CURRICULUM VITAE

PERSONAL INFORMATION

Name	:	Herma Dina Setiabudi
Designation	:	Assoc. Prof. Ts. Dr.
Department	:	Faculty of Chemical & Process Engineering Technology
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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 Director (Rankings & Branding Division) Corporate & Quality Affairs Centre
Company Name	:	Universiti Malaysia Pahang
Year	:	15/09/2021 – 14/09/2023
Position	:	Deputy Dean (Research & Postgraduate Studies) Faculty of Chemical and Process Engineering Technology
Company Name	:	Universiti Malaysia Pahang
Year	:	10/02/2020 – 14/09/2021
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 1,700,000 / USD 408,000 | Number of Project : > 30 |

RESEARCH OUTPUT

| Journal : 69 | Book Chapter : 5 | Proceedings : 13 |
| Citations : 1357 | h-index : 22 |

- **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/Al_2O_3 catalyst. Process Safety and Environmental Protection, 150, 356-364. (2021)
2. S.Y. Chin, S. Shahruddin, 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 (MoO_3) 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 Y_2O_3-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 CO_2 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 (CeO_2, La_2O_3, Y_2O_3, and Sm_2O_3) 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 Y_2O_3-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 CO_2 reforming of CH_4: 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–dicholorophenoxyacetic 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 CO_2-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 CH_4 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 CO_2 reforming of CH_4 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 CH_4 production from H_2 and CO_2 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 CO_2 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–Dicholorophenoxyacetic 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 Mesostructured 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 CO_2 reforming of CH_4 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 CO_2 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/Al_2O_3 Catalyst. IIUM 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 CO_2 reforming of CH_4 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 CO_2 reforming of CH_4. 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 $SmCoO_3$ 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 CO_2 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 Mesostructured 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 mesostructured 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. C_5-C_7 linear alkane hydroisomerization over MoO_3-ZrO_2 and Pt/MoO_3-ZrO_2 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 Brönsted $(MoO_x)^-(H_y)^+$ 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 Zn^{2+} 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, Abdulrasheed 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 CO_2 Bi-Reforming of Methane for Hydrogen and Syngas Productions. In Chemo-Biological Systems for CO_2 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/SiO_2 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 CO_2 reforming of CH_4: 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 CO_2 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**. CO_2 reforming of CH_4 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 Fatihah 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)**

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 CO_2 Reforming of CH_4. 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 CO_2 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 CO_2 reforming of CH_4". 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**

Student's Name	Program	Duration	Role
1. Ros Shazuin Rayyanu Bt Mohd Zaki	MSc	2020 – 2022	Main Supervisor
2. Siti Nurqurratulainie Binti Miskan	MSc	2020 – 2022	Main Supervisor
3. Nornasuha Bt Abdullah	PhD	2020 – 2023	Co Supervisor
4. Nur Syahirah Binti Kamarudin	PhD	2020 – 2023	Co Supervisor
5. Nor Shafiqah Mohd Nasir	PhD	2019 – 2022	Co Supervisor
6. Mohd Shamsul Amri Bin Mohd Jailani	MSc (Coursework)	2020	Main Supervisor
7. Mahadi Bin Bahari	PhD	2017 – 2020	Main Supervisor
8. Chong Chi Cheng	PhD	2017 – 2019	Main Supervisor
9. Muhamed Yusuf Shahul Hamid	PhD	2016 – 2019	Co Supervisor
10. Lau Ngie Jun	MSc	2017 – 2020	Main Supervisor
11. Rosalyza Binti Hasan	MSc	2016 – 2019	Main Supervisor
12. Syahida Nasuha Mohd Bukhari	MSc	2016 – 2019	Main Supervisor
13. Hazirah Binti A. Razak	MSc	2017 – 2020	Co Supervisor
14. Nornasuha Bt Abdullah	MSc	2016 – 2019	Co Supervisor
15. Tan Ji Siang	MSc	2015 – 2017	Co Supervisor
16. Saad Mohsin Abed	MSc (Coursework)	2016	Main Supervisor
17. 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

Semester	Subject	Credit Hour
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

Year	Record
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) https://doi.org/10.1016/j.ijhydene.2021.07.095
2020	Guest Editor, IOP Conference Series: Materials Science and Engineering, Special Issue: 5th International Conference of

	Chemical Engineering & Industrial Biotechnology. (IOP Publishing) https://iopscience.iop.org/issue/1757-899X/991/1
2020	Guest Editor, Material Today: proceedings, Special Issue: 5th International Conference of Chemical Engineering & Industrial Biotechnology. (Elsevier) https://www.sciencedirect.com/journal/materials-today-proceedings/vol/42/part/P1
2019	Guest Editor, Chemical Engineering & Technology, Special Issue: Hydrogen energy production from industrial and advanced reforming processes. (Wiley, IF: 1.728) https://onlinelibrary.wiley.com/toc/15214125/2020/43/4
2019	Guest Editor, SN Applied Sciences, Topical Collection: Current Trends in Chemical Engineering: Food, Water & Energy. (Springer) https://link.springer.com/collections/ibiafdcfej
2018	Guest Editor, Industrial & Engineering Chemistry Research, Special Issue: 2018 International Conference of Chemical Engineering and Industrial Biotechnology (ICCEIB). (ACS, IF: 3.720) https://doi.org/10.1021/acs.iecr.8b06249
2016 - 2018	Associate Editor, Malaysia Journal of Catalysis. (Penerbit UTM)
2015 - present	> 190 Reviews for ISI Journals (published by ACS, Elsevier, RCS, Wiley, and Springer)

REFERENCES

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