (PI)

>10 TNBR, IKIM, MPSJ
Pakar Management
Technology,
Hellas TF, Next Gen Oil, PETRONAS
World New Energy Centre (WNEC)

Industrial
Projects (PI)



Community
Projects (PI)



Professional Services



Professional Membership

Malaysia Board of Technologists
(MBOT), Board of Engineers

3

Malaysia (BEM),
International Bioprocessing Society

Awards



Top 2% Word Scientists (Subject
wise, 2021, 2022, 2023)
Venus International Research
Awards (Outstanding Researcher
in Bioprocess Engineering) 2023
Vice Chancellor Fellowship
Award (Young Academia) 2017
Anugerah Perkhidmatan
Cemerlang (APC) (2013, 2018)
Research Awards (Gold & Silver)

Assoc. Prof. Ts. Dr. Mohd Razif Bin Harun

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PERSONAL DETAILS

- Gender : Male
- Race : Malay
- Citizenship : Malaysian
- Home Address : 13 Jalan Desa Mewah, Taman Desa Mewah
Kajang 43500 Selangor
- Mobile : 01110969303

EDUCATION

Monash University, Australia 2011

Doctor of Philosophy (PhD)

Universiti Teknologi Malaysia (UTM) 2006

Bachelor of Engineering (Chemical Engineering) (Hons)

APPOINTMENTS

Universiti Putra Malaysia

Deputy Dean (Graduate studies and International) 2024-Present

Research Coordinator 2023-Present

Head of Department 2020-2022

Associate Professor 2018-Present

Academic coordinator 2016-2020

Laboratoire De Biotechnologie l'Environnement, France Apr 2014 – Dec 2015
Post-doctorate

Universiti Putra Malaysia

Student Welfare Coordinator 2012-2014

Senior Lecturer 2012-2018

Tutor 2007-2008

Monash University, Australia

Jun 2008 – Jun 2011

Demonstrator

Pan Century Oleochemical Sdn. Bhd.

Apr 2006 – Jul 2007

Process Engineer

Malaysian Palm Oil Board (MPOB)

Mar 2005 – Jul 2005

Trainee

PROFESSIONAL MEMBERSHIP

Institution of Chemical Engineers (IChemE)

Jan 2016 – Jan 2018

Associate member

Malaysia Board of Technologists (MBOT)

Professional Technologists (Ts.) 2023-2024

Graduate Technologists Lifetime

Board of Engineers Malaysia (BEM)

Lifetime

Graduate Engineer

International Bioprocessing Society (IBPROCS)

Lifetime

Member

Teaching Experience

1	ECH3202	Biochemical Engineering	1 (2023/24)
2	ECH5100	Research Methodology	1 (2023/24)
3	ECH4506	Renewable Energy	2 (2022/23)
4	ECH3201	Biochemical Engineering	1 (2022/23)
5	ECH5100	Research Methodology	1 (2022/23)
6	ECH3201	Biochemical Engineering	2 (2021/22)
7	EAB5100	Research Methodology	2 (2021/22)
8	ECH5100	Research Methodology	2 (2021/22)
9	EAB5100	Research Methodology	1 (2021/22)
10	ECH5515	Evaluation & Research Methodology	1 (2021/22)
11	ECH5515	Evaluation & Research Methodology	2 (2020/21)
12	ECH3201	Biochemical Engineering	2 (2020/21)
13	ECH3704	Chemical Engineering Reaction Kinetics	1 (2020/21)
14	ECH5511	Health, Safety and Environmental Protection	1 (2020/21)
15	ECH5515	Evaluation & Research Methodology	2 (2019/20)
16	ECH3201	Biochemical Engineering	1 (2019/20)
17	ECH5511	Health, Safety and Environmental Protection	1 (2019/20)
18	ECH5515	Evaluation & Research Methodology	2 (2018/19)
19	ECH4506	Renewable Energy	2 (2018/19)
20	ECH4406	Renewable Energy	2 (2017/18)
21	ECH5515	Evaluation & Research Methodology	2 (2017/18)
22	ECH5515	Evaluation & Research Methodology	1 (2017/18)
23	ECH3201	Biochemical Engineering	1 (2017/18)
24	ECH4204	Pharmaceutical Engineering	2 (2016/17)
25	ECH5505	Reliability and Maintainability	2 (2016/17)
26	ECH3701	Reaction Kinetics and Reactor Design	2 (2016/17)

27	ECH5515	Evaluation & Research Methodology	2 (2016/17)
28	ECH5515	Evaluation & Research Methodology	2 (2016/17)
29	ECH5509	Evaluation of Health, Safety and Environment	1 (2016/17)
30	ECH5515	Evaluation & Research Methodology	1 (2016/17)
31	ECH3201	Biochemical Engineering	1 (2016/17)
33	ECH3701	Reaction Kinetics and Reactor Design	2 (2015/16)
34	ECH5509	Evaluation of Health, Safety and Environment	2 (2015/16)
35	ECH5509	Evaluation of Health, Safety and Environment	1 (2015/16)
36	EAB5401	Hazard, Risk and Ethics	1 (2015/16)
37	ECH3201	Biochemical Engineering	1 (2015/16)
38	ECH5509	Evaluation of Health, Safety and Environment	2 (2014/15)
39	ECH5509	Evaluation of Health, Safety and Environment	1 (2013/14)
40	ECH3113	Heat Transfer Process	1 (2013/14)
41	ECH4503	Air Pollution Engineering	2 (2012/13)
42	ECH5509	Evaluation of Health, Safety and Environment	2 (2012/13)
43	ECH3113	Heat Transfer Process	1 (2012/13)
44	ECH4503	Air Pollution Engineering	2 (2011/12)

Supervision of Students

DOCTOR OF PHILOSOPHY

Principal Supervisor

1	GS55535	Liyana binti Yahya	On-going
2	GS55538	Nur Muhammad Afifi bin Zainal	On-going
3	GS57320	Siti Nur Atikah binti Mahamud	On-going
4	GS66043	Noorsuria binti Suradi	On-going
5	GS46981	Quin Anak Emparan	Graduated
6	GS45420	Anis Nurdhiani binti Rosdi	Graduated
7	GS44619	Bernard Ho Chon Han	Graduated
8	GS47748	Shiva Rezaei Motlagh	Graduated
9	GS39710	Selvakumar Thiruvankadam	Graduated
10	GS48058	Nur Hidayah binti Zainan	Graduated
11	GS43216	Syed Amirebrahim Emami Moghaddam	Graduated

MASTERS BY RESEARCH

Principal Supervisor

1	GS46978	Siti Nur Atikah binti Mahamud	Graduated
2	GS33097	Nik Norfadilah binti Nik Kob	Graduated
3	GS37815	Saidatul Aliaa binti Awaluddin	Graduated
4	GS38425	Abdul Raheem	Graduated

DOCTOR OF PHILOSOPHY

Co-Supervisor

1	GS50155	Rakesh Donepudi	On-going
2	GS55473	Nurfarahana binti Mohd Nasir	On-going
3	GS57974	Samaneh Alijantabaraghousi	On-going
4	GS50605	Noor Amirah binti Abdul Halim	Graduated
5	GS46053	Nur Izzati binti Md Saleh	Graduated
6	GS34235	Zahra Maghareh Esfahan	Graduated
7	GS45066	Nour A. T. Zghaibi	Graduated
8	GS39788	Siti Maisurah binti Zakaria	Graduated
9	GS32214	Muhammad Tariq Bashir	Graduated
10	GS32220	Nazaitulshila binti Rasit	Graduated

MASTERS BY RESEARCH

Co-Supervisor

1	GS59595	Fateen Izzati binti Zulkifli	Defer
2	GS63583	Khairina binti Jaman @ Zaman	Graduated
3	GS64878	Nur Ain Fitriah binti Zamrisham	On-going
4	GS49765	Alif Syafiq bin Kamarol Zaman	Graduated
5	GS47350	Nurafifah binti Mat Fuad	Graduated
6	GS34007	Mohd Ashraf bin Zainol Abidin	Graduated
7	GS33165	Musa Idris Tanimu	Graduated

MASTERS WITHOUT THESIS

Principal Supervisor

1. Vissal a/l Balasandar 2022/23
2. Mohd Aslam Jusoh 2021/22
3. Viviathevan A/L Tamil Selvan 2020/21
4. Mohamad Azril Bin Abdul Jalil 2020/21
5. Hussien Alkaff 2020/21
6. Syed Malek bin Syed Muhammad 2019/10
7. Ahmad Afizul Haq bin Abdul Razak 2018/19
8. Wan Nurhazirah bt Wan Harun 2018/19
9. Mohd Yunus bin Yusof 2017/18
10. Nur Ibthisyam binti Zahari 2017/18
11. Sazali Saini 2017/18
12. Wan Muhamad Anis Wan Mat 2016/17
13. Rohela Mohamad 2016/17
14. Noroeffarizal bt Ibrahim 2016/17
15. Fasahah Anour 2016/17
16. Sharifah Rahimah Sayed Idrus 2015/16
17. Mohd Noor Azli Isa 2015/16
18. Mohd Hafizuddin Hasni 2015/16
19. Amakhian Paul 2013/14
20. Hubert Gan 2012/13

Research

PROJECTS AND GRANTS

Principal Investigator

1	Development of a cost-effective cultivation method for microalgae.	RUGS (Vot.9346900)	2012-2014	RM 30,000
2	Speciation and kinetic modeling of microalgae cultivation to enhance biomass production.	FRGS (Vot.5524378)	2013-2015	RM 75,500
3	An integrated thermochemical and fermentation system for conversion of microalgal biomass for production.	PUTRA (Vot.9442000)	2015-2017	RM 140,000
4	Modelling microalgal gasification using thermodynamic equilibrium approach.	FRGS (Vot.5524736)	2015-2017	RM 57,000
5	An optimization study of sub-critical water extraction (SWE) of omega-3 fatty acid from <i>Nannochloropsis gaditana</i> .	GP-IPS (Vot.9491700)	2016-2018	RM 20,000
6	Cultivation kinetics and dewatering of <i>Nannochloropsis</i> sp. for high lipids and biomass production.	GP-IPB (Vot.9483900)	2016-2018	RM 70,000
7	One-step process for microalgal biodiesel production using subcritical water extraction (SWE) technology.	GP-IPS (Vot.9481000)	2016-2017	RM 20,000
8	One-step subcritical extraction process for microalgal biodiesel production	MOSTI (Vot.5450818)	2016-2019	RM 282,000
9	Omega-3 extraction from microalgae biomass via supercritical CO ₂ extraction (SFE): experimental and mathematical modelling.	GP-IPS (Vot.9573300)	2017-2019	RM 25,000
10	Optimization of bioactive compounds production from brown seaweed using green extraction approach.	GP-IPS (Vot.9573400)	2017-2019	RM 25,000

11	Process kinetics and modelling of microalgal protein extraction via subcritical water technology	FRGS (Vot.5540200)	2019-2022	RM 95,200
12	Development of a Novel Closed Photobioreactor for Outdoor Mass Culture of Microalgae	SATREPS (Vot.6300853)	2020-2023	RM180,000
13	Blue-seed Program (Microalgae system)	Blue-seed (Vot.6304000)	2022-2024	RM130,000
14	Application of alginate-based microalgae beads as fish feed	Geran Putra Inisiatif (Vot.9756900)	2022-2024	RM6,000

PROJECTS AND GRANTS

Project Member

1	The effectiveness of chilled pipe as root zone cooling mechanism for strawberry cultivation in lowland area	GP-IPS (Vot.9399811)	2014	RM 15,000
2	Microencapsulation of antitumor and anticancer metabolites from newly isolated lactobacillus and Enterococcus strain from vagina microbiota using herbal-based biopolymer	PUTRA (Vot.9443200)	2015-2017	RM 127,200
3	Evaluation and modeling of subcritical water extraction (SWE) of bioactive compounds from microalgae polysaccharides	FRGS (Vot.5524732)	2015-2017	RM 118,000
4	The use of virtual laboratory demonstrations to enhance laboratory teaching for undergraduate.	GIPP (Vot.9323654)	2015-2017	RM 10,000
5	Dewatering of Nannochloropsis sp. for high lipids and biomass production	GP-IPB (Vot.9483900)	2016-2018	RM 50,000
6	Evaluation on extraction of omega-3 from Nannochloropsis sp. using subcritical water technique	GP-IPB (Vot.9483900)	2016-2018	RM 100,000

7	Feasibility study of application of ionic liquids (ILs) in bio-product development from microalgae and lignocellulosic materials.	MATCHING GRANT (Vot.9300432)	2017-2019	RM 50,000
8	Formulating bacteria base material for self-healing concrete	FRGS (Vot.5540071)	2019-2021	RM 98,000
9	Elucidating the formulation, biological activity, and physical integrity of algae-printed living material for sustainable wearables and structures.	FRGS (Vot.5540554)	2022-2024	RM 187,376
10	Optimization Of Enzymatic Hydrolysis From Microalgae And Bioactive Peptide Fractionation Using Ultrafiltration Membrane As Antioxidants.	GP-IPS (Vot.9635800)	2022-2024	RM 25,000
11	Enhancing Anaerobic Co-Digestion of Cow Manure and Molasses Residue With Agro-Waste and Decanter Cake-Derived Activated Carbon: Performance Comparison and Kinetic Analysis	GP-IPS (Vot.9731000)	2022-2024	RM 20,000
12	The study of ionic liquid-alginate filtration system for ions removal from industrial waste water	MATCHING GRANT (Vot.9300475)	2022-2024	RM 20,000

Publications

H-INDEX (with total citations)

1. Scopus	25	4073
2. Google Scholar	29	6053

JOURNAL PUBLICATIONS

Senior Author (Scopus-Indexed Journal)

1. Zainal A, **Harun R**, Yahya L, Idrus S. "Operational process stability in pilot dry anaerobic digester of source-sorted organic fraction municipal solid waste." *Asia-Pac J Chem Eng*. 2024
2. Shiva Rezaei Motlagh, Amal A. Elgharbawy, Ramin Khezri, **Razif Harun** & Rozita Omar. "Ionic liquid assisted extraction of protein from Nannochloropsis biomass." *Biomass Conversion and Biorefinery*. 13 (2023): 8327-8338
3. Yahya L., **Harun R.**, Zainal A., Farahin A.W. "Evaluation of bioactive compounds from robust consortium microalgae species under actual flue gas exposure." *Biochemical Engineering Journal*. 190(2023): 108739
4. Shiva Rezaei Motlagh, **Razif Harun**, Dayang Radiah Awang Biak, Siti Aslina Hussain, Amal A. Elgharbawy, Ramin Khezri, Cecilia Devi Wilfred. "Ionic liquid method for the extraction of lipid from microalgae biomass: a review." *Biomass Conversion and Biorefinery*. 13 (2023): 11417–11439
5. Motlagh SR, Khezri R, **Harun R**, Awang Biak DR, Hussain SA, Chee CY. "Kinetic and thermodynamic studies of eicosapentaenoic acid extraction from Nannochloropsis oceanica using tetramethyl ammonium chloride and microwave irradiation." *PLoS ONE*. 17 (2022).
6. Zainan, Nur Hidayah, Sapardi, Mohd Azan Mohammed, Ho, Bernard Chon Han, Siajam, Shamsul Izhar, Kamal, Siti Mazlina Mustapa, Danquah, Michael K., **Harun, Razif**. "Kinetic and thermodynamic characterization of amino acids generation via subcritical water reaction of microalgae Nannochloropsis sp. biomass." *Biomass Conversion and Biorefinery*. 12 (2022): 2001-2014
7. S. N. Atikah, W. A. K. G. Wan Azlina, Y. H. Taufiq-Yap, Omar Mahmoud, A. S. El-Shafay, R. A. Ilyas, and **Razif Harun**. "Gasification Characteristics and Kinetics of Lipid-Extracted Nannochloropsis gaditana." *Processes*. 10(2022):1525

8. Nur Hidayah Binti Zainan, **Razif Harun**, Siti Mazlina Mustapa Kamal, Mohd Azan Mohammed Sapardi, Yanti Maslina Mohd Jusoh. "Profile of Amino Acids Production from Microalgae *Nannochloropsis* sp. Biomass using Subcritical Water Technology." *Asean Journal of Chemical Engineering*. 22(2022): 178-195
9. Syed Malek Syed Muhammad, **Razif Harun**. "Redesign identification criteria for major hazard installation in Malaysia." *Process Safety Progress*. 41(2022): 68-74
10. Atikah M.S.N., Taufiq Yap Y.H, Ilyas R.A., **Harun, Razif**. "Optimization of Algae Residues Gasification: Experimental and Theoretical Approaches." *Journal of Physics: Conference Series*. 2259(2022)
11. Zainal Nor Afifi, Syazwani, **Razif Harun**. "Performance monitoring of anaerobic digestion at various organic loading rates of commercial Malaysian food waste." *Frontiers in Bioengineering and Biotechnology* (2022)
12. Emparan Q., **Harun R.**, Sing Jye Y. "Efficiency of pollutants removal in treated palm oil mill effluent (TPOME) using different concentrations of sodium alginate- immobilized *Nannochloropsis* sp. cells." *International Journal of Phytoremediation* (2021)
13. Shiva Rezaei Motlagh, **Razif Harun**, Dayang Radiah Awang Biak, Siti Aslina Hussain, Amal A. Elgharbawy, Ramin Khezri, Cecilia Devi Wilfred. "Ionic liquid-based microwave-assisted extraction of lipid and eicosapentaenoic acid from *Nannochloropsis oceanica* biomass: experimental optimization approach." *Journal of Applied Phycology*. 22(2021): 2015–2029
14. Tan Kean Meng, **Razif Harun**, Ramizah Kamaludin, Mohd Asyraf Kasim. "Microalgal biorefinery: Challenge and strategy in bioprocessing of microalgae carbohydrate for the chemicals and biofuel." *Journal of Applied Biology & Applied Biotechnology*. 9(2021)
15. Nur Baiti Listyaningrum, Muhammad Mufti Azis, Sarto Sarto, Anis Nurdhiani Rosdi, **Mohd Razif Harun**. "Kinetic Study of Subcritical Water Extraction of Carbohydrate from Microalgae *Nannochloropsis* sp." *ASEAN Journal of Chemical Engineering*. 21(2021)
16. Jeevanandam, Jaison, **Harun, Mohd Razif**, Lau, Sie Yon, Sewu, Divine D., Danquah, Michael K. "Microalgal biomass generation via electroflotation: A cost-effective dewatering technology." *Applied Sciences*. 10(2020)
17. Liyana Yahya, **Razif Harun**, Luqman Chuah. "Screening of native microalgae species for carbon fixation at the vicinity of Malaysian coal-fired power plant." *Scientific Reports*. 10 (2020)
18. Shiva Rezaei Motlagh, **Razif Harun**, Dayang Radiah Awang Biak, Siti Aslina Hussain, Amal A. Elgharbawy, Ramin Khezri, Cecilia Devi Wilfred. "Prediction of potential ionic liquids (ILs) for

the solid-liquid extraction of docosahexaenoic acid (DHA) from microalgae using COSMO-RS." *Biomolecules*. 10(2020): 1149

19. Quin Emparan, **Razif Harun**, Jeevasheny Anang. "Effect of microalgae-to-palm oil mill effluent (POME) ratio for rapid effective pollutants removal and biomass production." *Desalination and Water Treatment*. 198 (2020): 119–125
20. Quin Emparan, Michael Danquah, **Razif Harun**. "Cultivation of *Nannochloropsis* sp. microalgae in palm oil mill effluent (POME) media for phycoremediation and biomass production: effect of microalgae cells with and without beads." *Journal of Water Process Engineering*. 33 (2020): 101043
21. Emami Moghaddam, **Razif Harun**, Mokhtar, M.N, Zakaria, R. "Kinetic and equilibrium modeling for the biosorption of metal ion by Zeolite-Algal-Alginate Beads (ZABs)." *Journal of Water Process Engineering*. 33 (2020): 101057
22. Zainan, N.H., Thiruvankadam, S., Danquah, M.K., **Harun, R.** "Biochemical analysis and potential applications of aqueous and solid products generated from subcritical water extraction of microalgae *Chlorella pyrenoidosa* biomass." *Journal of Applied Phycology*. 32(2020): 111-1126
23. Rezaei Motlagh, S., **Harun, R.**, Biak, D.R.A., Hussain, S.A. "Microwave assisted extraction of lipid from *Nannochloropsis gaditana* microalgae using [EMIM]Cl." *IOP Conference Series: Materials Science and Engineering*. 778(2020): 12164
24. Motlagh, S.R., **Harun, R.**, Awang Biak, D.R, Omar, R., Elgharbawy, A.A. "COSMO-RS based prediction for alpha- linolenic acid (ALA) extraction from microalgae biomass using room temperature ionic liquids (RTILS)." *Marine Drugs*. 18(2020): 108
25. Motlagh, Shiva Rezaei, **Harun, Razif**, Biak, Dayang Radiah Awang, Hussain, Siti Aslina, Ghani, Wan Azlina Wan Ab Karim, Khezri, Ramin, Wilfred, Cecilia Devi, Elgharbawy, Amal A.M. "Screening of long chain imidazolium base ionic liquids for EPA and DHA extraction from microalgae using COSMO-RS model." *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences*. 58(2019): 23-29
26. Motlagh, Shiva Rezaei, **Harun, Razif**, Biak, Dayang Radiah Awang, Hussain, Siti Aslina, Ghani, Wan Azlina Wan Ab Karim, Khezri, Ramin, Wilfred, Cecilia Devi, Elgharbawy, Amal A.M. "Screening of suitable ionic liquids as green solvents for extraction of eicosapentaenoic acid (EPA) from microalgae biomass using COSMO-RS model." *Molecules*. 24(2019): 713
27. Quin Emparan, Michael Danquah, **Razif Harun**. "Role of phycoremediation for nutrient removal from wastewaters: A review." *Applied Ecology and Environmental Research*. 17 (2019): 889-915

28. Quin Emparan, **Razif Harun**, Jye Yew Seng. "Phycoremediation of treated palm oil mill effluent (TPOME) using nanochloropsis sp. cells immobilized in the biological sodium alginate beads: Effect of POME concentration." *BioResources*. 14(2019): 9429-9443
29. Atikah M.S.N., **Harun, Razif**. "Simulation and Optimization of Chlorella vulgaris Gasification Using Aspen Plus." *Process Integration and Optimization for Sustainability*. 3(2019): 349-357
30. Emami Moghaddam, **Razif Harun**, Mokhtar, M.N, Zakaria, R. "Stability improvement of algal-alginate beads by zeolite molecular sieves 13X." *International Journal of Biological Macromolecules*. 132 (2019); 592-599
31. Bashir M.T., Salmiaton A., Idris A., **Harun R**. "Monitoring kinetic and thermodynamic parameters of fluoride adsorption from aqueous solution by pks-based anion resins." *Journal of Mechanical Engineering and Sciences* (2018)
32. Emami Moghaddam, **Razif Harun**, Mokhtar, M.N, Zakaria, R. "Potential of Zeolite and Algae in Biomass Immobilization." *BioMed Research International*. (2018)
33. Thiruvankadam, Selvakumar, Shamsul Izhar, Hiroyuki Yoshida, Michael K. Danquah, and **Razif Harun**. "One-step microalgal biodiesel production from Chlorella pyrenoidosa using subcritical methanol extraction (SCM) technology." *Biomass & Bioenergy*. 120(2018): 265-272
34. Ho, Bernard Chon Han, Kamal, Siti Mazlina Mustapa, Danquah, Michael K., **Harun, Razif**. "Optimization of Subcritical Water Extraction (SWE) of Lipid and Eicosapentaenoic Acid (EPA) from Nannochloropsis gaditana." *Biomed Research International*. (2018)
35. Thiruvankadam, Selvakumar, Shamsul Izhar, Hiroyuki Yoshida, Michael K. Danquah, and **Razif Harun**. "Subcritical Water Extraction of Chlorella pyrenoidosa: Optimization through Response Surface Methodology." *Biomed Research International*. (2018)
36. Bernard Chon Han Ho, Siti Mazlina Mustapa Kamal, **Razif Harun**. "Extraction of eicosapentaenoic acid from nanochloropsis gaditana using sub-critical water extraction." *Malaysian Journal of Analytical Sciences*. 22(2018): 619-625
37. Nur Hidayah Zainan, Mohd. Azizi Che Yunus, **Razif Harun**. "Preliminary study on lipid extraction from Nannochloropsis salina using supercritical carbon dioxide method." *The Malaysian Journal of Fundamental and Applied Sciences (MJFAS)*. 14 (2018)
38. Raheem, Abdul, Abbasi, Sikandar Ali, Memon, Asif, Samo, Saleem R, Taufiq-Yap Y.H., Danquah, Michael K., **Harun, Razif**. "Renewable energy deployment to combat energy crisis in Pakistan." *Energy, Sustainability and Society*. 6(2016): 16

39. Raheem, Abdul, Valerie Dupont, Abdul Qadir Channa, Xiao Zhao, Arun K. Vuppaladadiyam, Yun-Hin Taufiq-Yap, Ming Zhao, and **Razif Harun**. "Parametric Characterization of Air Gasification of *Chlorella vulgaris* Biomass." *Energy & Fuels* 31, no. 3 (2017): 2959-2969.
40. Awaluddin, S. A., Selvakumar Thiruvankadam, Shamsul Izhar, Yoshida Hiroyuki, Michael K. Danquah, and **Razif Harun**. "Subcritical water technology for enhanced extraction of biochemical compounds from *Chlorella vulgaris*." *BioMed research international* 2016 (2016).
41. Awaluddin, S. A., Shamsul Izhar, Yoshida Hiroyuki, Michael K. Danquah, and **Razif Harun**. "Sub-critical Water Technology for Enhance Extraction of Bioactive Compound from Microalgae." *Journal of Engineering Science and Technology, Special Issue on SOMCHE 2015, July* (2016) 63 - 72
42. Raheem, Abdul, Wan Azlina WAKG, YH Taufiq Yap, Michael K. Danquah, and **Razif Harun**. "Optimization of the microalgae *Chlorella vulgaris* for syngas production using central composite design." *Rsc Advances* 5, no. 88 (2015): 71805-71815.
43. Thiruvankadam, Selvakumar, Shamsul Izhar, Hiroyuki Yoshida, Michael K. Danquah, and **Razif Harun**. "Process application of Subcritical Water Extraction (SWE) for algal bio-products and biofuels production." *Applied energy* 154 (2015): 815-828.
44. Raheem, Abdul, WAKG Wan Azlina, YH Taufiq Yap, Michael K. Danquah, and **Razif Harun**. "Thermochemical conversion of microalgal biomass for biofuel production." *Renewable and Sustainable Energy Reviews* 49 (2015): 990-999.
45. Raheem, Abdul, S. Sivasangar, WAKG Wan Azlina, YH Taufiq Yap, Michael K. Danquah, and **Razif Harun**. "Thermogravimetric study of *Chlorella vulgaris* for syngas production." *Algal Research* 12 (2015): 52-59.
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JOURNAL PUBLICATIONS

Co-Author (Scopus-Indexed Journal)

1. Zamrisham, Nur Ain Fitriah, Syazwani Idrus, **Mohd Razif Harun**, Mohd Shahrizal Ab Razak, and Khairina Jaman. "Biogas production by integrating lava rock, red clay & ceramic bio ring as support carrier in treatment of landfill leachate with liquidised food waste." *Biochemical Engineering Journal* 204 (2024): 109221.
2. Nasir, Nurfarahana Mohd, Jusoh, Ahmad, **Harun, Razif**, Ibrahim, Nik Nor Liyana Nik, Rasit, Nazaitulshila, Ghani, Wan Azlina Wan Abdul Karim, Kurniawan, Setyo Budi. Nutrient consumption of green microalgae, *Chlorella* sp. during the bioremediation of shrimp aquaculture wastewater. *Algal Research*. 72(2023)
3. Jaman, Khairina, Idrus, Syazwani, Wahab, Abdul Malek Abdul, **Harun, Razif**, Daud, Nik Norsyahariati Nik, Ahsan, Amimun, Shams, Shahriar, Uddin, Md. Alhaz. Influence of Molasses Residue on Treatment of Cow Manure in an Anaerobic Filter with Perforated Weed Membrane and a Conventional Reactor: Variations of Organic Loading and a Machine Learning Application. *Membranes*. 13(2023)

4. Siti Maisurah Zakaria, Siti Mazlina Mustapa Kamal, **Mohd Razif Harun**, Rozita Omar & Shamsul Izhar Siajam. Extraction of phenolic compounds from *Chlorella* sp. microalgae using pressurized hot water: kinetics study. *Biomass Conversion and Biorefinery* volume 12 (2022); 2081–2089
5. Khairina Jaman, Nurjannah Amir, Mohammed Ali Musa, Afifi Zainal, Liyana Yahya, Abdul Malek Abdul Wahab, Sri Suhartini, Tuan Nurfarhana Tuan Mohd Marzuki, **Razif Harun**, and Syazwani Idrus. 2022. Anaerobic Digestion, Codigestion of Food Waste, and Chicken Dung: Correlation of Kinetic Parameters with Digester Performance and On-Farm Electrical Energy Generation Potential. *Fermentation*. (2022)
6. Timotius, Daniel, Kusumastuti, Yuni, Omar, Rozita, **Harun, Razif**, Kamal, Siti Mazlina Mustapa, Jenie, Siti Nurul Aisyiyah, Petrus, Himawan Tri Bayu Murti The Study of Methylene Blue Loading into Chitosan-graft-Maleic Sponges. *International Journal of Technology*. 13(2022):1796-1805
7. Segaran, Ramyah, Omar, Rozita, Kusumastuti, Yuni, **Harun, Razif**, Kamal, Siti Mazlina Mustafa. Combined microwave-assisted subcritical liquid extraction of chitosan from crab shell waste. *Progress on Chemistry and Application of Chitin and its Derivatives*. 27(2022): 204-216
8. Halim N.A.A., Abidin Z.Z., Siajam S.I., Hean C.G., **Harun M.R.** Optimization studies and compositional analysis of subcritical water extraction of essential oil from *Citrus hystrix* DC. Leaves. *Journal of Supercritical Fluids*. 178 (2021)
9. Md Saleh N.I., Wan Ab Karim Ghani W.A., Mustapa Kamal S.M., **Harun R.** Performance of single and two-stage cross-flow ultrafiltration membrane in fractionation of peptide from microalgae protein hydrolysate (*Nannochloropsis gaditana*). *Processes*, 9 (2021)
10. Fuad N., Omar R., Kamarudin S., **Harun R.**, Idris A., Wan Azlina W.A.K.G. Harvesting Marine Microalgae *Nannochloropsis* sp. using Dissolved Air Flotation (DAF) Technique. *Sains Malaysiana*, 50 (2021)
11. Halim N.A.A., Abidin Z.Z., Siajam S.I., Hean C.G., **Harun M.R.** Screening of factors influencing the yield of *Citrus hystrix* leaves essential oil extracted via pressurized hot water extraction based on resolution V fractional factorial design. *Journal of Food Process Engineering*, 43 (2020)
12. Zakaria S.M., Kamal S.M.M., **Harun R.**, Omar R., Siajam S.I. Characterization on phenolic acids and antioxidant activity of *Chlorella* sp. microalgae using subcritical water extraction. *Sains Malaysiana*. 49 (2020): 765-774

13. Zghaibi N., Omar R., Kamal S.M.M., Biak D.R.A., **Harun R.** Kinetics study of microwave-assisted brine extraction of lipid from the microalgae *Nannochloropsis* sp. *Molecules*, 25 (2020)
14. Esfahan Z.M., Izhar S., Ismail M.H.S., Kamyab H., Hiruyuki Y., **Harun R.** Synthesis and swelling kinetic study of bsa-based hydrogel composite by subcritical water technology. *Journal of Environmental Treatment Techniques*, 8 (2020)
15. Musa M.A., Idrus S., **Harun M.R.**, Marzuki T.F.T.M., Wahab A.M.A. A comparative study of biogas production from cattle slaughterhouse wastewater using conventional and modified upflow anaerobic sludge blanket (UASB) reactors. *International Journal of Environmental Research and Public Health*, 17 (2020)
16. Zghaibi N., Omar R., Kamal S.M.M., Biak D.R.A., **Harun R.** Microwave-assisted brine extraction for enhancement of the quantity and quality of lipid production from microalgae *nannochloropsis* sp. *Molecules*, 24 (2019)
17. Saleh N.I.M., Ghani W.A.W.A.K., **Harun M.R.**, Kamal S.M.M. Optimization of enzymatic hydrolysis for the production of antioxidative peptide from *Nannochloropsis gaditana* using response surface methodology. *Pertanika Journal of Science and Technology*, 27 (2019):41-55
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19. Fuad N., Omar R., Kamarudin S., **Harun R.**, Idris A., Wan Azlina W.A.K.G.. Effective use of tannin based natural biopolymer, AFlok-BP1 to harvest marine microalgae *Nannochloropsis*. *Journal of Environmental Chemical Engineering*. 6 (2018): 4318-4328
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22. Zakaria, S. M., SM Mustapa Kamal, **M. R. Harun**, R. Omar, and S. I. Siajam. "Extraction of antioxidants from *Chlorella* sp. using subcritical water treatment." In IOP Conference Series: Materials Science and Engineering, vol. 206, no. 1, p. 012035. IOP Publishing, 2017.
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- Chlorella sp. Microalgae and Assessment on Its Antioxidant Activity." *Molecules* 22, no. 7 (2017): 1105.
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International

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2. **Razif Harun**. Essentials in building a thriving algae ecosystem. Global Algae Summit (GAS) 2023. Universiti Teknologi Malaysia (UTM), Kuala Lumpur
3. **Razif Harun**. Microalgae for biofuel. International Conference on Clean Energy and Electric Power Engineering (ICCEPE 2022). AEIC Academic Exchange Information Center. China
4. **Razif Harun**. Microalgae for high value products. Quest International University Interscience Symposium (QISS 2022), Perak, Malaysia
5. **Razif Harun**, Farahin Abd Wahab, Natrah Ikhsan, Fatimah Yusoff, Tatsuki Toda. Microalgae for aquaculture applications. Microalgae for high value products. World Aquaculture Singapore (WAS 2022). Singapore
6. Abdul Wahab Farahin, **Razif Harun**, Divyashini Mohan, AbdulRahman Ahmed Qanaan, Masahiro Otake, Quin Emparan, Natrah Ikhsan, Fatimah Yusoff, Tatsuki Toda. Preliminary Study: Productivity of *Isochrysis galbana* in an outdoor scale-up multiple bag reactor system. World Aquaculture Singapore (WAS 2022). Singapore
7. Quin Emparan, **Razif Harun**, Rozita Omar, Dayang Radiah AwangBiak, Aida Isma Mohd Idris. Potential application of phycoremediation technology using *Chlorella vulgaris* for palm oil mill effluent treatment: an experimental study. World Aquaculture Singapore (WAS 2022). Singapore
8. **Razif Harun**, Farahin Wahab, Fatimah Yusoff. Evolution of microalgae photobioreactors COSMOS International Conference (CIC 2022). Kuala Lumpur
9. Zainal Nor Afifi, Syazwani, **Razif Harun**. Performance monitoring of anaerobic digestion at various organic loading rates of commercial Malaysian food waste. 1st International Conference on Innovation In Chemical Engineering (ICICET 2021), Universiti Putra Malaysia, Malaysia (UPM), Serdang, Selangor

10. Liyana Yahya, **Razif Harun**, Luqman Chuah, Screening of native microalgae species for carbon fixation at the vicinity of Malaysian coal-fired power plant. 1st International Conference on Innovation In Chemical Engineering (ICICET 2021). Universiti Putra Malaysia, Malaysia (UPM), Serdang, Selangor
11. **Razif Harun**. Microalgae for food and energy applications. International Bioprocessing Association Subject Conference (IBASC2021). Yogyakarta, Indonesia
12. M.S.N. Atikah, Y.H. Taufiq Yap, **Razif Harun**. Optimization of algae residues gasification: Experimental and theoretical Approach. 9th Conference On Emerging Energy & Process Technology (CONCEPT2021). Universiti Teknologi Malaysia (UTM), Skudai, Johor
13. S Rezaei Motlagh, **R Harun**, D R A Biak, and S A Hussain. Microwave Assisted Extraction Of Lipid From Nannochloropsis Gaditana Microalgae Using [EMIM]Cl. 26th Regional Symposium on Chemical Engineering (RSCE2019). Universiti Malaya, Kuala Lumpur
14. Quin Emparan, **Razif Harun**, Dayang R.A- Biak. Rozita Omar, Michael K. Danquah. Formulation and Characterization of NaCS-PDMDAAC Capsules with Immobilized Chlorella vulgaris for Phycoremediation of Palm Oil Mill Effluent. International Conference on Algae Biotechnology and Biofuels. 2019. Sydney, Australia
15. **Razif Harun**. Pursuing sustainability through circular economy. Microalgae for food and energy applications. 2nd Annual Symposium on solid waste refinery (ANSWER) 2019. Yogyakarta, Indonesia
16. Seyed Amirebrahim Emami Moghaddam, **Razif Harun***, Mohd Noriznan Mokhtar, Rabitah Zakaria, Potential of zeolite 13X as a carrier for algal immobilization 5th International Conference on Biotechnology Engineering (ICBioE 2018), Selangor, Malaysia
17. Shiva Razeligh, **Razif Harun**, Cecilia, Screening of Ionic Liquids by COSMO-RS, 5th International Conference on Biotechnology Engineering (ICBioE 2018), Selangor, Malaysia
18. Nur Hidayah Zainan, Tan Zyi Yie, Michael Kobina Danquah, **Razif Harun**. Cultivation of High lipid biomass microalga. 27th Scientific Conference MSM 2018, Kuala Lumpur
19. **Razif Harun**. Phycoremediation of microalgae. International Conference on Green & Sustainable Chemical Sciences. 2018. Dawood University, Pakistan
20. **Razif Harun**. Microalgae as carbon reduction agent. International Conference on Artificial Intelligence And Robotics 2018. Putrajaya

21. Atikah Mahmud, **Razif Harun**. Simulation and optimization of *Chlorella vulgaris* gasification in Aspen plus. 6th Conference on Emerging Energy & Process Technology 2017, Johor, Malaysia
22. Bernard Ho, Siti Mazlina Mustafa Kamal, **Razif Harun**. Extraction of Eicosapentaenoic Acid (EPA) from *Nannochloropsis gaditana* using Sub-critical Water Extraction (SWE) Method. International Conference on Separation Technology 2017 (ICoST 2017). Johor, Malaysia
23. Anis Nurdhiani Rosdi, Sarania Sundram Pillai, Siew-Moi Phang, **Razif Harun**. Subcritical Water Extraction (SWE) of brown seaweed for bioactive compounds production. World Research & Innovation Convention on Engineering & Technology, Langkawi 2016
24. Bernard Ho, **Razif Harun**. Extraction of Bioactive Compounds from *Nannochloropsis gaditana* via Sub-critical Water Extraction (SWE). World Research & Innovation Convention on Engineering & Technology, Langkawi 2016
25. Saidatul Aliaa Awaluddin, **Razif Harun**. Subcritical Water Technology for Enhanced Extraction of Biochemical Compounds from *Chlorella vulgaris*. World Research & Innovation Convention on Engineering & Technology, Langkawi 2016
26. Selvakumar Thiruvankadam, **Razif Harun**. Subcritical Water Extraction of algal oil from *Chlorella pyrenoidosa*. World Research & Innovation Convention on Engineering & Technology, Langkawi 2016
27. Nurul Aziz, Wan Azlina W.A.K.G, Taufiq Yap Y.H, Michael K. Danquah, **Razif Harun**. Preliminary study on syngas fermentation from microalgal biomass. World Research & Innovation Convention on Engineering & Technology, Langkawi 2016
28. **Razif Harun**, Michael K. Danquah. Modelling Growth of Microalgae *Nannochloropsis* Sp. Cultivated in Outdoor Bag Photo-Bioreactors. The Fifth Annual Asian Conference on Sustainability, Energy and the Environment, Kobe Japan 2015.
29. **Razif Harun**, Bruno Sialve, Michel Torrijos, Jean-Philippe Steyer and Danquah M. K. Effect of Pre-Treatment on Methane Production from Microalgal Biomass. The Fifth Annual Asian Conference on Sustainability, Energy and the Environment, Kobe Japan 2015
30. **Razif Harun**, Michael K. Danquah. Particulate size of microalgal biomass affects hydrolysate properties and bioethanol concentration. 2013 Hong Kong International conference on Engineering and Applied science. Hong Kong 2013

31. **Razif Harun**, Michael K. Danquah. Alkaline Pre-treatment of Microalgal Biomass for Bioethanol Production. AIChE Annual Meeting 2010, Salt Lake City, Utah- United States, 2010.
32. **Razif Harun**, Michael Davidson, Mark Doyle, Rajprathab Gopiraj, Michael Danquah, Gareth Forde. Analysis of an integrated microalgae photobioreactor, biodiesel and biogas production facility. Chemeca 2010, Adelaide- South Australia 2010.
33. **Razif Harun**, Michael Danquah, Gareth Forde. Exploration of the suitability of microalgae as a fermentation feedstock for bioethanol production. Bioenergy Australia 2009 conference, Queensland- Australia 2009.
34. Rozita Omar, **Razif Harun**, Azni Idris, Robiah Yunus, Tinia Idaty Mohd Ghazi, Wan Azlina Abdul Karim Ghani. (2008). Anaerobic Treatment of Cattle Manure for Biogas Production, American Institute of Chemical Engineers Annual Meeting 2008, Philadelphia, USA, 16-21 November 2008.

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National

1. Tang Zi Yi, Michael K. Danquah, Razif Harun. Medium formulation of microalgae for high biomass production. Symposium of Malaysian Chemical Engineers (SOMChe), Selangor, Malaysia, 2017
2. Aliaa, S., Shamsul Izhar, Hiroyuki Yoshida, Michael K. Danquah, Razif Harun. Sub-critical Water Technology for Enhanced Extraction of Bioactive Compounds from Microalgae. Symposium of Malaysian Chemical Engineers (SOMChe), Putrajaya Malaysia, 2015
3. Razif Harun, Michael K. Danquah, Wan Azlina Wan Ab Karim Ghani, Hun T, Selvakumar Thiruvankadam. National Conference on Industry-Academia initiatives in biotechnology. Cameron Highlands, Malaysia 2013

BOOK CHAPTERS

1. Ramizah Kamaludin, Tan Kean Meng, Siti Nurfatimah Mohd Shahpudin, Mohamad Hafizi Abu Bakar, **Razif Harun**, And Mohd Asyraf Kassim (2021). Sustainable Bioactive Metabolite Compound from Microalgae for Pharmaceutical Industry in *Microbes for a Sustainable Environment and Human Welfare: Advancements and Opportunities*. ISBN: 978-1-53619-062-5
2. **Razif Harun** (2018). Media Formulation for High Lipid microalgal biomass in *Microalgal Biotechnology*. ISBN: 978-953-51-6024-3.
3. Nur Hidayah Zainan, Michael Danquah, **Razif Harun** (2017). Photobioreactor design for large-scale microalgae cultivation in *Photobioreactors: Advancements, Applications and Research*. Nova Science Publishers, Amsterdam. ISBN: 978-1-53612-355-5
4. Abdul Raheem, W.A.K.G. Wan Azlina, Y.H. Taufiq Yap, Michael K. Danquah, **Razif Harun** (2017). Potential Applications of Nanotechnology in *Thermochemical Conversion of Microalgal Biomass*. Springer International Publishing Switzerland. ISBN: 978-3-319-45458-0
5. **Razif Harun**, Mark Doyle, Rajprathab Gopiraj, Michael Davidson, Gareth Forde, Michael Danquah (2013). Process Economics and Greenhouse Gas Audit for Microalgal Biodiesel Production in *Advanced Biofuels and Bioproducts*. Springer Science & Business Media, USA. ISBN: 978-1-46143-348-4
6. Ronald Halim, **Razif Harun**, Paul A. Webley, Michael K. Danquah (2013). Bioprocess Engineering Aspects of Biodiesel and Bioethanol Production from Microalgae in *Advanced Biofuels and Bioproducts*. Springer Science & Business Media, LLC, New York, USA. ISBN: 978-1-4614-3347-7
7. Lakshimi Mangamoori, **Razif Harun**, Ravichandra Pothumarthi, Parcha Lakshmi, Michael K. Danquah (2012). Recent advances in algal biofuels in *Energy: Modern energy storage, conversion, and transmission*. Nova Science Publishers, Amsterdam. ISBN: 978-1-61942-526-2

8. **Razif Harun**, Michael K. Danquah (2012). Physicochemical investigation of microalgal cell disruption technologies with energy consumption analysis in *Energy: Modern energy storage, conversion, and transmission*. Nova Science Publishers, Amsterdam.
ISBN: 978-1-62618-511-1
9. **Razif Harun**, Hassan J, Li J.S. Shu, Lucy A. Arthur, Michael K. Danquah (2012). Techno-economic assessment of large-scale production of bioethanol from microalgal biomass in *Natural and Artificial Photosynthesis: Solar Power as an Energy Source*. John Wiley & Sons Inc.
ISBN: 978-1-11816-006-0
10. **Razif Harun**, Boyin Liu, Michael K. Danquah (2011). Analysis of process configurations for bioethanol production from microalgal biomass in *Progress in Biomass and Bioenergy Production*. Intech Science, Technology & Medicine, Croatia.
ISBN: 978-953-307-177-0

Research Products & Awards

PATENTS FILLING

1. Self-supporting microalgae cultivation system (Patent filling). RUGS (Vot.9346900)

IP GRANTED

1. Virtual lab demonstration for biochemical laboratory – sterilization (Copyright LY2017004507)
2. Virtual lab demonstration for biochemical laboratory – sterilization (Copyright LY2017004508)

AWARDS

Project Principal Investigator

1. Venus International Research Awards (Outstanding Researcher in Bioprocess Engineering) 2023
2. World's Top 2% Scientist (Subject-Wise) 2023
3. Silver Medal, FYP Open day, 2023
4. The best pitcher in the industrial grant pitching with Petronas Research Sdn. Bhd. (2023)
5. World's Top 2% Scientist (Subject-Wise) 2022
6. Silver Medal, FYP Open day, 2022
7. World's Top 2% Scientist (Subject-Wise) 2021
8. Gold Medal, FYP Open day, 2021
9. Silver Award, Innovation and Technology Exhibition (InTEX), 2019
10. Silver Award, Innovation and Technology Exhibition (InTEX), 2019
11. 1ST Runner-up, 4th International Biotechnology Competition and Exhibition (IBCEx 2018)
12. Gold and Silver medal, Program Global I Lead Stem Kem Antara Upm, Pibg Sbpi Selandar, Asasi Pertanian Dan Fakulti Sains, Melaka

AWARDS

University Level

1. Kecemerlangan Dalam Pengajaran , 2022
2. Sijil Perkhidmatan Cemerlang, 2019
3. Anugerah Kecemerlangan Dalam Pengajaran (post graduate), 2018
4. Anugerah Kecemerlangan Dalam Pengajaran, 2018
5. Anugerah Perkhidmatan Cemerlang, 2018
6. Anugerah Kecemerlangan Dalam Pengajaran, 2017
7. Anugerah Perkhidmatan Cemerlang, 2017
8. University Research Award, Publication Category, 2016
9. Anugerah Kecemerlangan Dalam Pengajaran, 2016
10. Anugerah Fellowship Naib Canselor, 2016
11. Anugerah Perkhidmatan Cemerlang, 2016
12. Anugerah Perkhidmatan Cemerlang, 2013

Industrial & Community Projects

CONSULTATION

1. Microalgae Identification and growth performance (2023), UPM- Petronas Research Sdn. Bhd. (RM68,000)- PI
2. Microalgae Beads and zooplankton for fish feed (2023), UPM- World New Energy Sdn. Bhd. (RM12,000)-PI
3. Algae to Zero carbon platform (2023)- World New Energy Sdn. Bhd. (RM187,000)-PI
4. Characterization of Food waste and biogas analysis for integrated pilot plant with RNG system (2023), UPM- TNB Research Sdn. Bhd. (RM199,000)
5. Kajian uncertainty assessment untuk data inventori GHG (2022), UPM-Kementerian Alam Sekitar dan Air (RM50,000)
6. Microalgae Monitoring and Characterization of valuable compounds (2022), UPM-World New Energy Sdn. Bhd. (RM10,000)- PI
7. Microalgae Mass Cultivation & Industrial Applications (2022), UPM- TNB Research Sdn. Bhd. (4,000)-PI
8. Subject Matter Expert -Technical & Commercial Evaluation and Review for the cultivation, harvesting and processing of microalgae biomass into crude algae oil and dry algae cake (2022). UPM-Bank Pembangunan (RM175,000)
9. Food waste characterization for biogas anaerobic digestion process. (2020). UPM-TNB Research Sdn. Bhd. (RM 199,903.00)
10. Analysis service of AD-Substrate for biogas production. (2020). UPM-TNB Research Sdn. Bhd. (RM 18,773.58)
11. Chemical and Biochemical Analysis of Anaerobic Digestion Process Using Food Waste as Feedstock. (2019). UPM-TNB Research Sdn. Bhd (RM 130,838.00)
12. Microalgae consortia biochemical properties analysis. 2018. UPM- TNB Research Sdn. Bhd (RM 80,000.00)-PI

INDUSTRY NETWORK

1. Projek Industri Characterization of Food Waste and Biogas Analysis for Integrated Pilot Plant with RNG System: **TNB Research Sdn. Bhd**
2. Kolaborasi Mikroalga: **Kayuh Industries Sdn. Bhd.**
3. Proposal for the study of growth performance of red tilapia in a green-water RAS fed with black soldier fly larvae and Azolla pinnata: **World New Energy Sdn. Bhd.**
4. Microalgae integration with recirculating aquaculture systems-research collaboration: **World New Energy Sdn. Bhd.**
5. Microalgae potential as plants bio fertilizer for agriculture farmers: **World New Energy Sdn. Bhd.**
6. Indoor Recirculating Aquaculture System: **HELLAS TF Sdn. Bhd.**
7. Perbincangan Program bersama PETRONAS dengan Focal person CHESS UPM: **PETRONAS**
8. Collaborative meeting: **YHLAQUATIC SDN. BHD.**
9. Collaborative Meeting: **Green Lagoon Technology Morib Power Sdn. Bhd.**
10. Kolaborasi Algae Beads and Zooplankton: **World New Energy Sdn. Bhd.**
11. Microalgae Collaboration Event: **Leave a Nest Malaysia Sdn Bhd.**
12. Microalgae Collaboration Project: **Euglena Malaysia Sdn. Bhd.**
13. Real-Time Data Monitoring For Algae Photobioreactor: **World New Energy Sdn. Bhd.**
14. Basic Microalgae Mass Cultivation & Industrial Applications: **TNB Research Sdn. Bhd.**
15. Growth Monitoring of Two Microalgae Species (Chlorella sorokiniana & Scenedesmus obliquus): Sub-culturing, Biomass Concentration, Growth Profile, and Biochemical Properties Analysis: **World New Energy Sdn. Bhd.**
16. Khidmat nasihat teknikal dan lawatan penyelidikan Petronas Research Sdn Bhd bagi pemantauan fluorescence lipid mikroalga dengan menggunakan mikroskop fluorescence: **PETRONAS Research Sdn. Bhd.**
17. Kursus profesional dan lawatan teknikal 'basic microalgae & industrial training: **TNB Research Sdn. Bhd.**
18. Subject Matter Expert -Technical & Commercial Evaluation and Review for the cultivation, harvesting and processing of microalgae biomass into crude algae oil and dry algae cake: **Bank Pembangunan**

19. Projek pelan pengukuhan inventori kebangsaan (NATIONAL INVENTORY GHG): **Kementerian Alam Sekitar dan Air (KASA)**
20. The Study of Ionic Liquid-Alginate Filtration System For Ions Removal From Industrial Waste Water: **UTP**
21. JICA-JST (SATREPS-COSMOS JPMJSA 1509): **Japan International Cooperation Agency (JICA)**
22. E-waste Management in Malaysia: **Kementerian Alam Sekitar dan Air (KASA)**
23. SIRIM ECO 092:2020, Eco-labelling: **SIRIM Berhad**
24. Modified Chitosan as a Smart Biomaterial Produced from Crab Shell Waste via Combined Microwave-assisted and Subcritical Liquid (MwSL) Technique: **SEARCA**
25. Bioplastics from renewable resources: **PETRONAS Research Sdn. Bhd.**
26. Clean energy production from agricultural waste: **PETRONAS Research Sdn. Bhd.**
27. Impact of Carbon Quantum Dots Photosynthesis Enhancer on Euglena for Health Food Products: **Euglena Japan Sdn. Bhd.**
28. Panel Penilai Program Cuti Belajar Kementerian Pendidikan Malaysia: **Kementerian Pendidikan Malaysia**
29. Chemical and Biochemical Analysis of Anaerobic Digestion using foodwaste as feedstock: **TNB Research Sdn. Bhd.**
30. MS FSCC Summer School Malaysia 2018: **SEARCA**
31. Muzakarah Pakar 'Etika Pengubahsuaian Genetik Mikroalga': **Institut Kefahaman Islam Malaysia**
32. Vermi composting and anarobic digestion: **Majlis Perbandaran Subang Jaya**
33. Environmental Pollution Management Training: **Pakar Management Technology**

COMMUNITY PROJECT

1. Pemindahan ilmu Kapsul Mikroalga: **Jabatan Pendidikan Wilayah Persekutuan Kuala Lumpur (JPWPKL)**
2. MySchoolgoals: **Sekolah TTDI JAYA 2, Shah Alam**
3. Facilitator for Sustainability Transitions Summer School: **Universitas Gadjah Mada, Yogyakarta, Indonesia**

4. Mobility to Ho Chi Minh City University of Technology (HCMUT), Vietnam: **AUN/SEED-Net**
5. International Training Program on Study of Technical Education Innovations for Developing Nations: **Ceylon Electricity Board, Sri Lanka**
6. Researcher Links Workshop: Innovative Designs of Sustainable Agro-Hydro-Health Systems: **Center for Agroecology, Water & Resilience, Coventry University.**
7. A feasibility Study on Biogas Production from Domestic Wastewater Produced by 'Off-grid' households and communities in Royal Belum: **Center for Agroecology, Water & Resilience, Coventry University.**
8. Program Global I Lead Stem Kem Antara Upm, Pibg Sbpj Selandar, Asasi Pertanian Dan Fakulti Sains: **Persatuan Ibu Bapa Dan Guru, Melaka.**
9. Program Kemasyarakatan Di Perkampungan Orang Asli Sg Lalang, Semenyih: **Jabatan Kemajuan Orang Asli Malaysia**
10. Mesra Bersama Masyarakat 2013: **Sekolah Berasrama Penuh Integrasi Rawang**

Appointments

DEPUTY DEAN

- | | | |
|---------------------------|---|------------------|
| 1. Faculty of Engineering | Deputy Dean
(Graduate studies and International) | Feb 2024-Present |
|---------------------------|---|------------------|

HEAD OF DEPARTMENT

- | | | |
|---|------|-------------------|
| 1. Department of Chemical and Environmental Engineering | Head | Jan 2020-Jan 2022 |
|---|------|-------------------|

COORDINATOR

- | | | |
|---|--------------------------------|--------------------|
| 1. Department of Chemical and Environmental Engineering | Research Coordinator | Jan 2023-Present |
| 2. Department of Chemical and Environmental Engineering | Academic Coordinator I | Jan 2018-Jan 2020 |
| 3. Department of Chemical and Environmental Engineering | Academic Coordinator I | Jul 2017- Jan 2018 |
| 4. Department of Chemical and Environmental Engineering | Academic Coordinator II | Jan 2016-Jul 2017 |
| 5. Department of Chemical and Environmental Engineering | Student and Alumni Coordinator | Jan 2012-Dec 2014 |

STUDENT ADVISOR

Academic Level

1. Chan Yao Xun	223175	1 (2023/24)
2. Nawal Saeed	225780	1 (2023/24)
3. Laurenn Humbert	ES03705	1 (2022/23)
4. Alice Rougalle	ES03706	1 (2022/23)
5. Kim Jonggang	ES03727	1 (2022/23)
6. Ammar Abdullah Mohammed Ba Adil	199664	1 (2020/21)
7. Hamzah Raad Mayoof Hajiyat	200006	1 (2020/21)
8. Mariam Salah Ahmed Elhenidi	200034	1 (2020/21)
9. Song Qiuge	200072	1 (2020/21)
10. Nor Fadhilah Binti Mohd Tahir	200124	1 (2020/21)
11. Maisura Rahim Baccus	200208	1 (2020/21)
12. Bita Abedi	204364	1 (2020/21)
13. Muhammad Amir Bin Mohammad Rosli	181670	2 (2017/18)
14. Muhammad Hairol Nizam Bin Jamaluddin	181984	2 (2017/18)
15. Rabiatul Adawiyah Binti Ali	181994	2 (2017/18)
16. Puvanaa A/P Sivalingam	184775	2 (2017/18)
17. Intan Nuranissa Binti Mohamad Zailani	187412	2 (2017/18)
18. Mugundhan A/L Kumar	188644	2 (2017/18)
19. Lew Pei Sze	188697	2 (2017/18)
20. Constantine Emparie Anak Tujah	188709	2 (2017/18)
21. Mythili A/P Nadarajah	190877	2 (2017/18)
22. Sajidah Khadijah Binti Meor Mohammad Fared	191959	2 (2017/18)
23. Arif Bin Haridan	192613	2 (2017/18)

24. Eleena Binti Rozman	170187	1 (2016/17)
25. Hemapriya A/P Genesan	172023	1 (2016/17)
26. Doreen Leong Tseng-Hwei	172618	1 (2016/17)
27. Iffah Amirah Binti Hussin Ali	172719	1 (2016/17)
28. Kalisswari A/P Apparao	173343	1 (2016/17)
29. Chong Hui Shan	174826	1 (2016/17)
30. Azeelia Sonia Bayang	175639	1 (2016/17)
31. Muhammad Amir Bin Mohammad Rosli	181670	1 (2016/17)
32. Muhammad Hairol Nizam Bin Jamaluddin	181984	1 (2016/17)
33. Rabiatul Adawiyah Binti Ali	181994	1 (2016/17)
34. Puvanaa A/P Sivalingam	184775	1 (2016/17)
35. Intan Nuranissa Binti Mohamad Zailani	187412	1 (2016/17)
36. Mugundhan A/L Kumar	188644	1 (2016/17)
37. Lew Pei Sze	188697	1 (2016/17)
38. Constantine Emparie Anak Tujah	188709	1 (2016/17)
39. Mythili A/P Nadaraja	190877	1 (2016/17)
40. Adnan Hazif Bin Zainal Adzam	145977	1 (2013/14)
41. Abu Hasan Bin Nordin	167568	1 (2013/14)
42. Asyraf Aiman Bin Mohamad Akbar	168393	1 (2013/14)
43. Adrina Binti Azimin	168434	1 (2013/14)
44. Azman Bin Azimin	168898	1 (2013/14)
45. Aminur Rasyid Bin Ahmad Zaini	169965	1 (2013/14)
46. Aizuddin Bin Nazar	170022	1 (2013/14)
47. Eleena Binti Rozman	170187	1 (2013/14)
48. Abdus Salaam Mueen Bin A Shukor	170432	1 (2013/14)

49. Azlan Bin Anas	170615	1 (2013/14)
50. Hemapriya A/P Genesan	172023	1 (2013/14)
51. Doreen Leong Tsen-Hwei	172618	1 (2013/14)
52. Iffah Amirah Binti Hussin Ali	172719	1 (2013/14)
53. Kalisswari A/P Apparao	173343	1 (2013/14)
54. Chong Hui Shan	174826	1 (2013/14)
55. Azeelia Sonia Bayang	175639	1 (2013/14)
56. Abu Hassan Bin Nordin	167568	1 (2012/13)
57. Asyraf Aiman Bin Mohamad Akbar	168392	1 (2012/13)
58. Adrina Binti Zulkarnain	168434	1 (2012/13)
59. Azman Bin Azimin	168898	1 (2012/13)
60. Aminur Rasyid Bin Ahmad Zaini	169965	1 (2012/13)
61. Aizuddin Bin Nazar	170022	1 (2012/13)
62. Eleena Binti Rozman	170187	1 (2012/13)
63. Abdus Salaam Mueen Bin A Shukor	170432	1 (2012/13)
64. Azlan Bin Anas	170615	1 (2012/13)

STUDENT ADVISOR

University Level Teams or Clubs

1. Immersion English, Faculty of Engineering, UPM	Mentor	Feb – Dec 2012
2. Kembara Satria 2012	Academic Officer	28 Jun 2012
3. Design competition, Institute of Engineers, Malaysia (IEM)	Team Advisor	23 Jul 2012
4. Program at Bangi Golf Resort, Bandar Baru Bangi	Official Dinner Observatorial officer	20 Apr 2013
5. Immersion English, Faculty of Engineering, UPM	Mentor	Mar- Dec 2013
6. “Love Our Environment” program	Monitoring Officer	14 Sep 2013
7. Program Sihat Dan Ceria D’ Broga, Bukit Broga	Officer	20 Oct 2013
8. Mesra Bersama Masyarakat 2013	Monitoring officer	23 Nov 2013
9. Prestige 2013 Programme (Malaysian Gas Association)	Team Supervisor	16-17 Nov 2013
10. National Chem-E-car Competition	Monitoring Officer	11 - 12 April 2014
11. Vietnam Chemical Internship Program 2016	Inbound Supervisor	Sep 2016

CHAIRMAN

International Level Programs

- | | | |
|---|--------|--------------------|
| 1. 14 th AUN/SEED Regional Conference on Chemical Engineering 2021 (RCChE2021) in conjunction with International Conference in Chemical Engineering and Technology (ICICET 2021) | Patron | 30 Nov– 1 Dec 2021 |
|---|--------|--------------------|

CHAIRMAN

National Level Programs

- | | | |
|---|-----------------|------------------|
| 1. Global Algae Summit | University Head | 17 Aug 2023 |
| 2. Microalgae Farming for Sustainable Aquaculture | Director | 8 September 2023 |
| 3. National Chem-E-car competition | Director | 9 – 10 Apr 2014 |

CHAIRMAN

Faculty Level Programs

- | | | |
|---|----------------|------------------|
| 1. MSKK Postgraduate Symposium | UPM | 21 Feb 2022 |
| 2. MPSLP Postgraduate Symposium | UPM | 29 Jul 2021 |
| 3. Workshop on Quantitative and Qualitative Research Approach | Canselori, UPM | 23 – 25 Nov 2015 |

CHAIRMAN

Department Level Programs

- | | | |
|--|-----------------------------|----------------|
| 1. Hi-Tea Council Working Paper with alumni of the Master of Process Safety and Loss | Faculty of Engineering, UPM | Oct 2023 |
| 2. Manuscript Writing Workshop | Astana Putra, Serdang | 19-20 Sep 2023 |

3.	Networking Session: Lukasiwez Institute, Poland	Faculty of Engineering, UPM	8 Apr 2023
4.	Networking Session: Chulalongkorn University	Faculty of Engineering, UPM	27 Jul 2023
5.	Writing and Publishing Articles in High Impact Journal	Faculty of Engineering, UPM	5 Apr 2023
6.	Research Seminar: Marie Sklodowska-curie Actions	Faculty of Engineering, UPM	7 Mar 2023
7.	Virtual Final Year Open Day KKA	Faculty of Engineering, UPM	17 Aug 2021
8.	MSKK-KKA Symposium	Faculty of Engineering, UPM	23 Jun 2020
9.	Symposium: Educating Process Safety Culture Towards Smart Society	Faculty of Engineering, UPM	14 Jan 2020
10.	Review of the Bachelor of Chemical Engineering Curriculum with Honors	Faculty of Engineering, UPM	4-5 Nov 2019
11.	MSKK Postgraduate Symposium	PICC	25 Jun 2019
12.	Screencasting to Engage Teaching & Learning activities	Faculty of Engineering, UPM	19 Apr 2018
13.	Bengkel Kemaskini Lab Manual dan Penghasilan Edisi Terbaru Manual	Faculty of Engineering, UPM	10 -12 Jul 2017
14.	Process Reliability and Maintainability Workshop	Canselori Putra, UPM	5 – 7 Apr 2017
15.	Academic event: Developing Assessment Strategies	Faculty of Engineering, UPM	3 Apr 2017
16.	Academic event: Continuous Quality Improvement	Faculty of Engineering, UPM	3 Mar 2017
17.	2 Days Course on Algal Biotechnology	Everly Hotel Putrajaya	29 -30 Aug 2016

COMMITTEE MEMBER

International Level Programs

- | | | |
|---|-------------------------|-------------------|
| 1. International Putra Innocreative Carnival in Teaching and Learning (I-PICTL2023) | Jury | 14-16
Nov 2023 |
| 2. International Conference in Chemical Engineering and Technology (ICICET 2023) | Scientific committee | 4-5
Sept 2023 |
| 3. COSMOS International Conference (CIC) 2022 | Organizing
Committee | 23-25 Aug 2022 |
| 4. Petrochemistry-2020 | Scientific committee | 15-16
Oct 2020 |
| 5. Myschoolgoals International Festival 2019 | Expert Panel | 29
July 2019 |
| 6. 5th International Biotechnology Competition and Exhibition (IBCEEx 2019) | Jury | 5-6 Apr 2019 |
| 7. Food Security and Climate Change (FSCC) Summer School Malaysia | Organizing
Committee | 14-2 Jul 2018 |
| 8. World Research & Innovation Convention on Engineering & Technology (WRICET) | Publicity Committee | 24-25 Oct 2016 |
| 9. World Research & Innovation Convention on Engineering & Technology (WRICET) | Organizing
Committee | 25-26 Nov 2014 |
| 10. World Research & Innovation Convention on Engineering & Technology (WRICET) | Publicity Committee | 3-5 Mar 2012 |

COMMITTEE MEMBER

National Level Programs

1. Program Hadiah Latihan Persekutuan	Interview Panel	2023
2. Regional Chemical Engineering Undergraduate Conference	Jury	17-18 Aug 2022
3. Regional Chemical Engineering Undergraduate Conference	Jury	1-2 Sep 2021
4. Program Cuti belajar bergaji penuh (CBBP)	Interview Panel	22 Apr 2019
5. Program Cuti belajar bergaji penuh (CBBP)	Interview Panel	9 Apr 2019
6. Karnival Stem Peringkat Negeri Wilayah Persekutuan	Jury	14-16 Aug 2018

COMMITTEE MEMBER

University Level Programs

1. Vice Chancellor Fellowship Award (Teaching Category)	Evaluation Committee member	9 Jan 2024
2. FRGS 2024 application re-assessment session	Evaluation Committee member	8 Jan 2024
3. Putra InnoCreative Competition	Jury member	14-16 Nov 2023
4. Grant applications for UPM cycle 2/2023	Evaluation Committee member	2 Oct 2023
5. Grant applications for UPM cycle 1/2023	Evaluation Committee member	5 Sep 2023
6. Research Incentive Grant Application for Teaching and Learning	Evaluation Committee member	2 Jun 2023

7. FRGS 1/2023 Evaluation session	Evaluation Committee member	20 Mar 2023
8. Vice Chancellor Fellowship Award (Teaching Category)	Jury member	20 Mar 2023
9. Vice Chancellor Fellowship Award (Teaching Category)	Jury member	9 Feb 2022
10. Kyutech Grant Application 2021	Evaluation Committee member	4 Aug 2021
11. International Institute of Aquaculture and Aquatic Sciences (I-AQUAS), UPM	Research Associate	10 May 2021
12. FRGS 1/2021 Evaluation session	Evaluation Committee member	15 Mar 2021
13. The 2021-2022 University Level Research Grant	Evaluation Committee member	2 Jan 2021
14. The 2020 UPM-Kyutech Research Collaboration Grant	Evaluation Committee member	15 Sep 2020
15. Hand sanitizer	Donor	2 Jun 2020
16. Putra Grant Application	Evaluation Committee member	21 Jan 2020
17. Development of Decision-Making Framework toolkit (DMF) for Sustainable Plastic Waste Management	Evaluation panel	30 Oct 2019
18. Putra InnoCreative Competition	Jury member	16-17 Oct 2019
19. The 2019-2020 University Level Research Grant	Evaluation Committee member	2 Jan 2019
20. Geran Putra Berimpak	Evaluation Committee member	5 Oct 2018
21. Vice Chancellor Fellowship Award (Teaching Category)	Mentor	7 Jun 2018

22. Program Inovasi & Apresiasi (PIA)	Speaker	4 – 6 Apr 2018
23. Putra Massive Open Online Course (PutraMOOC), UPM	Coordinator of PutraMOOC Biochemical Engineering	2017
24. Laboratory Video Production	Committee member	Jul 2015

COMMITTEE MEMBER

Faculty Level Programs

1. Eksplorasi UPM (makmal) bersempena persidangan STEM tahun 2023	Committee member	25-26 October 2023
2. Engineering Innovation & Exhibition 2023	Committee member	25 Julai 2023
3. Penilaian LKP& LAP Geran Putra Fakulti Kejuruteraan	Panel	14 Oct 2023
4. Penilaian LKP& LAP Geran Putra Fakulti Kejuruteraan	Panel	16 May 2022
5. 6th MPSLP Postgraduate Symposium	Committee member	14 Jan 2020
6. Penghasilan Modul UPMSTEM untuk aktiviti pelajar sekolah dan latihan guru	Committee member	22 Feb 2019
7. MSKK Postgraduate Symposium	Committee member	25 June 2019
8. Bengkel Penilaian LKP& LAP Geran Putra Fakulti Kejuruteraan	Panel	14 Oct 2019
9. Jawatankuasa Kecil Anugerah Khas Pensyarah Kategori Pengajaran dan pembelajaran	Committee member	14 Mac 2018
10. UPM, Faculty of Engineering, Final Year Students' Project Presentation and Exhibition	Committee member	5 Jun 2012
11. New Students' Perkasa Week Ceremony	Faculty member	4 Sep 2012
12. Preparation Workshop on Immersion English, Faculty of Engineering, UPM	Committee member	3-4 Sep 2012
13. Graduation Ceremony, Faculty of Engineering, UPM	Committee member	12 Oct 2012

COMMITTEE MEMBER

Department Level Programs

1. Modular Course of Human Behavior and Human Error	Faculty of Engineering, UPM	13-15 May 2024
2. Modular Course Consequence Analysis	Faculty of Engineering, UPM	27-29 Nov 2023
3. Chemical Engineering Postgraduate Symposium	Faculty of Engineering, UPM	26 Jul 2023
4. Modular course process safety management	Faculty of Engineering, UPM	26-30 Nov 2022
5. Modular course safe handling of industrial chemicals	Faculty of Engineering, UPM	6-10 May 2023
6. Postgraduate Symposium of the MSKK Master's Program in Process Security and Loss Prevention	Faculty of Engineering, UPM	15 Feb 2023
7. Postgraduate Symposium of the MSKK Master's Program in Process Security and Loss Prevention	Faculty of Engineering, UPM	28 Jul 2022
8. Postgraduate Student Supervision Workshop	Manipal International University	14-15 Mar 2022
9. MSKK Postgraduate Symposium	Faculty of Engineering, UPM	21 Feb 2022
10. Postgraduate Symposium of the MSKK Master's Program in Process Security and Loss Prevention	Faculty of Engineering, UPM	14 Jan 2019
11. Mechanical Failures and Electrical Hazard Seminar	Faculty of Engineering, UPM	23-25 Oct 2017
12. Design of Safe Handling of Industrial Chemicals Workshop	Faculty of Engineering, UPM	1-3 Nov 2016
13. Design of Safe Handling of Industrial Chemicals Workshop	Faculty of Engineering, UPM	11-13 Apr 2016

14. Workshop on mechanical and electrical failure	Palace of the Golden Horses, Seri Kembangan	11-13 Nov 2013
15. Workshop on Design for safe handling of industrial chemicals	Cyberview Resort & Spa, Cyberjaya	8-10 Apr 2013
16. Workshop on process reliability and maintainability	Cyberview Resort & Spa, Cyberjaya	9-11 Apr 2012

COMMITTEE MEMBER

Academic Programs

1. Semakan Kurikulum Bacelor Kejuruteraan Kimia dengan Kepujian	Committee Member	2020-2021
2. Reinforcement of Process Safety and Loss Prevention Program	Committee member	Jan 2014
3. Master of Process Safety and Loss Prevention Program, UPM	Curriculum revision committee member	8-10 Feb 2012

EXAMINER – EXTERNAL INSTITUTION

Academic Program

- | | | |
|--|----------------------------------|-----------|
| 1. External Examiner for Bachelor of Chemical Engineering with Honours Program | Manipal International University | 2022-2024 |
| 2. External Examiner (Environmental Technology) | Quest International University | 2023-2024 |

SCHOLARSHIP/Grants

- | | | |
|---|---------------------------------|------|
| 1. Curtin Malaysia Collaborative Research Scheme (CMCR) | Curtin University | 2023 |
| 2. Panel Penemuduga Hadiah Latihan Persekutuan (HLP) | Jabatan Perkhidmatan Awam | 2023 |
| 3. Panel Penemuduga Program Cuti belajar bergaji penuh (CBBP) | Kementerian Pendidikan Malaysia | 2019 |

Postgraduate Thesis

- | | | |
|---|--|------|
| 1. Hend Yousuf Mohammad Yousuf (PhD) | Cairo University, Egypt | 2023 |
| 2. Wangqiyue Sun (PhD) | RMIT University
Melbourne, Victoria,
Australia | 2021 |
| 3. Jannatulhawa Jasni (PhD) | Universiti Kebangsaan
Malaysia (UKM) | 2021 |
| 4. Ainil Farhan binti Mohd Udaiyappan (PhD) | Universiti Kebangsaan
Malaysia (UKM) | 2020 |
| 5. Nur Farahin binti Abdul Rahman (PhD) | Universiti Kebangsaan
Malaysia (UKM) | 2019 |
| 6. Brandon Goh Han Hoe (Masters) | Universiti Malaya | 2019 |
| 7. Harizah Bajunaid Hariz (Masters) | Universiti Kebangsaan
Malaysia (UKM) | 2018 |
| 8. Kazi Imdadul Hassan (Masters) | Universiti Malaya | 2016 |

EXAMINER- UPM

PhD Thesis

1	GS59432	Hamad Noori Hamad Hamad	2023
2	GS52551	Norliza Binti Abdul Latiff	2023
3	GS47143	Nurul Farahin Binti Abd. Wahab	2021

Master Thesis

1	GS57411	Ashikin Afzan Binti Mohd Rohan	2023
2	GS63484	Fatin Farhana binti Razlan	2023
3	GS63025	Rubachandran Venkatesan	2022
4	GS58079	Akmalariffin b Rukijan	2021
5	GS54737	Mays Mahmood Mutlak	2020
6	GS47343	Shahera Binti Mohd Noor	2019
7	GS49887	Mohd Haziq Muhd Nor Han	2019
8	GS41289	Noor Azura Binti Muda	2017
9	GS41970	Tan Hong Boon	2017
10	GS46090	Nur Farihin bt Wahab	2017
11	GS45378	Nurul Hasna bt Abd Wahab	2017
12	GS46898	Junaizad bin Jamil	2017
13	GS47402	Sarah Anisa bt Adnan	2017
14	GS37280	Intesar Razaq Hussain	2016
15	GS41193	Esmail Ebrahim Al-Mokhtar	2016
16	GS44198	Syifatul Athirah bt Ab Ghani	2016
17	GS45235	Wan Nur Asnida bt Wan Othman	2016
18	GS45337	Nurul Farhana bt Harun	2016
19	GS40685	Faiz Azmi bin Sutarji	2016

20	GS40580	Shazali bin Ibrahim	2016
21	GS41210	Erica Foong Ker Ean	2016
22	GS42026	Muhammed Fairus bin Ahmad Aripin	2016

PROFESSIONAL SERVICE OR CONTRIBUTION

University Level

1.	Vice Chancellor Fellowship Award (Teaching Category)	Evaluation Committee member	9 Jan 2024
2.	FRGS 2024 application re-assessment session	Evaluation Committee member	8 Jan 2024
3.	Putra InnoCreative Competition	Jury member	14-16 Nov 2023
4.	Grant applications for UPM cycle 2/2023	Evaluation Committee member	2 Oct 2023
5.	Grant applications for UPM cycle 1/2023	Evaluation Committee member	5 Sep 2023
6.	Research Incentive Grant Application for Teaching and Learning	Evaluation Committee member	2 Jun 2023
7.	FRGS 1/2023 Evaluation session	Evaluation Committee member	20 Mar 2023
8.	Vice Chancellor Fellowship Award (Teaching Category)	Jury member	20 Mar 2023
9.	Vice Chancellor Fellowship Award (Teaching Category)	Jury member	9 Feb 2022
10.	Kyutech Grant Application 2021	Evaluation Committee member	4 Aug 2021
11.	International Institute of Aquaculture and Aquatic Sciences (I-AQUAS), UPM	Research Associate	10 May 2021
12.	FRGS 1/2021 Evaluation session	Evaluation Committee member	15 Mar 2021

13. The 2021-2022 University Level Research Grant	Evaluation Committee member	2 Jan 2021
14. The 2020 UPM-Kyutech Research Collaboration Grant	Evaluation Committee member	15 Sep 2020
15. Hand sanitizer	Donor	2 Jun 2020
16. Putra Grant Application	Evaluation Committee member	21 Jan 2020
17. Development of Decision-Making Framework toolkit (DMF) for Sustainable Plastic Waste Management	Evaluation panel	30 Oct 2019
18. Putra InnoCreative Competition	Jury member	16-17 Oct 2019
19. The 2019-2020 University Level Research Grant	Evaluation Committee member	2 Jan 2019
20. Geran Putra Berimpak	Evaluation Committee member	5 Oct 2018
21. Vice Chancellor Fellowship Award (Teaching Category)	Mentor	7 Jun 2018
22. Program Inovasi & Apresiasi (PIA)	Speaker	4 – 6 Apr 2018
23. Putra Massive Open Online Course (PutraMOOC), UPM	Coordinator of PutraMOOC Biochemical Engineering	2017
24. Laboratory Video Production	Committee member	Jul 2015

EDITOR

Citation Indexed Journal

- | | | |
|--|--------|------------|
| 1. International Journal of Engineering & Technology | Editor | 2013 -2015 |
|--|--------|------------|

EDITOR

Non-citation Indexed Journal

- | | | |
|---|--------|----------|
| 1. WRICET 2012 – Material Testing Journal | Editor | Mar 2013 |
|---|--------|----------|

SPEAKER

International Level

- | | | |
|--|--|-------------------|
| 1. 2nd International Conference on Chemical Engineering and Technology | UPM, Malaysia | 4-5 Sep 2023 |
| 2. Global Algae Summit (GAS) | Leave a Nest, Singapore | 17 Aug 2023 |
| 3. COSMOS International Conference | Kuala Lumpur, Malaysia | 23-25 Aug 2022 |
| 4. International Conference on Clean Energy and Electric Power Engineering (ICPEPE 2022) | AEIC Academic Exchange Information Center. China | 20-22 May 2022 |
| 5. Quest International University Interscience Symposium (QISS 2022) | Quest International University | 23-24 July 2022 |
| 6. World Aquaculture Singapore (WAS 2022) | World Aquaculture Society | 30 Nov-2 Dec 2022 |
| 7. International Bioprocessing Association Subject Conference (IBASC2021) | Universitas Gadjah Mada, Indonesia | 4-5 Aug 2021 |
| 8. 2nd Annual Symposium on Solid Waste Refinery (ANSWER) 2019 | Universitas Gadjah Mada, Indonesia | 13-14 Nov 2019 |

9. Summer course: Smart Integrated Farming for Sustainable Agriculture	Agrotechnology Innovation Centre, Yogyakarta, Indonesia	18 July 2019
10. WAFERS SUMMER COURSE Global Perspective in Bioresource Technology	Universitas Gadjah Mada, Indonesia	7 -16 Aug 2018
11. International Conference on Green & Sustainable Chemical Sciences	Dawood University, Pakistan	3 – 4 March 2018
12. 2nd International Conference on Chemical Engineering 2016	Universitas Katolik Parahyangan, Indonesia.	26 – 27 Oct 2016
13. World Research and Innovation Convention on Engineering and Technology	Langkawi, Malaysia	24 -25 Oct 2016
14. The Fifth Annual Asian Conference on Sustainability, Energy and The Environment	Kobe, Japan	11 -14 Jun 2015
15. Hong Kong International Conference on Engineering and Applied Science	Hong Kong	19 -21 Dec 2013

SPEAKER

National Level

1. Basic Microalgae Mass Cultivation & Industrial Application	TNB Research Sdn. Bhd	11-12 October 2022
2. Environmental Pollution Management	Kuala Lumpur	10 -14 Oct 2017
3. The Institution of Engineers Malaysia	Selangor	22 Feb 2016

SESSION CHAIRMAN

International Level

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|--|--------------------------------|-----------------------|
| 1. International Conference in Chemical Engineering and Technology (ICICET 2023) | Universiti Putra
Malaysia | 4-5 September
2023 |
| 2. World Aquaculture Singapore (WAS 2022) | World Aquaculture
Society | 30 Nov-2 Dec 2022 |
| 3. International Conference in Chemical Engineering and Technology (ICICET 2021) | Universiti Putra
Malaysia | 30 Nov-1 Dec 2021 |
| 4. International Conference on Algae Biotechnology and Biofuels (ICABB2019) | IRC, Sydney, Australia | 28-29 Mac 2019 |
| 5. International Conference on Green & Sustainable Chemical Sciences | Dawood University,
Pakistan | 3 – 4 March 2018 |

JOURNAL REVIEWER

Citation Indexed

- | | | |
|---|--|------|
| 1. Amino acids profile of 56 species of microalgae reveals that free amino acids allow to distinguish between phylogenetic groups | Algal Research | 2023 |
| 2. A Review of Immobilized Microalgae Culture: Mechanisms and Applications in Wastewater Treatment | Algal Research | 2022 |
| 3. Immobilized Microalgae using Alginate for Wastewater Treatment | Journal of Science and
Technology. | 2021 |
| 4. Subcritical low temperature extraction technology and its application in extracting seed oils | Journal of Food Process
Engineering | 2021 |
| 5. Optimization of lipid recovery from <i>Nannochloropsis gaditana</i> via wet-centrifugal extraction | Algal Research | 2020 |
| 6. The next chapter in wastewater beneficiation: algal biocrude production | Environmental Science:
Water Research &
Technology | 2020 |

7.	Microalgae harvesting for health beneficial dietary supplements	Algal Research	2020
8.	Study on Optimization of Iron Ions and pH in <i>Chlorella vulgaris</i> Aquaculture Production	Scientific Reports	2020
9.	Novel, automated, semi-industrial modular photobioreactor system for cultivation of demanding microalgae that produce fine chemicals—the next story of <i>H. pluvialis</i> and astaxanthin	Algal Research	2020
10.	Domestic Wastewater Treatment Using Various Microalgae for Lipid Production" for the Journal of Science and Technology.	Journal of Science and Technology	2020
11.	How the Spray Drying Process Affect the Quality of Microalgal Biomass: A Comprehensive Analysis of Biocomposition of Spray Dried <i>S. acuminatus</i> Biomass	Biomass and Bioenergy	2019
12.	Potential of <i>Monodus subteraneus</i> CCALA 830 for eicosapentaenoic acid (EPA) production	Biotechnology Reports	2019
13.	Pyrolysis behavior of sunflower seed husks: kinetic evaluation	Biomass and Bioenergy	2019
14.	Subcritical water extraction of bioactive compounds from <i>Orostachys japonicus</i> A. Berger (Crassulaceae)	Scientific reports	2019
15.	Biodiesel production from slaughter wastes of broiler chicken: A potential survey in Iran	Renewable Energy	2019
16.	Optimization of pyrolysis process of sugarcane straw by thermogravimetric and differential scanning calorimetry analyses in different atmospheres	Renewable Energy	2019
17.	Phycoremediation in aquaculture; a winwin paradigm	Aquaculture Research	2019
18.	Preliminary understanding on the ash behaviour of algae during co-gasification in an entrained flow reactor.	Fuel Processing Technology	2018
19.	Pyrolysis of <i>Spirulina maxima</i> : kinetic modelling and selectivity for aromatic hydrocarbons.	Algal Research	2018
20.	Microalgal biodiesel production: realizing the sustainability index.	Renewable & Sustainable Energy Reviews	2017
21.	Pyrolysis of <i>Spirulina maxima</i> : values of activation energy and in situ catalysis increasing the selectivity of aromatic hydrocarbons.	Algal Research	2017

22. Self-sufficient bioethanol production system using a lignin-derived adsorbent of fermentation inhibitors.	ACS Sustainable Chemistry & Engineering	2017
23. Modelling of real-solar radiation spatial distribution as a tool for solar energy cadastre in the cities.	Energy and Environment	2017
24. Evaluation of different enzymatic treatment procedures on sugar extraction from microalgal biomass, experimental and kinetic study.	Energy	2017
25. Variations in physicochemical properties and bioconversion efficiency of <i>Ulva lactuca</i> polysaccharides after different biomass-pretreatment techniques.	Renewable Energy	2017
26. Acceptance and willingness to pay for solar home system in Pakistan: Survey evidence from northern area on the promotion of solar energy.	Energy, Sustainability and Society	2017
27. Optimization Study on the hydrogen peroxide pretreatment and production of bioethanol from seaweed <i>Ulva prolifera</i> biomass.	Bioresource Technology	2016
28. A review of thermochemical conversion of microalgal biomass for biofuels.	Green Chemistry	2016
29. Effect of longterm lime pretreatment of date palm leaves on delignification.	Journal of Agricultural Science	2016
30. Enhancing the feasibility of <i>Microcystis aeruginosa</i> as a feed stock for bioethanol production by altering its biological characteristics.	Waste and Biomass Valorisation (WAVE)	2016
31. Impact of Curing Time on Thin Film Composite Nanofiltration Membrane for Improving Xylose Glucose Separation.	International Journal of Biomass and Renewable (IJBR)	2016
32. Utilization of crude rubber seed oil (CSRO) for the production of bio gasoline: physicochemical studies.	International Journal of Biomass and Renewable (IJBR)	2016
33. Comparative evaluation of chemical and enzymatic saccharification of mixotrophically grown deoiled microalgal biomass for reducing sugar production.	Bioresource Technology	2015
34. Increased release of fermentable sugars from elephant grass by enzymatic hydrolysis in the presence of surfactants.	Energy Conversion and Management	2013
35. Influence of cellulose pulping treatment (H factor) on the rheological properties of gel-like cellulose pulp dispersions in castor oil.	Industrial & Engineering Chemistry Research	2012

JOURNAL REVIEWER

Non-citation Indexed

- | | | |
|---|--|------|
| 1. Developing Solid Waste Management System in a Campus in Danang, Vietnam | Indian Conference on Logic and its Applications (ICLA) | 2021 |
| 2. Effect of pressure on essential oil yield of Chromolaena odorata leaves extract using supercritical fluid carbon dioxide | International Conference on Separation Technology | 2017 |
| 3. Production of fish palatant from local fish waste by subcritical water extraction | International Conference on Separation Technology | 2017 |
| 4. A Review: Ultrasonic and Subcritical Technologies in the Production of Biodiesel Fuel | World research and innovation conference on engineering & technology | 2016 |
| 5. A Novel Oscillatory Flow Bioreactor for a Potentially Higher Biomethane Generation and Sustainable Cattle Manure Treatment | World research and innovation conference on engineering & technology | 2016 |
| 6. Heavy metal removal from simulated wastewater physically and chemically modified palm shell activated carbon | Malaysian society for engineering and technology | 2012 |

JURY

External International Institutions

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|---|----------------------|-----------------------|
| 1. Bachelor of Chemical Engineering (Honors),
Manipal International University | External
Examiner | Nov 2022-Nov
2024 |
| 2. Bachelor of Chemical Engineering (Honors),
Manipal International University | External
Examiner | Nov 2020-
Nov 2022 |

JURY

External Local Institutions

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|---|----------------------|----------------------|
| 1. Bachelor of Environmental Technology (Honours)
and Diploma in Environmental Technology, Quest
International University | External
Examiner | Apr 2023-Apr
2025 |
| 2. Seminar Projek Ilmiah, Universiti Kebangsaan
Malaysia | Jury | 4-5 July 2022 |
| 3. Regional Chemical Engineering Undergraduate
Conference (RCEUC) 2022 | Jury | 17-18 Aug
2022 |
| 4. Regional Chemical Engineering Undergraduate
Conference (RCEUC) 2021 | Jury | 1-2 Sept 2021 |
| 5. Board of Studies (BOS), Faculty of Engineering,
Technology & Built Environment, UCSI University | Member | 2020 |
| 6. Pertandingan Rekacipta & Inovasi STEM: Karnival
STEM Kementerian Pendidikan Malaysia | Jury | 14-16 Aug
2018 |
| 7. 4 th International Biotechnology Competition and
Exhibition 2018 | Jury | 13 -14 Apr
2018 |
| 8. 3 th International Biotechnology Competition and
Exhibition 2017 | Jury | 15 Apr 2017 |
| 9. Faculty of Build Environment, UKM Bangi | Jury | 15 Dec 2012 |

GOVERNMENT ADVISORY BODIES OR COMMUNITY ORGANIZATIONS

Member

- | | | |
|---|---|------|
| 1. The waste to Energy (WtE) solid waste treatment plant construction project | Member - Technical Evaluation Committee | 2021 |
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FOUNDER OF COOPERATION NETWORK (MOU, MOA)

Foreign Agencies

- | | |
|---|------|
| 1. MoU between UPM and Zhengzhou University of Light Industry | 2024 |
| 2. MoU between UPM and Manipal International University | 2021 |

FOUNDER OF COOPERATION NETWORK (MOU, MOA)

Local Agencies

- | | |
|--|------|
| 1. MoA between UPM and World New Energy Centre Sdn. Bhd. | 2023 |
| 2. MoA between UPM and Hellas TF Sdn. Bhd. | 2022 |
| 3. MoU between UPM and Petronas | 2021 |

COMMUNITY NETWORK

International Level

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|---|--------|------|
| 1. Joint Research project between UPM and Universitas Gadjah Mada | Leader | 2020 |
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COMMUNITY NETWORK

National Level

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|---|--------|---------------------|
| 1. UPM Exploration Committee in conjunction with the 2023 STEM conference | Member | 25-26 Oct 2023 |
| 2. Program Kemasyarakatan Di Perkampungan Orang Asli Sg Lalang, Semenyih, Jabatan Kemajuan Orang Asli Malaysia | Leader | 26/09/2016 |
| 3. A feasibility Study on Biogas Production from Domestic Wastewater Produced by 'Off-grid' households and communities in Royal Belum, Center for Agroecology, Water & Resilience, Coventry University. | Leader | Dec 2017 – Apr 2018 |