

PERSONAL INFORMATION

Name : Herma Dina Setiabudi
Designation : Assoc. Prof. Ts. Dr.
Department : Faculty of Chemical & Process Engineering Technology
Office No : +60-9-5492836
Fax No : +60-9-5492889
Mobile No : +6012-7393471
Email : herma@ump.edu.my



ACADEMIC QUALIFICATION

- Universiti Teknologi Malaysia, Malaysia, Chemical Engineering, Bachelor Degree, 2010
- Universiti Teknologi Malaysia, Malaysia, Chemical Engineering, Doctor of Philosophy, 2013

WORKING EXPERIENCE

Position : Associate Professor
Company Name : Universiti Malaysia Pahang
Year : 08/07/2020 – present

Position : Deputy Dean (Research & Postgraduate Studies)
Company Name : Universiti Malaysia Pahang
Year : 10/02/2020 – 9/02/2022

Position : Senior Lecturer
Company Name : Universiti Malaysia Pahang
Year : 20/08/2013 – 07/07/2020

PROFESSIONAL AFFILIATION

- Graduate Member (GE97344A), Board of Engineer Malaysia
- Professional Technologists (PT18100014), Malaysian Board of Technologists

EXPERTISE

- **Reaction Intensification**
Reforming; Isomerization; Cracking; Photocatalysis
- **Advanced Material**
Metal based catalyst; Mesoporous silica; Nanosilica; Nanoparticles
- **Sustainable Energy**
Hydrogen, Syngas
- **Wastewater Treatment**
Adsorption; Photocatalysis

CONSULTATION

| Number of Project : 4 | Total Amount : > RM 250,000 / USD 59,000 |

RESEARCH INFORMATION

RESEARCH GRANT

| Total Funding : > RM 1,500,000 / USD 346,000 | Number of Project : > 30 |

RESEARCH OUTPUT

| Journal : 69 | Book Chapter : 5 | Proceedings : 13 |
| Citations : 1286 | h-index : 20 |

➤ **JOURNAL**

1. L.N Jun, M.B. Bahari, **H.D. Setiabudi**, A.A. Jalil, D.V.N. Vo. Greenhouse gas mitigation and hydrogen generation via enhanced ethylene glycol dry reforming on La-promoted Co/Al₂O₃ catalyst. *Process Safety and Environmental Protection*, 150, 356-364. (2021)
2. S.Y. Chin, S. Shahrudin, G.K. Chua, N. Samsodin, **H.D. Setiabudi**, N.S. Karam Chand, N.A. Samsudin. Palm Oil-Based Chemicals for Sustainable Development of Petrochemical Industries in Malaysia: Progress, Prospect, and Challenges. *ACS Sustainable Chemistry & Engineering*. (2021)
3. L.P. Teh, **H.D. Setiabudi**, S.M. Sidik, N.H.R. Annuar, A.A. Jalil. Synergic role of platinum (Pt) and molybdenum trioxide (MoO₃) promoted HBEA zeolite towards n-heptane isomerization. *Materials Chemistry and Physics*, 263, 124406. (2021)
4. L.P. Teh, **H.D. Setiabudi**, S.N. Timmiati, M.A.A. Aziz, N.H.R. Annuar, N.N.N. Ruslan. Recent Progress in Ceria-based Catalysts for the Dry Reforming of Methane: A Review. *Chemical Engineering Science*, 116606. (2021)
5. N.S. Kamarudin, R. Jusoh, N.F. Sukor, A.A. Jalil, **H.D. Setiabudi**, N.F.M. Salleh. Facile Electro-Assisted Green Synthesis of Size-Tunable Silver Nanoparticles and Its Photodegradation Activity. *Journal of Cluster Science*, 1-13. (2021)
6. S.M. Yusof, R. Othaman, **H.D. Setiabudi**, L.P. Teh. Modified fibrous silica for enhanced carbon dioxide adsorption: Role of metal oxides on physicochemical properties and adsorption performance. *Journal of Solid State Chemistry*, 294, 121845. (2021)
7. M.B. Bahari, **H.D. Setiabudi**, T. Nishino, N. Ayas, D.V.N. Vo. Coke-resistant Y₂O₃-promoted cobalt supported on mesoporous alumina for enhanced hydrogen production. *Journal of the Energy Institute*, 94, 272-284. (2021)
8. M. Ibrahim, A.A. Jalil, W.F.W. Zakaria, N.A.A. Fatah, M.Y.S. Hamid, S.M. Izan, H.D. Setiabudi. n-Hexane hydroisomerization over Zr-modified bicontinuous lamellar silica mordenite supported Pt as highly selective catalyst: Molecular hydrogen generated protonic acid sites and optimization. *International Journal of Hydrogen Energy*, 46(5), 4019-4035. (2021)
9. S.N. Bukhari, C.C. Chong, **H.D. Setiabudi**, Y.W. Cheng, L.P. Teh, A.A. Jalil. Ni/Fibrous type SBA-15: Highly active and coke resistant catalyst for CO₂ methanation. *Chemical Engineering Science* 229, 116141. (2021)
10. Mahadi B Bahari, **H.D. Setiabudi**, Trinh Duy Nguyen, Pham TT Phuong, Quang Duc Truong, Aishah Abdul Jalil, Nurul Ainirazali, Dai-Viet N Vo. Insight into the Influence of Rare-earth Promoter (CeO₂, La₂O₃, Y₂O₃, and Sm₂O₃) Addition toward Methane Dry Reforming over Co/Mesoporous Alumina Catalysts. *Chemical Engineering Science*. 228, 115967. (2020)
11. M. Ibrahim, A.A. Jalil, W.F.W. Zakaria, N.A.A. Fatah, M.Y.S. Hamid, S.M. Izan, **H.D. Setiabudi**. n-Hexane hydroisomerization over Zr-modified bicontinuous lamellar silica mordenite supported Pt as highly selective catalyst: Molecular hydrogen generated protonic acid sites and optimization. *International Journal of Hydrogen Energy*, 46, 5, 4019-4035. (2021)
12. S.M. Yusof, R. Othaman, **H.D. Setiabudi**, L.P. Teh. Modified fibrous silica for enhanced carbon dioxide adsorption: Role of metal oxides on physicochemical properties and adsorption performance. *Journal of Solid State Chemistry*, 294, 121845. (2021).
13. A. Awad, M.S. Alnarabiji, M.A. Salam, D.V.N. Vo, **H.D. Setiabudi**, B. Abdullah. Synthesis, Characterisation, and Performance Evaluation of Promoted Ni-Based Catalysts for Thermocatalytic Decomposition of Methane. *ChemistrySelect* 5 (37), 11471-11482.
14. M.B. Bahari, **H.D. Setiabudi**, T. Nishino, N. Ayas, D.V.N. Vo. Coke-resistant Y₂O₃-promoted cobalt supported on mesoporous alumina for enhanced hydrogen production. *Journal of the Energy Institute*. (2020).
15. Y.W. Cheng, C.C. Chong, M.K. Lam, W.H. Leong, L.F. Chuah, S. Yusup, **H.D. Setiabudi**, Y. Tang, J.W. Lim. Identification of microbial inhibitions and mitigation strategies towards cleaner bioconversions of palm oil mill effluent (POME): A review. *Journal of Cleaner Production*. 280, 124346. (2021)
16. C.C. Chong, Y.W. Cheng, **H.D. Setiabudi**, N. Ainirazali, D.V.N. Vo, B. Abdullah. Dry reforming of methane over Ni/dendritic fibrous SBA-15 (Ni/DFSBA-15): Optimization, mechanism, and regeneration studies. *International Journal of Hydrogen Energy*. (2020) *Article in press*
17. C.C. Chong, Y.W. Cheng, M.B. Bahari, L.P. Teh, S.Z. Abidin, **H.D. Setiabudi**. Development of nanosilica-based catalyst for syngas production via CO₂ reforming of CH₄: A review. *International Journal of Hydrogen Energy*. (2020) *Article in press*
18. N.A.A. Fatah, A.A. Jalil, M.L. Firmansyah, S. Triwahyono, **H.D. Setiabudi**, D.V.N. Vo. Enhanced hydrogen-assisted cracking of 1, 3, 5-triisopropylbenzene over fibrous silica ZSM-5: Influence of co-surfactant during synthesis. *International Journal of Hydrogen Energy*. (2020) *Article in press*

19. C.C. Chong, Y.W. Cheng, S.N. Bukhari, **H.D. Setiabudi**, A.A. Jalil. Methane dry reforming over Ni/fibrous SBA-15 catalysts: Effects of support morphology (rod-liked F-SBA-15 and dendritic DFSBA-15). *Catalysis Today*. (2020)
20. C.C. Chong, S.N. Bukhari, Y.W. Cheng, **H.D. Setiabudi**, L.P. Teh, A.A. Jalil. Facile synthesis of tunable dendritic fibrous SBA-15 (DFSBA-15) with radial wrinkle structure. *Microporous and Mesoporous Materials*, 294, 109872. (2020)
21. N.S. Kamarudin, R. Jusoh, N.F. Sukor, A.A. Jalil, **H.D. Setiabudi**. Intensified photocatalytic degradation of 2, 4–dichlorophenoxyacetic acid using size-controlled silver nanoparticles: Effect of pre-synthesis extraction. *Advanced Powder Technology*. 31 (8), 3381-3394. (2020)
22. Mahadi B Bahari, **Herma Dina Setiabudi**, Trinh Duy Nguyen, Aishah Abdul Jalil, Nurul Ainirazali, Dai-Viet N Vo. Hydrogen production via CO₂-CH₄ reforming over cobalt-supported mesoporous alumina: A kinetic evaluation. *International Journal of Hydrogen Energy*. (2020) *Article in press*
23. I. Hussain, A.A. Jalil, N.A.A. Fatah, M.Y.S. Hamid, M. Ibrahim, M.A.A. Aziz, **H.D. Setiabudi**. A highly competitive system for CO methanation over an active metal-free fibrous silica mordenite via in-situ ESR and FTIR studies. *Energy Conversion and Management*. 211, 112754. (2020)
24. N.S. Kamarudin, R. Jusoh, A.A. Jalil, **H.D. Setiabudi**, N.F. Sukor. Synthesis of silver nanoparticles in green binary solvent for degradation of 2, 4–D herbicide: Optimization and kinetic studies. *Chemical Engineering Research and Design*. 159, 300-314. (2020)
25. **H.D. Setiabudi**, M.A.A. Aziz, S. Abdullah, L.P. Teh, R. Jusoh. Hydrogen production from catalytic steam reforming of biomass pyrolysis oil or bio-oil derivatives: A review. *International Journal of Hydrogen Energy*. (2019) *Article in press*
26. N. Abdullah, N. Ainirazali, C.C. Chong, H.A. Razak, **H.D. Setiabudi**, S.Y. Chin, A.A. Jalil. Effect of Ni loading on SBA-15 synthesized from palm oil fuel ash waste for hydrogen production via CH₄ dry reforming. *International Journal of Hydrogen Energy*. (2019) *Article in press*
27. N. Abdullah, N. Ainirazali, C.C. Chong, H.A. Razak, **H.D. Setiabudi**, A.A. Jalil, D.V.N. Vo. Influence of impregnation assisted methods of Ni/SBA-15 for production of hydrogen via dry reforming of methane. *International Journal of Hydrogen Energy*. (2019) *Article in press*
28. C.C. Chong, S.N. Bukhari, Y.W. Cheng, **H.D. Setiabudi**, A.A. Jalil, C. Phalakornkule. Robust Ni/Dendritic Fibrous SBA-15 (Ni/DFSBA-15) For Methane Dry Reforming: Effect of Ni Loadings. *Applied Catalysis A: General*, 584, 117174. (2019)
29. C.C. Chong, **H.D. Setiabudi**, A.A. Jalil. Dendritic fibrous SBA-15 supported nickel (Ni/DFSBA-15): A sustainable catalyst for hydrogen production. *International Journal of Hydrogen Energy*. (2019) *Article in press*
30. R. Hasan, W.J. Ying, C.C. Cheng, N.F. Jaafar, R. Jaafar, A.A. Jalil, **H.D. Setiabudi**. Methylene blue adsorption onto cockle shells-treated banana pith: optimization, isotherm, kinetic, and thermodynamic studies. *Indones. J. Chem.* *Accepted Manuscript*
31. M.A.A. Aziz, **H.D. Setiabudi**, L.P. Teh, N.H.R. Annuar, A.A. Jalil. A review of heterogeneous catalysts for syngas production via dry reforming. *Journal of the Taiwan Institute of Chemical Engineers*, 101, 139-158. (2019).
32. C.C. Chong, L.P. Teh, **H.D. Setiabudi**. Syngas production via CO₂ reforming of CH₄ over Ni-based SBA-15: Promotional effect of promoters (Ce, Mg, and Zr). *Material Today Energy*, 12, 408-417. (2019)
33. S.N. Bukhari, C.C. Chong, **H.D. Setiabudi**, N. Ainirazali, M.A.A. Aziz, A.A. Jalil, S.Y. Chin. Optimal Ni loading towards efficient CH₄ production from H₂ and CO₂ over Ni supported onto fibrous SBA-15. *International Journal of Hydrogen Energy*. 44(14), 7228-7240. (2019)
34. R. Hasan, C.C. Chong, S.N. Bukhari, R. Jusoh, **H.D. Setiabudi**. Effective removal of Pb (II) by low-cost fibrous silica KCC-1 synthesized from silica-rich rice husk ash. *Journal of Industrial and Engineering Chemistry*. 75, 262-270. (2019)
35. S.N. Bukhari, C.C. Chong, **H.D. Setiabudi**, N. Ainirazali, M.A.A. Aziz, L.P. The, N.H.R. Annuar. Comparative study of Ni loading methods towards superior CO₂ conversion over Ni/SBA-15. *International Journal of Engineering & Technology*. 7(4.38), 1663-1665. (2018)
36. R. Hasan, C.C. Chong, **H.D. Setiabudi**, R. Jusoh, A.A. Jalil. Process optimization of methylene blue adsorption onto eggshell–treated palm oil fuel ash. *Environmental Technology & Innovation*, 13, 62-73. (2019).
37. R. Hasan, C.C. Chong, **H.D. Setiabudi**. Synthesis of KCC-1 Using Rice Husk Ash for Pb Removal from Aqueous Solution and Petrochemical Wastewater. *Bulletin of Chemical Reaction Engineering & Catalysis*, 14(1), 196-204. (2019)
38. N.H.N. Kamarudin, **H.D. Setiabudi**, A.A. Jalil, S.H. Adam, N.F.M. Salleh. Utilization of Lapindo Volcanic Mud for Enhanced Sono-sorption Removal of Acid Orange 52. *Bulletin of Chemical Reaction Engineering & Catalysis*, 14(1), 189-195. (2019)

39. L.P. Teh, S. Triwahyono, A.A. Jalil, **H.D. Setiabudi**, M.A.A. Aziz. Catalytic CO Methanation over Mesoporous ZSM5 with Different Metal Promoters. *Bulletin of Chemical Reaction Engineering & Catalysis*, 14(1), 228-237. (2019)
40. N.S. Kamarudin, R. Jusoh, **H.D. Setiabudi**, N.W.C. Jusoh, N.F. Jaafar, N.F. Sukor. Cymbopogon Nardus mediated synthesis of Ag nanoparticles for the photocatalytic degradation of 2, 4-Dichlorophenoxyacetic acid. *Bulletin of Chemical Reaction Engineering & Catalysis*, 14(1), 169. (2018).
41. R. Hasan, N.A.F. Ahliyasah, C.C. Chong, R. Jusoh, **H.D. Setiabudi**. Eggshell Treated Oil Palm Fronds (EG-OPF) as low-cost adsorbent for Methylene Blue Removal. *Bulletin of Chemical Reaction Engineering & Catalysis*, 14(1), 158-164. (2019)
42. A.A. Azmi, N. Ngadi, M.J. Kamaruddin, Z.Y. Zakaria, L.P. Teh, N.H.R. Annuar, **H.D. Setiabudi**, A.A. Jalil, M.A.A. Aziz. Rapid One Pot Synthesis of Mesoporous Ceria Nanoparticles by Sol-gel Method for Enhanced Carbon Dioxide Capture. *Chemical Engineering Transactions*, 72, 403-408. (2019)
43. M.S.M. Yusof, A.A. Jalil, A. Ahmad, S. Triwahyono, M.H.D. Othman, T.A.T. Abdullah, M.L. Firmansyah, **H.D. Setiabudi**, A. Johari, W. Nabgan. Effect of Pt-Pd/C coupled catalyst loading and polybenzimidazole ionomer binder on oxygen reduction reaction in high-temperature PEMFC. *International Journal of Hydrogen Energy*. 44(37) 20760-20769 (2018)
44. S. Triwahyono, N. Salamun, A.A. Jalil, S.M. Izan, **H.D. Setiabudi**, D. Prasetyoko, Zirconium-Loaded Mesoporous Silica Nanoparticles Adsorbent for Removal of Hexavalent Chromium from Aqueous Solution. *Industrial & Engineering Chemistry Research*. 58(2), 704-712. (2018)
45. C.C. Chong, N. Abdullah, S.N. Bukhari, N. Ainirazali, L.P. Teh, **H.D. Setiabudi**. Hydrogen production via CO₂ reforming of CH₄ over low-cost Ni/SBA-15 from silica-rich palm oil fuel ash (POFA) waste. *International Journal of Hydrogen Energy*. 44(37), 20815-20825. (2018)
46. S.N. Bukhari, C.C. Chong, L.P. Teh, D.V.N. Vo, N. Ainirazali, S. Triwahyono, A.A. Jalil, **H.D. Setiabudi**. Promising hydrothermal technique for efficient CO₂ methanation over Ni/SBA-15. *International Journal of Hydrogen Energy*. 44(37), 20792-20804. (2018)
47. R. Hasan, **H.D. Setiabudi**. Removal of Pb (II) from aqueous solution using KCC-1: Optimization by response surface methodology (RSM). *Journal of King Saud University-Science*. (2018)
48. F. Fayaz, N.T.A. Nga, T.L.M. Pham, H.T. Danh, B. Abdullah, **H.D. Setiabudi**, D.V.N. Vo. Hydrogen Production from Ethanol Dry Reforming Over Lanthania-Promoted Co/Al₂O₃ Catalyst. *IJUM Engineering Journal*, 19(1), 24-33. (2018)
49. S. Singh, R. Kumar, **H.D. Setiabudi**, S. Nanda, D.V.N. Vo. Advanced synthesis strategies of mesoporous SBA-15 supported catalysts for catalytic reforming applications: A state-of-the-art review. *Applied Catalysis A: General*, 559, 57-74. (2018)
50. R. Hasan, N.A.M. Razifuddin, N.W.C. Jusoh, R. Jusoh, **H.D. Setiabudi**. Artocarpus integer peel as a highly effective low-cost adsorbent for methylene blue removal: Kinetics, isotherm, thermodynamic and pelletized studies. *Malaysian Journal of Fundamental and Applied Sciences*, 14(1), 25-31. (2018)
51. **H.D. Setiabudi**, C.C. Chong, S.M. Abed, L.P. Teh, S.Y. Chin. Comparative study of Ni-Ce loading method: Beneficial effect of ultrasonic-assisted impregnation method in CO₂ reforming of CH₄ over Ni-Ce/SBA-15. *Journal of Environmental Chemical Engineering* 6(1), 745-753. (2018)
52. S.N. Bukhari, C.Y. Chin, **H.D. Setiabudi**, D.V.N. Vo, Tailoring the properties and catalytic activities of Ni/SBA-15 via different TEOS/P123 mass ratios for CO₂ reforming of CH₄. *Journal of Environmental Chemical Engineering* 5(4), 3122-3128. (2017)
53. O.U. Osazuwa, **H.D. Setiabudi**, R.A. Rasid, C.K. Cheng. Syngas production via methane dry reforming: A novel application of SmCoO₃ perovskite catalyst. *Journal of Natural Gas Science and Engineering* 37, 435-448. (2017).
54. O. Omoregbe, H.T. Danh, C. Nguyen-Huy, **H.D. Setiabudi**, S.Z. Abidin, Q. D. Truong, Dai-Viet N. Vo. Syngas production from methane dry reforming over Ni/SBA-15 catalyst: Effect of operating parameters, *International Journal of Hydrogen Energy* 42(16), 11283-11294. (2017)
55. T.J. Siang, H.T. Danh, S. Singh, Q.D. Truong, **H.D. Setiabudi**, Dai-Viet N. Vo. Syngas Production from Combined Steam and Carbon Dioxide Reforming of Methane over Ce-modified Silica supported Nickel Catalysts, *Chemical Engineering Transactions* 56, 1129-1134. (2017)
56. M.Y.S. Hamid, M.L. Firmansyah, S. Triwahyono, A.A. Jalil, R.R. Mukti, E. Febriyanti, V. Suendo, **H.D. Setiabudi**, M. Mohamed, W. Nabgan. Oxygen vacancy-rich mesoporous silica KCC-1 for CO₂ methanation, *Applied Catalysis A: General* 532, 86-94. (2017).
57. **H.D. Setiabudi**, R. Jusoh, S.F.R.M. Suhaimi, S.F. Masrur. Adsorption of methylene blue onto oil palm (*Elaeis guineensis*) leaves: Process optimization, isotherm, kinetics and thermodynamic studies. *Journal of the Taiwan Institute of Chemical Engineers* 63, 363-370. (2016).

58. M.R. Sazegar, A.A. Jalil, S. Triwahyono, R.R. Mukti, M. Aziz, M.A.A. Aziz, **H.D. Setiabudi**, N.H.N. Kamarudin. Protonation of Al-grafted Mesoporous Silica Nanoparticles (MSN): Acidity and Catalytic Activity for Cumene Conversion. *Chemical Engineering Journal*, 240:352-361. (2014).
59. N.W.C. Jusoh, A.A. Jalil, S. Triwahyono, **H.D. Setiabudi**, N. Sapawe, M.A.H. Satar, A.H. Karim, N.H.N. Kamarudin, R. Jusoh, N.F. Jaafar, N. Salamun, J. Efendi. Sequential desilication–isomorphous substitution route to prepare mesoporous silica nanoparticles loaded with ZnO and their photocatalytic activity. *Applied Catalysis A: General*, 468: 276-287. (2013).
60. S. Triwahyono, A.A. Jalil, N.N. Ruslan, **H.D. Setiabudi**, N.H.N. Kamarudin. C₅-C₇ linear alkane hydroisomerization over MoO₃-ZrO₂ and Pt/MoO₃-ZrO₂ catalysts. *Journal of Catalysis*, 303: 50-59. (2013).
61. **H.D. Setiabudi**, A.A. Jalil, S. Triwahyono, N.H.N. Kamarudin, R. Jusoh. Ir/Pt-HZSM5 for n-Pentane Isomerization: Effect of Si/Al ratio and Reaction Optimization by Response Surface Methodology. *Chemical Engineering Journal*, 217: 300-309. (2013).
62. S.N. Timmiati, A.A. Jalil, S. Triwahyono, **H.D. Setiabudi**, N.H.R. Annuar. Formation of acidic Brønsted (MoO_x)[−](H_y)⁺ evidenced by XRD and 2,6-lutidine FTIR spectroscopy for cumene cracking. *Applied Catalysis A: General*, 459: 8-16. (2013).
63. A.A. Jalil, M.A.H. Satar, S. Triwahyono, **H.D. Setiabudi**, N.H.N. Kamarudin, N.F. Jaafar, N. Sapawe, R. Ahamad. Tailoring the current density to enhance photocatalytic activity of CuO/HY for decolorization of malachite green. *Journal of Electroanalytical Chemistry*, 701: 50-58. (2013).
64. **H.D. Setiabudi**, A.A. Jalil, S. Triwahyono. Ir/Pt-HZSM5 for n-Pentane Isomerization: Effect of Iridium Loading on the Properties and Catalytic Activity. *Journal of Catalysis*, 294: 128-135. (2012).
65. N.H.N. Kamarudin, A.A. Jalil, S. Triwahyono, R.R. Mukti, M.A.A. Aziz, **H.D. Setiabudi**, M.N.M. Muhid, H. Hamdan. Interaction of Zn²⁺ with Extraframework Aluminum in HBEA Zeolite and its Role in Enhancing n-Pentane Isomerization. *Applied Catalysis A: General*, 431: 104-112. (2012).
66. **H.D. Setiabudi**, A.A. Jalil, S. Triwahyono, N.H.N. Kamarudin, R.R. Mukti. IR Study of Iridium Bonded to Perturbed Silanol Groups of Pt-HZSM5 for n-Pentane Isomerization. *Applied Catalysis A: General*, 417-418: 190-199. (2012).
67. M.A.A. Aziz, N.H.N. Kamarudin, **H.D. Setiabudi**, H. Hamdan, A.A. Jalil, S. Triwahyono. Negative Effect of Ni on PtHY in n-Pentane Isomerization evidenced by IR and ESR Studies. *Journal of Natural Gas Chemistry*, 21: 29-36. (2012).
68. A.A. Jalil, S. Triwahyono, M.R. Yaakob, Z.Z.A. Azmi, N. Sapawe, N.H.N. Kamarudin, **H.D. Setiabudi**, N.F. Jaafar, S.M. Sidik, S.H. Adam, B.H. Hameed. Utilization of bivalve shell-treated Zea mays L. (maize) husk leaf as a low-cost biosorbent for enhanced adsorption of malachite green. *Bioresource Technology*, 120: 218-224. (2012).
69. **H.D. Setiabudi**, S. Triwahyono, A.A. Jalil, N.H.N. Kamarudin, M.A.A. Aziz. Effect of Iridium Loading on HZSM5 for Isomerization of n-Heptane. *Journal of Natural Gas Chemistry*, 20: 477-482. (2011).

➤ **BOOK / BOOK CHAPTER**

1. Tan Ji Siang, Aishah Abdul Jalil, Mohd-Nasir Nor Shafiqah, Mahadi B Bahari, **Herma Dina Setiabudi**, Sumaiya Zainal Abidin, Trinh Duy Nguyen, Abdurashed Abdulrahman, Quyet Van Le, Sonil Nanda, Dai-Viet N Vo. Recent progress in ethanol steam reforming for hydrogen generation. In *New Dimensions in Production and Utilization of Hydrogen* (pp. 5). Elsevier. (2020)
2. Hamidah Abdullah, Chin Sim Yee, Chi Cheng, Tan Ji Siang Chong, Osarieme Uyi Osazuwa, **Herma Dina Setiabudi**, Dai-Viet N Vo, Sumaiya Zainal Abidin. Recent Advances in CO₂ Bi-Reforming of Methane for Hydrogen and Syngas Productions. In *Chemo-Biological Systems for CO₂ Utilization* (pp 49-75). CRC Press. (2020)
3. Tan Ji Siang, Nurul Asmawati Roslan, **Herma Dina Setiabudi**, Sumaiya Zainal Abidin, Trinh Duy Nguyen, Chin Kui Cheng, Aishah Abdul Jalil, Minh Thang Le, Prakash K Sarangi, Sonil Nanda, Dai-Viet N Vo. Recent Advances in Steam Reforming of Glycerol for Syngas Production. In *Biorefinery of Alternative Resources: Targeting Green Fuels and Platform Chemicals* (pp. 399-425). Springer, Singapore. (2020)
4. T.J. Siang, D.P. Minh, S. Singh, **H.D. Setiabudi**, & D.V.N. Vo Recent Advances in Hydrogen Production through Bi-Reforming of Biogas. In *Fuel Processing and Energy Utilization* (pp. 71-91). Chapman and Hall/CRC. (2019)
5. F. Fayaz, M.B. Bahari, T.L. Pham, C. Nguyen-Huy, **H.D. Setiabudi**, B. Abdullah, D.V.N. Vo. Hydrogen-Rich Syngas Production via Ethanol Dry Reforming over Rare-Earth Metal-Promoted Co-based Catalysts. In *Recent Advancements in Biofuels and Bioenergy Utilization* (pp. 177-204). Springer, Singapore. (2018)

➤ **PROCEEDING**

1. C.Q. Teong, **H.D. Setiabudi**, N.A.S. El-Arish, M.B. Bahari, L.P. Teh. Vatica rassak wood waste-derived activated carbon for effective Pb (II) adsorption: Kinetic, isotherm and reusability studies. *Materials Today: Proceedings*, 42, 165-171. (2021)
2. N.S. Kamarudin, R. Jusoh, **H.D. Setiabudi**, N.F. Sukor, J.H. Shariffuddin. Potential nanomaterials application in wastewater treatment: Physical, chemical and biological approaches. *Materials Today: Proceedings*, 42, 107-114. (2021)
3. M.B. Bahari, **H.D. Setiabudi**, N. Ainirazali, D.V.N. Vo. A short review on bimetallic Co-based catalysts for carbon dioxide reforming of methane. *Materials Today: Proceedings*. (2020)
4. M.B. Bahari, S.N. Bukhari, L.N. Jun, **H.D. Setiabudi**. Development of fibrous mesoporous silica for catalytic reaction: A short review. *Materials Today: Proceedings*. (2020)
5. H.A. Razak, N. Abdullah, **H.D. Setiabudi**, C.S. Yee, N. Ainirazali. Influence of Ni loading on SBA-15 synthesized from oil Palm ash silica for syngas production. *IOP Conference Series: Materials Science and Engineering*, 702, 012024. (2019)
6. J.A. Jaafar, N.H.N. Kamarudin, **H.D. Setiabudi**, S.N. Timmiati, L.P. Teh. Mesoporous Silica Nanoparticles and Waste Derived-Siliceous Materials for Doxorubicin Adsorption and Release. *Materials Today: Proceedings*, 19(4), 1420-1425. (2019)
7. H.A. Razak, N. Abdullah, J. Gasang, **H.D. Setiabudi**, C.S. Yee, N. Ainirazali. Conversion of carbon dioxide and methane to syngas over Ni/SiO₂ catalyst prepared from waste palm oil fuel ash. *IOP Conference Series: Earth and Environmental Science*, 220(1), 012058. (2019)
8. N. Abdullah, C.C. Chong, H.A. Razak, N. Ainirazali, S.Y. Chin, **H.D. Setiabudi**. Synthesis of Ni/SBA-15 for CO₂ reforming of CH₄: Utilization of palm oil fuel ash as silica source. *Materials Today: Proceedings*, 5(10), 21594-21603. (2018)
9. S.N. Bukhari, A.H.K. Owgi, N. Ainirazali, D.V.N. Vo, **H.D. Setiabudi**. Enhanced catalytic performance of Ni/SBA-15 towards CO₂ methanation via P123-assisted method. *Materials Today: Proceedings*, 5(10), 21620-21628. (2018)
10. R. Hasan, S.N. Bukhari, R. Jusoh, N.S.A. Mutamin, **H.D. Setiabudi**. Adsorption of Pb (II) onto KCC-1 from aqueous solution: Isotherm and kinetic study. *Materials Today: Proceedings*, 5(10), 21574-21583. (2018)
11. C.C. Chong, A.H.K. Owgi, N. Ainirazali, S.Y. Chin, **H.D. Setiabudi**. CO₂ reforming of CH₄ over Ni/SBA-15 prepared by surfactant-assisted impregnation method: Comparative study of surfactant types. *Materials Today: Proceedings*, 5(10), 21644-21651. (2018).
12. N.S. Kamarudin, R. Jusoh, **H.D. Setiabudi**, N.F. Sukor. Photodegradation of methylene blue using phyto-mediated synthesis of silver nanoparticles: effect of calcination treatment. *Materials Today: Proceedings*, 5(10), 21981-21989. (2018)
13. Osaze Omoregbe, Huong T Danh, S.Z. Abidin, **H.D. Setiabudi**, Bawadi Abdullah, Khanh B Vu, Dai-Viet N Vo. Influence of Lanthanide Promoters on Ni/SBA-15 Catalysts for Syngas Production by Methane Dry Reforming. *Procedia Engineering* 148, 1388-1395. (2016).

➤ **EXHIBITION**

1. Sumaiya Zainal Abidin, Nurul Asmawati Roslan, Chin Sim Yee, **Herma Dina Setiabudi**. Recovery of Alumina from Hazardous Dross Using AD-TRAC System. 2021 Creation, Innovation, Technology & Research Exposition (CITREX 2021), Universiti Malaysia Pahang, Pahang, Malaysia. 7 April 2021. (**Silver**)
2. Nurul Amirah Salihah, **Herma Dina Setiabudi**, Chi Qi Teong, Mahadi Bahari,. G-Acticarb: Effective Adsorbent for Industrial Wastewater Treatment. 2020 Creation, Innovation, Technology & Research Exposition (CITREX 2020), Universiti Malaysia Pahang, Pahang, Malaysia. 12-23 Feb 2020. (**Gold & Best of the Best Award**)
3. Nur Fatimah Mohamad Zahir, **Herma Dina Setiabudi**, Rohayu Juosh, Nurul Aini Mohaed Razali. G-POFA: Effective Photocatalyst for Textile Effluent Degradation. 2020 Creation, Innovation, Technology & Research Exposition (CITREX 2020), Universiti Malaysia Pahang, Pahang, Malaysia. 12-23 Feb 2020 (**Gold & Best of the Best Award**)
4. **Herma Dina Setiabudi**, Ruzinah Isha, Rohayu Jusoh. Green Industrial Wastewater Treatment System. International Conference & Exposition on Inventions by Institutions of Higher Learning 2019 (PECIPTA'19), UTHM, Malaysia. 22-33 September 2019. (**Gold**)
5. Rohayu Jusoh, **Herma Dina Setiabudi**, Ruzinah Isha, Nur Syahirah Kamarudin, Nuramirah Fateha Sukor. Green Antibacterial Nanofinishing for Linen and Textile. International Conference & Exposition on Inventions by Institutions of Higher Learning 2019 (PECIPTA'19), UTHM, Malaysia. 22-33 September 2019. (**Silver**)

6. **Herma Dina Setiabudi**, Ruzinah Isha, Rohayu Jusoh, Rosalyza Hasan, Chong Chi Cheng. Green Industrial Wastewater Treatment System. 2019 Creation, Innovation, Technology & Research Exposition (CITREX 2019), Universiti Malaysia Pahang, Pahang, Malaysia. 12-13 February 2019. **(Gold & Best Invention in Fluids Award)**
7. Rohayu Jusoh, Nur Syahirah Kamarudin, Nuramirah Fateha Sukor, **Herma Dina Setiabudi**. Green Antibacterial Nanofinishing for Linen and Textile. 2019 Creation, Innovation, Technology & Research Exposition (CITREX 2019), Universiti Malaysia Pahang, Pahang, Malaysia. 12-13 February 2019. **(Gold & Best Innovation in Chemical Technology Award)**
8. Nur Aida Farihin Ahliyasah, Rosalyza Hasan, Syahida Nasuha Bukhari, Chong Chi Cheng, Rohayu Jusoh, **Herma Dina Setiabudi**. A Green Approach: Eggshell Treated Oil Palm Fronds (EG-OPF) as Low-Cost Adsorbent for Efficient Wastewater Treatment. International Engineering Invention & Innovation Exhibition (i-ENVEX) 2018. **(Silver)**
9. Nur Aida Farihin Ahliyasah, Rosalyza Hassan, Nurul Aini Razali, **Herma Dina Setiabudi**. Eggshell-treated oil palm frond (EG-OPF) as low cost adsorbent for methylene blue removal. 2018 Creation, Innovation, Technology & Research Exposition (CITREX 2018), Universiti Malaysia Pahang, Pahang, Malaysia. 7-8 February 2018. **(Gold)**
10. Ahmad Haziq Mohd Noor, Nurul Aini Mohamed Razali, **Herma Dina Setiabudi**. Production of Adsorbent from Fish Scales Waste for Removal of 2-Chlorophenol. 2018 Creation, Innovation, Technology & Research Exposition (CITREX 2018), Universiti Malaysia Pahang, Pahang, Malaysia. 7-8 February 2018. **(Silver)**
11. **Herma Dina Setiabudi**, Rohayu Jusoh, Nur Hidayatul Nazirah Kamarudin, Rosalyza Hasan, Syahida Nasuha Bukhari, Chong Chi Cheng. Waste to Wealth: Rice Husk to Fibrous. International Festival Innovation on Green Technology (i-FINOG) 2018. 20-22 April 2018. **(Silver)**
12. Nur Aida Farihin Ahliyasah, Rosalyza Hassan, Syahida Nasuha Mohd Bukhari, Chong Chi Cheng, **Herma Dina Setiabudi**, Nurul Aini Mohamed Razali. Eggshell Treated Oil Palm Fronds (EG-OPF) As Low Cost Adsorbent for Efficient Dyes Removal: A Green Approach. International Festival Innovation on Green Technology (i-FINOG) 2018. 20-22 April 2018. **(Silver)**
13. Wong Jie Ying, Rosalyza Hassan, **Herma Dina Setiabudi**, Nurul Aini Razali, Eggshell-Treated palm Oil Fuel Ash (EG-POFA) as Low-Cost Adsorbent for Methylene Blue Removal. 2017 Creation, Innovation, Technology & Research Exposition (CITREX 2017), Universiti Malaysia Pahang, Pahang, Malaysia. 15-16 March 2017. **(Silver)**
14. Chong Chi Cheng, Nornasuha Abdullah, Syahida Nasuha Mohd Bukhari, Nurul Aini Razali, **Herma Dina Setiabudi**. Ni/SBA-15 from Palm Oil Fuel Ash (POFA) for CO₂ Reforming of CH₄. 2017 Creation, Innovation, Technology & Research Exposition (CITREX 2017), Universiti Malaysia Pahang, Pahang, Malaysia. 15-16 March 2017. **(Silver)**
15. Kanchana Manirajah, Nurulaini Mohamed Razali, Sheela Sukumaran, Harrydass Ellppan, Syahida Nasuha Mohd Bukhari, Rosalyza Hasan, **Herma Dina Setiabudi**. Low Cost Activated Carbon from Waste Tyre for Efficient Wastewater Treatment. 2017 Creation, Innovation, Technology & Research Exposition (CITREX 2017), Universiti Malaysia Pahang, Pahang, Malaysia. 15-16 March 2017. **(Silver)**
16. Siti Nuraihan Mohamed Arof, Nurul Aini Mohamed Razali, **Herma Dina Setiabudi**. Hydrogen Production from CO₂ Reforming of Methane Over Ni/SBA-15. 2016 Creation, Innovation, Technology & Research Exposition (CITREX 2016), Universiti Malaysia Pahang, Pahang, Malaysia. 7-8 March 2016. **(Bronze)**
17. Chin Chia Yun, **Herma Dina Setiabudi**. "Design and development of Ni/SBA-15 for CO₂ reforming of CH₄". 2016 Creation, Innovation, Technology & Research Exposition (CITREX 2016), Universiti Malaysia Pahang, Pahang, Malaysia. 7-8 March 2016. **(Bronze)**
18. Lim Kiang Hoo, **Herma Dina Setiabudi**, Nurul Aini Mohamed Razali. Development of Ni/SBA-15 catalyst and its potential in enhancing syngas production. 2016 Creation, Innovation, Technology & Research Exposition (CITREX 2016), Universiti Malaysia Pahang, Pahang, Malaysia. 7-8 March 2016. **(Bronze)**

SUPERVISION

➤ POSTGRADUATE

<u>Student's Name</u>	<u>Program</u>	<u>Duration</u>	<u>Role</u>
1. Ros Shazuin Rayyanu Bt Mohd Zaki	MSc	2020 – 2020	Main Supervisor
2. Siti Nurqurratulainie Binti Miskan	MSc	2020 – 2020	Main Supervisor
3. Nornasuha Bt Abdullah	PhD	2020 – 2023	Co Supervisor

4. Nur Syahirah Binti Kamarudin	PhD	2020 – 2023	Co Supervisor
5. Nornasuha Abdullah	PhD	2020 – 2023	Co Supervisor
6. Nor Shafiqah Mohd Nasir	PhD	2019 – 2022	Co Supervisor
7. Mohd Shamsul Amri Bin Mohd Jailani	MSc (Coursework)	2020	Main Supervisor
8. Mahadi Bin Bahari	PhD	2017 – 2020	Main Supervisor
9. Chong Chi Cheng	PhD	2017 – 2019	Main Supervisor
10. Muhamed Yusuf Shahul Hamid	PhD	2016 – 2019	Co Supervisor
11. Lau Ngie Jun	MSc	2017 – 2020	Main Supervisor
12. Rosalyza Binti Hasan	MSc	2016 – 2019	Main Supervisor
13. Syahida Nasuha Mohd Bukhari	MSc	2016 – 2019	Main Supervisor
14. Hazirah Binti A. Razak	MSc	2017 – 2020	Co Supervisor
15. Nornasuha Bt Abdullah	MSc	2016 – 2019	Co Supervisor
16. Tan Ji Siang	MSc	2015 – 2017	Co Supervisor
17. Saad Mohsin Abed	MSc (Coursework)	2016	Main Supervisor
18. Abderlrahman Hamad Khalifa Owgi	MSc (Coursework)	2016	Main Supervisor

➤ **UNDERGRADUATE**

- Bachelor (Undergraduate Research Project) : >20 students
- Bachelor (Plan Design) : >10 Groups
- Bachelor (Industrial Training) : > 30 students

SUBJECT TAUGHT

<u>Semester</u>	<u>Subject</u>	<u>Credit Hour</u>
SEM 3 2020 2021	MPP1316 MASTER PROJECT II	6
SEM 2 2020 2021	BKF1313 MPP1133 ENGINEERING MECHANICS	3
	BTK1224 STATIC & STRENGTH OF MATERIALS	4
	BTK1263 STATIC & STRENGTH OF MATERIALS	3
	MKK1533 ENVIRONMENTAL TECHNOLOGY (E)	3
	MPP1254 MASTER PROJECT I	4
	MPP1133 RESEARCH METHODOLOGY	3
SEM 1 2020 2021	BTK1263 STATIC & STRENGTH OF MATERIALS	3
SEM 2 2019 2020	BTK1224 STATIC AND STRENGTH OF MATERIALS	4
	MPP1254 MASTER PROJECT I	4
	MPP1316 MASTER PROJECT II	6
	MPP1133 RESEARCH METHODOLOGY	2
	MKK1533 ENVIRONMENTAL TECHNOLOGY	3
	MPP1533 ENVIRONMENTAL MANAGEMENT AND SUSTAINABILITY DEVELOPMENT	3
SEM 1 2019 2020	DKK1111 INTRODUCTION TO CHEMICAL ENGINEERING	1
	BKF1313 ENGINEERING MECHANICS	3
	MMT1162 RESEARCH METHODOLOGY	2
SEM 3 2018 2019	MPP1254 MASTER PROJECT I	4
	MPP1316 MASTER PROJECT II	6
SEM 2 2018 2019	BKF1313 ENGINEERING MECHANICS	3
	BKF1333 THERMODYNAMICS	3
	MPP1254 MASTER PROJECT I	4
	MPP1133 RESEARCH METHODOLOGY	3
SEM 1 2018 2019	BKF1313 ENGINEERING MECHANICS	3
	BKF1333 THERMODYNAMICS	3
	MPP1133 RESEARCH METHODOLOGY	3
	BKF1313 ENGINEERING MECHANICS (SBKC)	3
SEM 2 2017 2018	BKF1313 ENGINEERING MECHANICS	3

	BKF1333 THERMODYNAMICS	3
	BKF1313 ENGINEERING MECHANICS (SBKC)	3
SEM 1 2017 2018	DKK2363 ENGINEERING MECHANICS	3
	BKF1313 ENGINEERING MECHANICS	3
SEM 2 2016 2017	BKF1333 THERMODYNAMICS	3
SEM 1 2016 2017	DKK2363 ENGINEERING MECHANICS	3
	BKF2143 COMPUTER PROGRAMMING FOR ENGINEERS	3
SEM 3 2015 2016	DKK2363 ENGINEERING MECHANICS	3
SEM 2 2015 2016	BKF1751 BASIC SCIENCE & ENGINEERING LAB	1
	BKF1313 ENGINEERING MECHANICS	3
SEM 1 2015 2016	BKF1313 ENGINEERING MECHANICS	3
	DKK2363 ENGINEERING MECHANICS	3
SEM 2 2014 2015	BKF1313 ENGINEERING MECHANICS	3
	BKC3771 ENVIRONMENTAL ENGINEERING LAB	1
SEM 1 2014 2015	DKK2363 ENGINEERING MECHANICS	3
	DKK2373 FLUID MECHANICS	3
SEM 2 2013 2014	BKF3731 UNIT OPERATION LAB	1
	DKK2483 PLANT UTILITY	3
	DKK2483 PLANT UTILITY	3
SEM 1 2013 2014	BKF3731 UNIT OPERATION LAB	1
	DKK2363 ENGINEERING MECHANICS	3
	DKK2373 THERMODYNAMICS	3

EDITORIAL & REVIEW RECORDS

<u>Year</u>	<u>Record</u>
2021	Guest Editor, Chemical Engineering Research and Design, Special Issue: International Symposium of Reaction Engineering, Catalysis & Sustainable Energy. (Elsevier, IF: 3.739)
2021	Guest Editor, International Journal of Hydrogen Energy, Special Issue: Advanced Technologies for Hydrogen Production Towards Green Applications. (Elsevier, IF: 5.816)
2021	Guest Editor, Material Today: proceedings, Special Issue: International Symposium of Reaction Engineering, Catalysis & Sustainable Energy. (Elsevier)
2021 - 2023	Chief-Editor, Journal of Chemical Engineering and Industrial Biotechnology. (Penerbit UMP)
2021 - 2023	Associate Editor, Malaysia Journal of Catalysis. (Penerbit UTM)
2020	Guest Editor, Chemical Engineering & Processing: Process Intensification, Special Issue: 5th International Conference of Chemical Engineering & Industrial Biotechnology. (Elsevier, IF: 4.237)
2020	Guest Editor, International Journal of Hydrogen Energy, Special Issue: 5th International Conference of Chemical Engineering & Industrial Biotechnology. (Elsevier, IF: 5.816)
2020	Guest Editor, IOP Conference Series: Materials Science and Engineering, Special Issue: 5th International Conference of Chemical Engineering & Industrial Biotechnology. (IOP Publishing)
2020	Guest Editor, Material Today: proceedings, Special Issue: 5th International Conference of Chemical Engineering & Industrial Biotechnology. (Elsevier)
2019	Guest Editor, Chemical Engineering & Technology, Special Issue: Hydrogen energy production from industrial and advanced reforming processes. (Wiley, IF: 1.728)
2019	Guest Editor, SN Applied Sciences, Topical Collection: Current Trends in Chemical Engineering: Food, Water & Energy. (Springer)
2018	Guest Editor, Industrial & Engineering Chemistry Research, Special Issue: 2018 International Conference of Chemical Engineering and Industrial Biotechnology (ICCEIB). (ACS, IF: 3.720)

2016 - 2018	Associate Editor, Malaysia Journal of Catalysis. (Penerbit UTM)
2015 - present	> 180 Reviews for ISI Journals (published by ACS, Elsevier, RCS, Wiley, and Springer)

REFERENCES

Name	: Prof. Ts. Dr. Che Ku Mohammad	; Prof. Dr. Aishah Abdul Jalil
	Faizal Che Ku Yahya	
Telephone No.	: +60-9-5492746	; +60-7-5535581
Email	: mfaizal@ump.edu.my	; aishah@cheme.utm.my
Position	: Dean, Faculty of Chemical & Process	; Professor
	Engineering Technology	
Company	: Universiti Malaysia Pahang	; Universiti Teknologi Malaysia