

**Mohd Sobri Takriff**  
**Professor**  
**Department of Mechanical and Nuclear Engineering**  
**University of Sharjah**

**EDUCATION**

Ph.D. Chemical Engineering	University of Arkansas, USA	1996
M.Sc. Chemical Engineering,	University of Arkansas, USA	1993
B.Sc. (Cum Laude) Chemical Engineering	University of Arkansas, USA	1990

**SPECIALIZATION**

General Specialization	Chemical Engineering, Fluid Mechanics, and Heat & Mass Transfer
Research Interest	Wastewater Treatment, Water Recovery, Renewable Energy, Process Modeling & Simulation, Process Safety, Circular Solution

**PROFESSIONAL AFFILIATIONS**

- Fellow, The Institution of Chemical Engineers, UK (99911102)
- Chartered Engineer, The Engineering Council, UK (572936)
- Professional Engineer, Board of Engineer Malaysia (12943)
- Corporate Member, Institution of Engineers Malaysia (26922)

**PROFESSIONAL POSITIONS**

- 2021- Current: Full Professor, Department of Mechanical and Nuclear Engineering, University of Sharjah.
- 2017-2021: Universiti Kebangsaan Malaysia-Sime Darby Foundation Co-Chair Professor for Sustainable Development
- 2018-2021: Director IDEA Center, Universiti Kebangsaan Malaysia
- 2013-2021 Full Professor (VK6), Universiti Kebangsaan Malaysia
- 2013-2014: Adjunct Professor, Universiti Malaysia Sarawak
- 2010-2021 Board of Director, UKM Pakarunding Sdn. Bhd.
- 2008-2013 Full Professor (VK7), Universiti Kebangsaan Malaysia
- 2002-2008 Associate Professor, Universiti Kebangsaan Malaysia
- 1996-2002 Lecturer, Universiti Kebangsaan Malaysia

## **AWARDS & HONORS**

ASEAN Energy Award 2020, ASEAN Energy Centre, 2020

National Energy Award, 2020, Ministry of Energy & Natural Resources, Malaysia, 2020

Excellence Academic Award, Universiti Kebangsaan Malaysia, 2017

Top Research Scientist Malaysia 2015, Akademi Sains Malaysia, 2015

Excellence Service Award, Universiti Kebangsaan Malaysia, 2012

Excellence Service Award, Universiti Kebangsaan Malaysia, 2009

Research Publication Award (Book–Science, Technology and Medical Category,) Universiti Kebangsaan Malaysia, 2007

Excellence Service Award, Universiti Kebangsaan Malaysia, 2007

Silver Medal, Malaysian Technology Expo 2006, Kuala Lumpur, 2006

Quality Award: Young Reseracher Award , 2006

Teaching Excellence Award, Universiti Kebangsaan Malaysia, 2005

Silver Medal, ITEX, Geneva Switzerland, 2002

Teaching Excellence Award, Universiti Kebangsaan Malaysia, 1999

Excellence Service Award, Universiti Kebangsaan Malaysia, 1999

Combs Award, University of Arkansas , 1989,1990

## **INVITED TALKS**

Invited Speaker: Smart Circular Bioeconomy, Green Energy Solutions in APEC region 2020, APEC-ACABT, Taiwan 18-20 December 2020.

Invited Speaker: Bio-Circular-Green Economy - The Malaysian Scenario, International conference on circular economy and Technology transferring for small and medium size enterprise, Ministry of Higher Education, Research and Innovation, Thailand, 23 September 2020

Invited Speaker: Indigenous Resources for Renewable Energy, CIMB Young ASEAN Leaders, sept 20 2019, Malaysia

Keynote Speaker: Microalgae for agriculture, The 2nd International Conference on Natural Products and Bioresource Sciences – 2018, Jakarta, Indonesia 1-2 November 2018

Keynote Speaker: Destination Bioeconomy, The 5th International Conference on Biotechnology Engineering 2018 – Kuala Lumpur (19-20 Sept 2018), Kuala Lumpur

Invited Speaker: Regional Consultation on Achieving SDGs through Sector-focused STI Policies, Bangkok, Thailand 27-29 Ogos 2018

Keynote Speaker: Research Funding Best Practices, Research Funding & Powering the Innovation Engine,

Malaysian Industrial Development Agency & Nottingham University, Kuala Lumpur, 23-24 August 2017

Keynote Speaker: Hydrogen from oil palm biomass, International hydrogen and fuel cell technology, Putrajaya 12-15 April 2017

Keynote Speaker: Renewable energy Opportunities from Palm Oil Milling, Overcoming Critical Bottlenecks to Accelerate Renewable Energy Deployment in ASEAN+6 Countries, Bangkok Thailand, 13-15 June 2016

Plenary Speaker: Assessment of POME as a resource for biohythane energy, 2015, ABHL-ABBS, 21-23 Sept 2015, Kentin, Taiwan

Invited Speaker: Integrated Delivery of Engineering Curriculum, National Engineering Education Workshop, 20-21 August 2015, Tokyo Japan.

Keynote Speaker: Malaysian Biomass Strategy – An alternative direction, 2015, Biomass Open Research Forum, Thailand Institute of Scientific and Technology Research, 9-10 July 2015, Bangkok Thailand

## **PROFESSIONAL SERVICES**

Professional Formation Forum, The Institution of Chemical Engineers – UK, Malaysian Branch

Chairperson, Academic Research on Palm Oil Sustainability

Accreditation Panel, Board of Engineers Malaysia

Board of Study, Universiti Teknologi Malaysia

Board of Study, Universiti Putra Malaysia

Board of Study, International Islamic University Malaysia

Academic Program External Examiner, Universiti Teknologi Malaysia

Academic Program External Examiner, International Islamic University Malaysia

Academic Program External Examiner, Universiti Malaysia Pahang

Academic Program External Examiner, Universiti Malaysia Sarawak

Academic Program External Examiner, Universiti Malaysia Perlis

Research Grants Evaluation Panel, Ministry of Higher Education Malaysia

Board of Examination, National Institute of Occupational Safety and Health.

Expert Panel, Department of Environment Malaysia

Working Group – Revision of Ms 761, Code of Practice For The Storage And Handling of Flammable And Combustible Liquids, Department of Standard Malaysia

## FUNDED RESEARCH PROJECTS

Sime Darby Foundation Research Endowment for Sustainability- Smart Circular Solution (MYR 15,000,000, 2021-2030)

Ministry of Higher Education (Process Criteria Establishment and Safety Aspect Evaluation of Biogas Fuelled Solid Oxide Fuel Cell (SOFC) Power Generation Plant (MYR255,000, 2019-2023)

Ministry of Higher Education (Integrated microalgae-membrane bioreactor for water reclamation and biomass feedstock for cellulose (MYR470,000, 2019-2021)

Sime Darby Foundation Research Endowment for Sustainable development- Development of Zero Waste Processing, (MYR 15,000,000, 2010-2020)

CRAUN Research - Integrated Sago Waste Recovery and Treatment Demonstration Plant (MYR 1,200,000, 2016-2019)

Ministry of Higher Education, (Integrated native algae CO<sub>2</sub> sequestration and effluent treatment, MYR207,000 2015-2017)

Sime Darby Plantation - CO<sub>2</sub> sequestration and effluent treatment (MYR527,000, 2014-2017)

Ministry of Higher Education, (Zero Waste Processing, MYR 660,999, 2012-2014)

Ministry of Science Technology and Innovation, (Scale-Up Of Oscillatory Flow Bioreactor, MYR268,000, 2011-2013)

## SUPERVISION (POSTDOC & POSTGRAD STUDENTS)

### *Postdoc Supervision*

Dr Safa Senan Mahmood	2020-21	Biohydrogen production by a novel integrated system of dark fermentation and microalgae cultivation
Dr Afrasyab Khan	2019	Flow instabilities & the impact on accompanying structures
Dr Nazlina Md Yasin	2016	Biohydrogen production from POME using native microalgae strain
Dr. Rajkumar Rengganathan	2015	Carbon capture using native algal strain
Dr. Rajkumar Rengganathan	2014	Isolation, Purification and identification of native microalgae strains

### *PhD Supervision (Recently Graduated & in Progress)*

Azima Syafaini, 2021, Phd Thesis – Acclimatization and harvesting of local microalgae species for biodiesel production

Kamrul Fakir, 2020, Phd Thesis - Integrated Effluent Treatment and CO<sub>2</sub> sequestration

Ainil Farhan Mohd Udaiyappan, 2020 – Phd Thesis – Industrial Effluent Treatment Using Local Microalgae Species

Badiaa Saeed Omer Babaqi, 2018, PhD Thesis - Process Integration for Energy Saving and Emissions Reduction of Crude Oil Distillation Unit

Tengku Nor Azira Tengku Mohamed Salim - Intelligent asset safety management for process industry (in Progress)

Dayang Siti Nurzailyn Abang Samsudin - CFD modelling of gas explosion in process industry (in Progress)

Ahmad Faris Mohd Fakeri- Process Safety Evaluation Criteria for Biogas Fuelled solid oxide fuel cell (in Progress)

Abdul Mu'im Abdul Nasir - Fluid Dynamics of Sago Hampas Drying in a Fluidised Bed Drier (in Progress)

Nadia Binti Kamarrudin - CFD modelling and Experimental investigation of jet -stream cooling system (in Progress)

Norzila Mohd - Wastewater bioremediation using local microalgae strains (in Progress)

## RECENT PUBLICATIONS

1. Mahmud, S.S., Jahim, J.M., Abdul, P.M., Luthfi, A.A.I., Takriff, M.S., Techno-economic analysis of two-stage anaerobic system for biohydrogen and biomethane production from palm oil mill effluent, (2021) *Journal of Environmental Chemical Engineering*, 9 (4), art. no. 105679
2. Japar, A.S., Takriff, M.S., Mohd Yasin, N.H., Mahmud, S.S. , Optimization of Chlorella biomass harvesting by flocculation and its potential for biofuel production , (2021) *Journal of Applied Phycology*, 33 (3), pp. 1621-1629.
3. Rohani, R., Yusoff, I.I., Amran, N.F.A., Naim, R., Takriff, M.S., Comparison of separation performance of absorption column and membrane contactor system for biohydrogen upgraded from palm oil mill effluent fermentation, (2021) *Environmental Progress and Sustainable Energy*, 40 (3), art. no. e13573
4. Mohd Udaiyappan, A.F., Hasan, H.A., Takriff, M.S., Sheikh Abdullah, S.R., Mohd Yasin, N.H., Ji, B. , Cultivation and application of *Scenedesmus* sp. strain UKM9 in palm oil mill effluent treatment for enhanced nutrient removal, (2021) *Journal of Cleaner Production*, 294, art. no. 126295
5. Shomran, A.T., Hussein, E.K., Shomran, H.T., Gaaz, T.S., Takriff, M.S., Kadhum, A.A.H., Al-Amiery, A.A. , Investigation of Adding Silicon on Fatigue Properties of Aluminum Based Alloys, (2021) *Silicon*, 13 (4), pp. 1215-1222.
6. Japar, A.S., Takriff, M.S., Mohd Yasin, N.H., Microalgae acclimatization in industrial wastewater and its effect on growth and primary metabolite composition, (2021) *Algal Research*, 53, art. no. 102163,
7. Hanoon, M.M., Resen, A.M., Al-Amiery, A.A., Kadhum, A.A.H., Takriff, M.S. , Theoretical and Experimental Studies on the Corrosion Inhibition Potentials of 2-((6-Methyl-2-Ketoquinolin-3-yl)Methylene) Hydrazinecarbothioamide for Mild Steel in 1 M HCl (2021) *Progress in Color, Colorants and Coatings*, 15 (1), pp. 21-33.
8. Resen, A.M., Hanoon, M.M., Alani, W.K., Kadhim, A., Mohammed, A.A., Gaaz, T.S., Kadhum, A.A.H., Al-Amiery, A.A., Takriff, M.S., Exploration of 8-piperazine-1-ylmethylumbelliferone for application as a corrosion inhibitor for mild steel in hydrochloric acid solution, (2021) *International Journal of Corrosion and Scale Inhibition*, 10 (1), pp. 368-387.
9. Mahmud, S.S., Azahar, A.M., Luthfi, A.A.I., Abdul, P.M., Mastar, M.S., Anuar, N., Takriff, M.S., Jahim, J.M.D., Potential Utilisation of Dark-Fermented Palm Oil Mill Effluent in Continuous Production of Biomethane by Self-Granulated Mixed Culture, (2020) *Scientific Reports*, 10 (1), art. no. 9167
10. Albadarin, N.A., Takriff, M.S., Tan, S.T., Shahahmadi, S.A., Minggu, L.J., Kadhum, A.A.H., Yin, W.W., Salehmin, M.N.I., Alkhalqi, E.M., Hamid, M.A.A., Amin, N. Tunable morphology and band gap alteration of CuO-ZnO nanostructures based photocathode for solar photoelectrochemical cells, (2020) *Materials Research Express*, 7 (12), art. no. 125010, .
11. Jaafar, W.S.W.M., Said, N.F.S., Maulud, K.N.A., Uning, R., Latif, M.T., Kamarulzaman, A.M.M., Mohan, M., Pradhan, B., Saad, S.N.M., Broadbent, E.N., Cardil, A., Silva, C.A., Takriff, M.S. Carbon emissions from oil palm induced forest and peatland conversion in sabah and Sarawak, Malaysia, (2020) *Forests*, 11 (12), art. no. 1285, pp. 1-22.
12. Arisht, S.N., Abdul, P.M., Jasni, J., Mohd Yasin, N.H., Lin, S.-K., Wu, S.-Y., Takriff, M.S., Jahim, J.M., Dose-response analysis of toxic effect from palm oil mill effluent (POME) by-products on biohydrogen producing

- bacteria – A preliminary study on microbial density and determination of EC50, (2020) *Ecotoxicology and Environmental Safety*, 203, art. no. 110991
13. Shaker, L.M., Al-Amiery, A.A., Kadhum, A.A.H., Takriff, M.S., Manufacture of contact lens of nanoparticle-doped polymer complemented with zemax , (2020) *Nanomaterials*, 10 (10), art. no. 2028
  14. Rosli, M.I., Abdul Nasir, A.M., Takriff, M.S., Ravichandar, V. , Drying sago pith waste in a fluidized bed dryer, (2020) *Food and Bioproducts Processing*, 123, pp. 335-344
  15. Babaqi, B.S., Takriff, M.S., Othman, N.T.A., Kamarudin, S.K., Yield and energy optimization of the continuous catalytic regeneration reforming process based particle swarm optimization (2020) *Energy*, 206, art. no. 118098,
  16. Hanipa, M.A.F., Abdul, P.M., Jahim, J.M., Takriff, M.S., Reungsang, A., Wu, S.-Y. , Biotechnological approach to generate green biohydrogen through the utilization of succinate-rich fermentation wastewater, (2020) *International Journal of Hydrogen Energy*, 45 (42), pp. 22246-22259
  17. Othman, T.N.A., Din, Z.A.M., Takriff, S.M.M. , Simulation on drying of sago bagasse in a fluidized bed dryer, (2020) *Journal of Engineering Science and Technology*, 15 (4), pp. 2507-2521.
  18. Ding, G.T., Mohd Yasin, N.H., Takriff, M.S., Kamarudin, K.F., Salihon, J., Yaakob, Z., Mohd Hakimi, N.I.N., Phycoremediation of palm oil mill effluent (POME) and CO<sub>2</sub> fixation by locally isolated microalgae: *Chlorella sorokiniana* UKM2, *Coelastrella* sp. UKM4 and *Chlorella pyrenoidosa* UKM7, (2020) *Journal of Water Process Engineering*, 35, art. no. 101202,
  19. Mohd Udaiyappan, A.F., Hasan, H.A., Takriff, M.S., Abdullah, S.R.S., Maeda, T., Mustapha, N.A., Mohd Yasin, N.H., Nazashida Mohd Hakimi, N.I., Microalgae-bacteria interaction in palm oil mill effluent treatment, (2020) *Journal of Water Process Engineering*, 35, art. no. 101203,
  20. Uning, R., Latif, M.T., Othman, M., Juneng, L., Hanif, N.M., Nadzir, M.S.M., Maulud, K.N.A., Jaafar, W.S.W.M., Said, N.F.S., Ahamad, F., Takriff, M.S., A review of southeast Asian oil palm and its CO<sub>2</sub> fluxes, (2020) *Sustainability (Switzerland)*, 12 (12), art. no. 5077,
  21. Tiang, M.F., Fitri Hanipa, M.A., Abdul, P.M., Jahim, J.M.D., Mahmod, S.S., Takriff, M.S., Lay, C.-H., Reungsang, A., Wu, S.-Y., Recent advanced biotechnological strategies to enhance photo-fermentative biohydrogen production by purple non-sulphur bacteria: An overview, (2020) *International Journal of Hydrogen Energy*, 45 (24), pp. 13211-13230
  22. Al-Amiery, A., Shaker, L.M., Kadhum, A.A.H., Takriff, M.S. , Synthesis, characterization and gravimetric studies of novel triazole-based compound , (2020) *International Journal of Low-Carbon Technologies*, 15 (2), pp. 164-170. Cited 14 times.
  23. Al-Amiery, A., Salman, T.A., Alazawi, K.F., Shaker, L.M., Kadhum, A.A.H., Takriff, M.S. , Quantum chemical elucidation on corrosion inhibition efficiency of Schiff base: DFT investigations supported by weight loss and SEM techniques, (2020) *International Journal of Low-Carbon Technologies*, 15 (2), pp. 202-209
  24. Jasni, J., Arisht, S.N., Mohd Yasin, N.H., Abdul, P.M., Lin, S.-K., Liu, C.-M., Wu, S.-Y., Jahim, J.M., Takriff, M.S., Comparative toxicity effect of organic and inorganic substances in palm oil mill effluent (POME) using native microalgae species, (2020) *Journal of Water Process Engineering*, 34, art. no. 101165
  25. Khan, A., Takriff, M.S., Sanaullah, K., Zwawi, M., Algarni, M., Felemban, B.F., Bahadar, A., Shah, A., Rigit, A.R.H., Periodic compression and cavitation induced shear between steam-water two-phase flows for bio-materials degradation, (2020) *International Journal of Environmental Science and Technology*, 17 (3), pp. 1591-1626.
  26. Al-Amiery, A.A., Shaker, L.M., Kadhum, A.A.H., Takriff, M.S., Corrosion inhibition of mild steel in strong acid environment by 4-((5,5-dimethyl-3-oxocyclohex-1-en-1-yl)amino)benzenesulfonamide (2020) *Tribology in Industry*, 42 (1), pp. 89-101
  27. Gaaz, T.S., Dakhil, R.M., Jamil, D.M., Al-Amiery, A.A., Kadhum, A.A., Takriff, M. , Evaluation of green corrosion inhibition by extracts of citrus aurantium leaves against carbon steel in 1 m hcl medium complemented with quantum chemical assessment, (2020) *International Journal of Thin Film Science and Technology*, 9 (3), pp. 171-179.
  28. Salman, T.A., Jawad, Q.A., Hussain, M.A.M., Al-Amiery, A.A., Shaker, L.M., Kadhum, A.A.H., Takriff, M.S. , New environmental friendly corrosion inhibitor of mild steel in hydrochloric acid solution: Adsorption and thermal studies, (2020) *Cogent Engineering*, 7 (1), art. no. 1826077, .
  29. Jawad, Q.A., Hameed, A.Q., Abood, M.K., Al-Amiery, A.A., Shaker, L.M., Kadhum, A.A.H., Takriff, M.S. , Synthesis and comparative study of novel triazole derived as corrosion inhibitor of mild steel in hcl medium complemented with dft calculations, (2020) *International Journal of Corrosion and Scale Inhibition*, 9 (2), pp. 688-705.

30. Salim, R.D., Jawad, Q.A., Ridah, K.S., Shaker, L.M., Al-Amiery, A.A., Kadhum, A.A.H., Takriff, M.S. , Corrosion inhibition of thiadiazole derivative for mild steel in hydrochloric acid solution , (2020) International Journal of Corrosion and Scale Inhibition, 9 (2), pp. 550-561.
31. Zinad, D.S., Hanoon, M., Salim, R.D., Ibrahim, S.I., Al-Amiery, A.A., Takriff, M.S., Kadhum, A.A.H. , A new synthesized coumarin-derived schiff base as a corrosion inhibitor of mild steel surface in hcl medium: Gravimetric and dft studies, (2020) International Journal of Corrosion and Scale Inhibition, 9 (1), pp. 228-243
32. Khan, A., Takriff, M.S., Rosli, M.I., Othman, N.T.A., Sanaullah, K., Rigit, A.R.H., Shah, A., Ullah, A. , Flow characteristics within the wall boundary layers of swirling steam flow in a pipe comprising horizontal and inclined sections, (2020) Korean Journal of Chemical Engineering, 37 (1), pp. 19-36.
33. Hariz, H.B., Takriff, M.S., Mohd Yasin, N.H., Ba-Abbad, M.M., Mohd Hakimi, N.I.N. , Potential of the microalgae-based integrated wastewater treatment and CO<sub>2</sub> fixation system to treat Palm Oil Mill Effluent (POME) by indigenous microalgae; Scenedesmus sp. and Chlorella sp, (2019) Journal of Water Process Engineering, 32, art. no. 100907,
34. Luaibi, H.M., Al-Taweel, S.S., Gaaz, T.S., Kadhum, A.A.H., Takriff, M.S., Al-Amiery, A.A. , Removal of rhodamine dye from water using erbium oxide nanoparticles , (2019) Korean Journal of Materials Research, 29 (12), pp. 747-752.
35. Khan, A., Takriff, M.S., Rosli, M.I., Othman, N.T.A., Sanaullah, K., Rigit, A.R.H., Shah, A., Ullah, A., Mushtaq, M.U., Turbulence dissipation & its induced entrainment in subsonic swirling steam injected in cocurrent flowing water, (2019) International Journal of Heat and Mass Transfer, 145, art. no. 118716,
36. Mohd Faudzi, M.H.I., Jahim, J.M., Abdul, P.M., Chu, C.-Y., Wu, S.-Y., Takriff, M.S., Harun, S. , Kinetic model of thermophilic biohydrogen production from POME , (2019) International Journal of Integrated Engineering, 11 (7), pp. 219-232
37. Chong, W.C., Mohammad, A.W., Mahmoudi, E., Chung, Y.T., Kamarudin, K.F., Takriff, M.S. , Nanohybrid membrane in algal-membrane photoreactor: Microalgae cultivation and wastewater polishing (2019) Chinese Journal of Chemical Engineering, 27 (11), pp. 2799-2806
38. Salaman, A.J., Al-Obaidi, A.A., Takriff, M.S. , Enhancing morphology and compression properties of halloysite reinforced polyurethane nanocomposites using injection-moulding technique, (2019) Results in Physics, 14, art. no. 102507
39. Khalid, A.A.H., Yaakob, Z., Abdullah, S.R.S., Takriff, M.S. , Assessing the feasibility of microalgae cultivation in agricultural wastewater: The nutrient characteristics, (2019) Environmental Technology and Innovation, 15, art. no. 100402,
40. Al-Taweel, S.S., Saud, H.R., Kadhum, A.A.H., Takriff, M.S., The influence of titanium dioxide nanofiller ratio on morphology and surface properties of TiO<sub>2</sub> /chitosan nanocomposite (2019) Results in Physics, 13, art. no. 102296,
41. Mohammed Dakhil, R., Sumer Gaaz, T., Al-Amiery, A., Takriff, M.S., Amir Kadhum, A.H. , Synthesis and characterization of erbium trioxide nanoparticles as photocatalyzers for degradation of methyl orange dye (2019) Drinking Water Engineering and Science, 12 (1), pp. 15-21
42. Pudukudy, M., Yaakob, Z., Jia, Q., Takriff, M.S. , Catalytic decomposition of methane over rare earth metal (Ce and La) oxides supported iron catalysts , (2019) Applied Surface Science, 467-468, pp. 236-248.
43. Khalid, A.A.H., Yaakob, Z., Abdullah, S.R.S., Takriff, M.S., Analysis of the elemental composition and uptake mechanism of Chlorella sorokiniana for nutrient removal in agricultural wastewater under optimized response surface methodology (RSM) conditions (2019) Journal of Cleaner Production, 210, pp. 673-686
44. Salman, T.A., Al-Amiery, A.A., Shaker, L.M., Kadhum, A.A.H., Takriff, M.S., A study on the inhibition of mild steel corrosion in hydrochloric acid environment by 4-methyl-2-(Pyridin-3-yl)thiazole-5-carbohydrazide (2019) International Journal of Corrosion and Scale Inhibition, 8 (4), pp. 1035-1059.
45. Ba-Abbad, M.M., Takriff, M.S., Kadhum, A.A.H., Mohamad, A.B., Benamor, A., Wahab Mohammad, A. , Modified zno nanoparticles using iron ions (Fe<sup>3+</sup>) for photo-catalytic degradation of toxic pollutants under sunlight, (2019) Handbook of Remediation for Complex Environmental Problems, pp. 127-145.
46. Hamzah, A.A., Ruzairi, A.R., Takriff, M.S., Mohamad, E.J., Pusppanathan, J., Azman, I.N., Mohd Ghazali, M.S., Sabri, M.Z., Mohrab, K.F., Ghafar, F., Zahari, M.N., Application of electrical resistance tomography in an Oscillatory Baffled column for Gas-Liquid two-phase flow , (2019) International Journal of Integrated Engineering, 11 (6), pp. 119-125.
47. Hariz, H.B., Takriff, M.S., Ba-Abbad, M.M., Mohd Yasin, N.H., Mohd Hakim, N.I.N. , CO<sub>2</sub> fixation capability of Chlorella sp. and its use in treating agricultural wastewater , (2018) Journal of Applied Phycology, 30 (6), pp. 3017-3027

48. Azahar, A.M., Anuar, N., Jahim, J.M., Takriff, M.S., Yii, W.S. , Analysis of 16s rdna primer sets for molecular taxonomy study of mixed culture that produce biohydrogen (2018) *Malaysian Applied Biology*, 47 (5), pp. 251-259.
49. Teow, Y.H., Wong, Z.H., Takriff, M.S., Mohammad, A.W. , Fouling behaviours of two stages microalgae/membrane filtration system applied to palm oil mill effluent treatment, (2018) *Membrane Water Treatment*, 9 (5), pp. 373-383
50. Rosli, M.I., Nasir, A.M.A., Takriff, M.S., Chern, L.P., Simulation of a fluidized bed dryer for the drying of sago waste, (2018) *Energies*, 11 (9), art. no. 2383
51. Syafiqah Hazman, N.A., Mohd Yasin, N.H., Takriff, M.S., Hasan, H.A., Kamarudin, K.F., Mohd Hakimi, N.I.N., Integrated palm oil mill effluent treatment and CO2 sequestration by microalgae, (2018) *Sains Malaysiana*, 47 (7), pp. 1455-1464.
52. Babaqi, B.S., Takriff, M.S., Kamarudin, S.K., Othman, N.T.A. , Mathematical Modeling, Simulation, and Analysis for Predicting Improvement Opportunities in the Continuous Catalytic Regeneration Reforming Process, (2018) *Chemical Engineering Research and Design*, 132, pp. 235-251.
53. Pudukudy, M., Yaakob, Z., Jia, Q., Sobri Takriff, M. , Catalytic decomposition of undiluted methane into hydrogen and carbon nanotubes over Pt promoted Ni/CeO2 catalysts, (2018) *New Journal of Chemistry*, 42 (18), pp. 14843-14856
54. Khalid, A.A.H., Yaakob, Z., Abdullah, S.R.S., Takriff, M.S. , Growth improvement and metabolic profiling of native and commercial *Chlorella sorokiniana* strains acclimatized in recycled agricultural wastewater, (2018) *Bioresource Technology*, 247, pp. 930-939.
55. Ba-Abbad, M.M., Takriff, M.S., Benamor, A., Nasser, M.S., Mahmoudi, E., Mohammad, A.W. , Synthesis and characterization of Sm<sup>3+</sup>-doped ZnO nanoparticles via a sol–gel method and their photocatalytic application. (2018) *Journal of Sol-Gel Science and Technology*, 85 (1), pp. 178-190

#### **PATENTS**

- Mohd Sobri Takriff, Abdul Wahab Mohammad & Mohd Tusirin Nor, 2015, MY2015000765-A system for clarifying industrial effluents, Malaysian patent
- Mohd Sobri Takriff, 2014, WO2014175723 – A Bioreactor, WIPO Patent
- Wan Ramli Wan Daud, Edy Heriato Majlan, Abdul Wahab Mohammad, Abu Bakar Mohamad & Mohd Sobri Takriff, 2009, WO2009064169 - Compact Pressure Swing Adsorption System for Hydrogen Purification – WIPO Patent
- Mohd Sobri Takriff & Taslim Hasballah, 2004, MYPI20041771- Compact Mixer, Malaysian Patent