

Prof. Dr. Navadol Laosiripojana

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EDUCATIONAL BACKGROUND

Year A.D. 2003 Ph.D. (Chemical Engineering), Imperial College London, UK
Year A.D. 2000 M.Sc. (Chemical Engineering), Imperial College London, UK
Year A.D. 1999 B.Eng. (Chemical Engineering), Chulalongkorn University, Thailand
(วศ.บ. (วิศวกรรมเคมี), จุฬาลงกรณ์มหาวิทยาลัย, ประเทศไทย, 2542)

EXPERTISE:

Biofuel production technology; Biorefinery technology; Natural gas processing technology; Applied catalysis in energy conversion process; Chemical reaction engineering of energy process related to the research topics of this course / with the ability to advise on research works under the program.

ACADEMIC BACKGROUND

2010-Present Professor, The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi
2007-2010 Associate Professor, The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi
2005-2007 Assistant Professor, The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi
2003-2005 Lecturer, The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi
2000-2003 Ph.D. chemical engineering, Imperial College London
1999-2000 M.Sc. chemical engineering, Imperial College London
1995-1999 B.Eng. chemical engineering, Chulalongkorn University

MANAGEMENT ROLES

2020-present Director, The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi
2017-2020 Chairperson of Energy Division, The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi
2010-2017 Assistant to director, The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi

RESEARCH HONORS AND FELLOWSHIPS

2021 ● Elected Associate Fellow, Academy of Sciences, Royal Society of Thailand
2020 ● TORAY Science and Technology Award
2019 ● TRF Senior Research Scholar (2019-2021), Thailand Research Fund
2016 ● TRF Senior Research Scholar (2016-2018), Thailand Research Fund
2015 ● National Researcher Award, National Research Council of Thailand
● TRF-Thomson Reuters-OHEC Research Excellence Award
● Outstanding Research Award from Thailand Research Fund
2010 ● TRF-CHE-SCOPUS Researcher Award (Engineering & Multidisciplinary Technology

- Category) from Elsevier Inc.
- 2009 ● PTIT Award from Petroleum Institute of Thailand
 - Excellent Research Award from National Research Council of Thailand
 - Innovation Ambassador from National Innovation Agency
 - 2008 ● Finalist of ASEAN Young Scientist and Technologist Award from ASEAN National Committee on Science & Technology
 - TRF-CHE Outstanding Mid-Career Researcher Award
 - 2007 ● Young Scientist Award from the Foundation for the Promotion of Science and Technology under Patronage of His Majesty the King
 - Outstanding Research Award from Thailand Research Fund
 - 2005 ● TRF Outstanding New Researcher Award
 - Outstanding Presentation Award from Thailand Research Fund
 - 2000 ● Ph.D. Scholarship from Imperial College London & Rolls-Royce (UK)
 - 1999 ● M.Sc. Scholarship from British Council (UK)

PUBLICATIONS

International Journal Publications (242 articles with more than >7300 citation)

1. Khan, M.J., Karim, Z., Charnnok, B., Poonsawat, T., Posoknistakul, P., Laosiripojana, N. and Wu, K.C.W., Sakdaronnarong, C. (2023). "Fabrication and Characterization of Functional Biobased Membranes from Postconsumer Cotton Fabrics and Palm Waste for the Removal of Dyes". *International Journal of Molecular Sciences*, 24(7), 6030, <https://doi.org/10.3390/ijms24076030>.
2. Laobuthee, A., Khankhuan, A., Panith, P., Veranitisagul, C., Laosiripojana, N. (2023). "Ni-Fe Cocatalysts on Magnesium Silicate Supports for the Depolymerization of Kraft Lignin". *ACS Omega*, 8(9), pp. 8675-8682.
3. Weerasai, K., Laosiripojana, N., Imman, S., Kreetachat, T., Suriyachai, N. (2023). "Reusable alkaline catalyzed organosolv pretreatment and delignification of bagasse for sugar platform biorefinery". *Biomass Conversion and Biorefinery*, 13(3), pp. 1751-1761.
4. Sereewatthanawut, I., Sornchamni, T., Siri-nguan, N., Laosiripojana, N., Li, K., Tongnan, V., Maneesard, P., Swadchaipong, N., Hartley, U.W. (2023). "Two-steps thermochemical cycles of H₂O/CO₂ co-splitting over Ba_{0.95}La_{0.05}FeO₃ (BLF) in a packed bed reactor and micro-channel reactor". *Reaction Kinetics, Mechanisms and Catalysis*, 136, pp. 1965-1981.
5. Chotirotasukon, C., Jirachavala, K., Raita, M., Pongchaiphol, S., Hararak, B., Laosiripojana, N., Champreda, V. (2023). "Effects of thermal and physical modification on functional properties of organosolv lignin from sugarcane bagasse and its application in cosmeceutical products". *Frontiers in Chemical Engineering*, 5, <https://doi.org/10.3389/fceng.2023.1099010>.
6. Hajidariyor, T., Nuntawad, N., Somsaen, P., Prukdamrongchai, R., Cherdchoo, H., Posoknistakul, P., Khemthong, P., Wanmolee, W., Arjfuk, P., Pongchaikul, P., Laosiripojana, N., Wu, K.C.W., Sakdaronnarong, C. (2023). "Cryo-Induced Cellulose-Based Nanogel from *Elaeis guineensis* for Antibiotic Delivery Platform". *International Journal of Molecular Sciences*, 24(2), art. no. 1230.

7. Chotirotsukon, C., Khattab, S.M.R., Kobayashi, N., Katahira, M., Laosiripojana, N., Champreda, V., Watanabe, T. (2022). "Microwave-accelerated glycerolysis of sugarcane trash using Lewis acid, $\text{AlK}(\text{SO}_4)_2$, for bioethanol production". *Industrial Crops and Products*, 190, art. no. 115849.
8. Sangjan, A., Boonsith, S., Sansanaphongpricha, K., Thinbanmai, T., Ratchahat, S., Laosiripojana, N., Wu, K.C.-W., Shin, H.S., Sakdaronnarong, C. (2022). "Facile preparation of aqueous-soluble fluorescent polyethylene glycol functionalized carbon dots from palm waste by one-pot hydrothermal carbonization for colon cancer nanotheranostics". *Scientific Reports*, 12(1), 10550, <https://doi.org/10.1038/s41598-022-14704-x>.
9. Sangsiri, P., Laosiripojana, N., Laosiripojana, W., Daorattanachai, P. (2022). "Activity of a Sulfonated Carbon-Based Catalyst Derived from Organosolv Lignin toward Esterification of Stearic Acid under Near-Critical Alcohol Conditions". *ACS Omega*, 7(44), pp. 40025-40033.
10. Kutrakul, N., Liu, A., Ratchahat, S., Posoknistakul, P., Laosiripojana, N., Wu, K.C.-W., Sakdaronnarong, C. (2022). "Highly selective catalytic conversion of raw sugar and sugarcane bagasse to lactic acid over YbCl_3 , ErCl_3 , and CeCl_3 Lewis acid catalysts without alkaline in a hot-compressed water reaction system". *Chemical Engineering Research and Design*, 187, pp. 549-569.
11. Saengsririchan, A., Khemthong, P., Wanmolee, W., Youngjan, S., Phanthasri, J., Arjfuk, P., Pongchaikul, P., Ratchahat, S., Posoknistakul, P., Laosiripojana, N., Wu, K.C.-W., Sakdaronnarong, C. (2022). "Platinum/carbon dots nanocomposites from palm bunch hydrothermal synthesis as highly efficient peroxidase mimics for ultra-low H_2O_2 sensing platform through dual mode of colorimetric and fluorescent detection". *Analytica Chimica Acta*, 1230, art. no. 340368.
12. Owkusumsirisakul, J., Keeriang, T., Laosiripojana, N., Issro, C. (2022). "Investigation on the effects of carbonization parameters on carbon material produced from durian shell". *Biomass Conversion and Biorefinery*, 12(10), pp. 4719-4727.
13. Pongchaiphol, S., Suriyachai, N., Hararak, B., Raita, M., Laosiripojana, N., Champreda, V. Physicochemical characteristics of organosolv lignins from different lignocellulosic agricultural wastes (2022) *International Journal of Biological Macromolecules*, 216, pp. 710-727.
14. Charnnok, B., Laosiripojana, N. Integrative process for rubberwood waste digestibility improvement and levulinic acid production by hydrothermal pretreatment with acid wastewater conversion process (2022) *Bioresource Technology*, 360, art. no. 127522
15. Sangsiri, P., Laosiripojana, N., Daorattanachai, P. Synthesis of sulfonated carbon-based catalysts from organosolv lignin and methanesulfonic acid: Its activity toward esterification of stearic acid (2022) *Renewable Energy*, 193, pp. 113-127.
16. Saengsririchan, A., Saikate, C., Silasana, P., Khemthong, P., Wanmolee, W., Phanthasri, J., Youngjan, S., Posoknistakul, P., Ratchahat, S., Laosiripojana, N., Wu, K.C.-W., Sakdaronnarong, C. The Role of N and S Doping on Photoluminescent Characteristics

- of Carbon Dots from Palm Bunches for Fluorimetric Sensing of Fe³⁺ Ion (2022) International Journal of Molecular Sciences, 23 (9), art. no. 5001
17. Khongchamnan, P., Suriyachai, N., Kreetachat, T., Laosiripojana, N., Weerasai, K., Champreda, V., Suwannahong, K., Sakulthaew, C., Chokeyaroenrat, C., Imman, S. (2022). "Optimization of Liquid Hot Water Pretreatment and Fermentation for Ethanol Production from Sugarcane Bagasse Using *Saccharomyces cerevisiae*". *Catalysts*, 12(5), art. no. 463.
 18. Praikaew, W., Kiatkittipong, W., Aiouache, F., Najdanovic-Visak, V., Termtanun, M., Lim, J.W., Lam, S.S., Kiatkittipong, K., Laosiripojana, N., Boonyasuwat, S., Assabumrungrat, S. Mechanism of CaO catalyst deactivation with unconventional monitoring method for glycerol carbonate production via transesterification of glycerol with dimethyl carbonate (2022) International Journal of Energy Research, 46 (2), pp. 1646-1658.
 19. Totong, S., Laosiripojana, W., Laosiripojana, N., Daorattanachai, P. Nickel and Rhenium Mixed Oxides-Doped Graphene Oxide (MOs/GO) Catalyst for the Oxidative Depolymerization of Fractionated Bagasse Lignin (2022) Industrial and Engineering Chemistry Research, 61 (1), pp. 215-223.
 20. Chysirichote, T., Phaiboonsilpa, N., Laosiripojana, N. High Production of Cellulase and Xylanase in Solid-State Fermentation by *Trichoderma reesei* Using Spent Copra and Wheat Bran in Rotary Bioreactor (2022) Industrial and Engineering Chemistry Research, In Press
 21. Preechakun, T., Pongchaiphol, S., Raita, M., Champreda, V., Laosiripojana, N. Detoxification of hemicellulose-enriched hydrolysate from sugarcane bagasse by activated carbon and macroporous adsorption resin (2022) Biomass Conversion and Biorefinery, In Press
 22. Raita, M., Wanmolee, W., Suriyachai, N., Payomhorm, J., Laosiripojana, N. Lignocellulosic biomass and its potential derivative products (2022) A-Z of Biorefinery: A Comprehensive View, pp. 79-120.
 23. Areepak, C., Jiradechakorn, T., Chuetor, S., Phalakornkule, C., Sriariyanun, M., Raita, M., Champreda, V., Laosiripojana, N. Improvement of lignocellulosic pretreatment efficiency by combined chemo - Mechanical pretreatment for energy consumption reduction and biofuel production (2022) Renewable Energy, 182, pp. 1094-1102.
 24. Panyadee, R., Saengsrichan, A., Posoknistakul, P., Laosiripojana, N., Ratchahat, S., Matsagar, B.M., Wu, K.C.-W., Sakdaronnarong, C. Lignin-derived syringol and acetosyringone from palm bunch using heterogeneous oxidative depolymerization over mixed metal oxide catalysts under microwave heating (2021) Molecules, 26 (24), art. no. 7444
 25. Imman, S., Kreetachat, T., Khongchamnan, P., Laosiripojana, N., Champreda, V., Suwannahong, K., Sakulthaew, C., Chokeyaroenrat, C., Suriyachai, N. Optimization of sugar recovery from pineapple leaves by acid-catalyzed liquid hot water pretreatment for bioethanol production (2021) Energy Reports, 7, pp. 6945-6954.

26. Tongnan, V., Ait-Lahcen, Y., Wongsartsai, C., Khajonvittayakul, C., Siri-Nguan, N., Laosiripojana, N., Hartley, U.W. Process intensification of methane production via catalytic hydrogenation in the presence of ni-ceo₂/cr₂o₃ using a micro-channel reactor (2021) *Catalysts*, 11 (10), art. no. 1224
27. Khajonvittayakul, C., Tongnan, V., Amornraksa, S., Laosiripojana, N., Hartley, M., Hartley, U.W. Co₂ hydrogenation to synthetic natural gas over ni, fe and co-based ceo₂-cr₂o₃ (2021) *Catalysts*, 11 (10), art. no. 1159
28. Pongchaiphol, S., Preechakun, T., Raita, M., Champreda, V., Laosiripojana, N. Characterization of Cellulose-Chitosan-Based Materials from Different Lignocellulosic Residues Prepared by the Ethanosolv Process and Bleaching Treatment with Hydrogen Peroxide (2021) *ACS Omega*, 6 (35), pp. 22791-22802.
29. Pongchaiphol, S., Chotirotsukon, C., Raita, M., Champreda, V., Laosiripojana, N. Two-Stage Fractionation of Sugarcane Bagasse by a Flow-through Hydrothermal/Ethanosolv Process (2021) *Industrial and Engineering Chemistry Research*, 60 (34), pp. 12629-12639.
30. Boonamnuy, T., Laosiripojana, N., Assabumrungrat, S., Kim-Lohsoontorn, P. Effect 3A and 5A molecular sieve on alcohol-assisted methanol synthesis from CO₂ and H₂ over Cu/ZnO catalyst (2021) *International Journal of Hydrogen Energy*, 46 (60), pp. 30948-30958.
31. Khamhaeng, P., Laosiripojana, N., Assabumrungrat, S., Kim-Lohsoontorn, P. Techno-economic analysis of hydrogen production from dehydrogenation and steam reforming of ethanol for carbon dioxide conversion to methanol (2021) *International Journal of Hydrogen Energy*, 46 (60), pp. 30891-30902.
32. Saychu, P., Thanasiriruk, M., Khajonvittayakul, C., Viratikul, R., Tongnan, V., Hartley, M., Wongsakulphasatch, S., Laosiripojana, N., Hartley, U.W. Catalytic performance of Na-Mn₂O₃-based catalysts towards oxidative coupling of methane (2021) *Catalysis Today*, 375, pp. 225-233.
33. Khongchamnan, P., Wanmolee, W., Laosiripojana, N., Champreda, V., Suriyachai, N., Kreetachat, T., Sakulthaew, C., Chokejaroenrat, C., Imman, S. Solvothermal-Based Lignin Fractionation From Corn Stover: Process Optimization and Product Characteristics (2021) *Frontiers in Chemistry*, 9, art. no. 697237
34. Sittipunsakda, O., Kemacheevakul, P., Laosiripojana, N., Chuangchote, S. Photocatalytic hydrogen production from urine using sr-doped tio₂ photocatalyst with subsequent phosphorus recovery via struvite crystallization (2021) *Catalysts*, 11 (8), art. no. 1012
35. Siabbamrung, P., Quitain, A.T., Kida, T., Laosiripojana, N., Boonnoun, P., Shotipruk, A. Solid acid catalyst prepared via one-step microwave-assisted hydrothermal carbonization: Enhanced stability towards intensified production of 5-hydroxymethylfurfural in water/ γ -valerolactone/NaCl (2021) *Molecular Catalysis*, 512, art. no. 111772
36. Khajonvittayakul, C., Tongnan, V., Namon, N., Phonbubpha, C., Laosiripojana, N., Hartley, M., Hartley, U.W. Tar steam reforming for synthesis gas production over Ni-

- based on ceria/zirconia and $\text{La}_{0.3}\text{Sr}_{0.7}\text{Co}_{0.7}\text{Fe}_{0.3}\text{O}_3$ in a packed-bed reactor (2021) *Chemosphere*, 277, art. no. 130280
37. Imman, S., Khongchamnan, P., Wanmolee, W., Laosiripojana, N., Kreetachat, T., Sakulthaew, C., Chokeyaroenrat, C., Suriyachai, N. Fractionation and characterization of lignin from sugarcane bagasse using a sulfuric acid catalyzed solvothermal process (2021) *RSC Advances*, 11 (43), pp. 26773-26784.
 38. Khamhangdatepon, T., Tongnan, V., Hartley, M., Sornchamni, T., Siri-Nguan, N., Laosiripojana, N., Li, K., Hartley, U.W. Mechanisms of synthesis gas production via thermochemical cycles over $\text{La}_{0.3}\text{Sr}_{0.7}\text{Co}_{0.7}\text{Fe}_{0.3}\text{O}_3$ (2021) *International Journal of Hydrogen Energy*, 46 (48), pp. 24666-24675.
 39. Ngoenthong, N., Tongnan, V., Sornchamni, T., Siri-nguan, N., Laosiripojana, N., Hartley, U.W. Application of a micro-channel reactor for process intensification in high purity syngas production via $\text{H}_2\text{O}/\text{CO}_2$ co-splitting (2021) *International Journal of Hydrogen Energy*, 46 (48), pp. 24581-24590.
 40. Praikaew, W., Kiatkittipong, W., Aiouache, F., Najdanovic-Visak, V., Ngaosuwan, K., Wongsawaeng, D., Lim, J.W., Lam, S.S., Kiatkittipong, K., Laosiripojana, N., Boonyasuwat, S., Assabumrungrat, S. Process and energy intensification of glycerol carbonate production from glycerol and dimethyl carbonate in the presence of eggshell-derived CaO heterogeneous catalyst (2021) *Energies*, 14 (14), art. no. 4249
 41. Thanasiriruk, M., Saychoo, P., Khajonvittayakul, C., Tongnan, V., Hartley, U.W., Laosiripojana, N. Optimizing operating conditions for Oxidative Coupling Methane (OCM) in the presence of NaCl-MnOx/SiO_2 (2021) *Applied Science and Engineering Progress*, 14 (3), pp. 477-488.
 42. Pongsiriyakul, K., Kiatkittipong, W., Adhikari, S., Lim, J.W., Lam, S.S., Kiatkittipong, K., Dankeaw, A., Reubroycharoen, P., Laosiripojana, N., Faungnawakij, K., Assabumrungrat, S. Effective Cu/Re promoted Ni -supported $\gamma\text{-Al}_2\text{O}_3$ catalyst for upgrading algae bio-crude oil produced by hydrothermal liquefaction (2021) *Fuel Processing Technology*, 216, art. no. 106670
 43. Kaewmeesri, R., Nonkumwong, J., Kiatkittipong, W., Laosiripojana, N., Faungnawakij, K. Deoxygenations of palm oil-derived methyl esters over mono- And bimetallic NiCo catalysts (2021) *Journal of Environmental Chemical Engineering*, 9 (2), art. no. 105128
 44. Wanmolee, W., Beltramini, J.N., Bartley, J., Laosiripojana, N., Doherty, W.O.S. One step liquefaction of hardwood lignin to oligomers soluble in polymerizable solvents (2021) *Industrial Crops and Products*, 162, art. no. 113259
 45. Suriyachai, N., Wanmolee, W., Khongchamnan, P., Laosiripojana, N., Champreda, V., Kreetachat, T., Imman, S. Effects of Modified Activated Carbon on Microwave-Accelerated Organosolv Fractionation of Rice Husk (2021) *ACS Omega*, 6 (8), pp. 5389-5398.
 46. Chuetor, S., Ruiz, T., Barakat, A., Laosiripojana, N., Champreda, V., Sriariyanun, M. Evaluation of rice straw biopowder from alkaline-mechanical pretreatment by hydro-textural approach (2021) *Bioresource Technology*, 323, art. no. 124619

47. Chotirotsukon, C., Raita, M., Yamada, M., Nishimura, H., Watanabe, T., Laosiripojana, N., Champreda, V. Sequential fractionation of sugarcane bagasse using liquid hot water and formic acid-catalyzed glycerol-based organosolv with solvent recycling (2021) *Bioenergy Research*, 14 (1), pp. 135-152.
48. Damaurai, J., Preechakun, T., Raita, M., Champreda, V., Laosiripojana, N. Investigation of Alkaline Hydrogen Peroxide in Aqueous Organic Solvent to Enhance Enzymatic Hydrolysis of Rice Straw (2021) *Bioenergy Research*, 14 (1), pp. 122-134.
49. Sarabut, J., Charojrochkul, S., Sornchamni, T., Laosiripojana, N., Assabumrungrat, S., Hartley, U.W., Kim-Lohsoontorn, P. Erratum to 'Effect of strontium and zirconium doped barium cerate on the performance of proton ceramic electrolyser cell for syngas production from carbon dioxide and steam' [Int J Hydrogen Energy 44 (2019) 20634–20640] (*International Journal of Hydrogen Energy* (2021) *International Journal of Hydrogen Energy*, 46 (13), p. 9266.
50. Muangsuwan, C., Kriprasertkul, W., Ratchahat, S., Liu, C.-G., Posoknistakul, P., Laosiripojana, N., Sakdaronnarong, C. Upgrading of Light Bio-oil from Solvothermolysis Liquefaction of an Oil Palm Empty Fruit Bunch in Glycerol by Catalytic Hydrodeoxygenation Using NiMo/Al₂O₃ or CoMo/Al₂O₃ Catalysts (2021) *ACS Omega*, 6 (4), pp. 2999-3016.
51. Khamhangdatepon, T., Sornchamni, T., Siri-Nguan, N., Laosiripojana, N., Hartley, U.W. A dual reactor for isothermal thermochemical cycles of h₂ o/co₂ co-splitting using la_{0.3} sr_{0.7} co_{0.7} fe_{0.3} o₃ as an oxygen carrier (2021) *Processes*, 9 (6), art. no. 1018
52. Kaewmeesri, R., Nonkumwong, J., Witoon, T., Laosiripojana, N., Faungnawakij, K. Effect of water and glycerol in deoxygenation of coconut oil over bimetallic nico/sapo-11 nanocatalyst under n₂ atmosphere (2020) *Nanomaterials*, 10 (12), art. no. 2548, pp. 1-15.
53. Suriyachai, N., Weerasai, K., Upajak, S., Khongchamnan, P., Wanmolee, W., Laosiripojana, N., Champreda, V., Suwannahong, K., Imman, S. Efficiency of catalytic liquid hot water pretreatment for conversion of corn stover to bioethanol (2020) *ACS Omega*, 5 (46), pp. 29872-29881.
54. Temluxame, P., Laosiripojana, N., Assabumrungrat, S., Puengjinda, P., Kim-Lohsoontorn, P. Phase transformation and electrical properties of bismuth oxide doped scandium cerium and gadolinium stabilized zirconia (0.5Gd_{0.5}Ce₁₀ScSZ) for solid oxide electrolysis cell (2020) *International Journal of Hydrogen Energy*, 45 (55), pp. 29953-29965.
55. Tepamatr, P., Laosiripojana, N., Sesuk, T., Charojrochkul, S. Effect of samarium and praseodymium addition on water gas shift performance of Co/CeO₂ catalysts (2020) *Journal of Rare Earths*, 38 (11), pp. 1201-1206.
56. Wongsartsai, C., Tongnan, V., Sornchamni, T., Siri-nguan, N., Laosiripojana, N., Hartley, M., Hartley, U.W. CO₂ utilization via methanation using 40%Ni/CexCr_{1-x}O₂ as a novel catalyst: a comparative study of packed-bed and micro-channel reactors (2020) *Reaction Kinetics, Mechanisms and Catalysis*, 131 (1), pp. 101-117.

57. Tumkot, L., Quitain, A.T., Boonnoun, P., Laosiripojana, N., Kida, T., Shotipruk, A. Synergizing sulfonated hydrothermal carbon and microwave irradiation for intensified esterification reaction (2020) *ACS Omega*, 5 (37), pp. 23542-23548.
58. Posoknistakul, P., Tangkrakul, C., Chaosuanphae, P., Deepentham, S., Techasawong, W., Phonphirunrot, N., Bairak, S., Sakdaronnarong, C., Laosiripojana, N. Fabrication and characterization of lignin particles and their ultraviolet protection ability in PVA composite film (2020) *ACS Omega*, 5 (33), pp. 20976-20982.
59. Suriyachai, N., Chuangchote, S., Laosiripojana, N., Champreda, V., Sagawa, T. Synergistic effects of co-doping on photocatalytic activity of titanium dioxide on glucose conversion to value-added chemicals (2020) *ACS Omega*, 5 (32), pp. 20373-20381.
60. Saupsor, J., Kasempremchit, N., Bumroongsakulsawat, P., Kim-Lohsoontorn, P., Wongsakulphasatch, S., Kiatkittipong, W., Laosiripojana, N., Gong, J., Assabumrungrat, S. Performance comparison among different multifunctional reactors operated under energy self-sufficiency for sustainable hydrogen production from ethanol (2020) *International Journal of Hydrogen Energy*, 45 (36), pp. 18309-18320.
61. Sangjan, A., Ngamsiri, P., Klomkliang, N., Wu, K.C.-W., Matsagar, B.M., Ratchahat, S., Liu, C.-G., Laosiripojana, N., Sakdaronnarong, C. Effect of microwave-assisted wet torrefaction on liquefaction of biomass from palm oil and sugarcane wastes to bio-oil and carbon nanodots/nanoflakes by hydrothermolysis and solvothermolysis (2020) *Renewable Energy*, 154, pp. 1204-1217.
62. Tumkot, L., Quitai, A.T., Kida, T., Laosiripojana, N., Shotipruk, A., Boonnoun, P. Sulfonated hydrothermal carbon-based catalyzed esterification under microwave irradiation: Optimization and kinetic study (2020) *Bulletin of Chemical Reaction Engineering & Catalysis*, 15 (2), pp. 514-524.
63. Roongraung, K., Chuangchote, S., Laosiripojana, N. Enhancement of photocatalytic oxidation of glucose to value-added chemicals on TiO₂ photocatalysts by a zeolite (Type y) support and metal loading (2020) *Catalysts*, 10 (4), art. no. 423, In Press.
64. Roongraung, K., Chuangchote, S., Laosiripojana, N., Sagawa, T. Electrospun Ag-TiO₂ Nanofibers for Photocatalytic Glucose Conversion to High-Value Chemicals (2020) *ACS Omega*, 5 (11), pp. 5862-5872.
65. Phaiboonsilpa, N., Champreda, V., Laosiripojana, N. Comparative study on liquefaction behaviors of xylan hemicellulose as treated by different hydrothermal methods (2020) *Energy Reports*, 6, pp. 714-718.
66. Phaiboonsilpa, N., Chysirichote, T., Champreda, V., Laosiripojana, N. Fermentation of xylose, arabinose, glucose, their mixtures and sugarcane bagasse hydrolyzate by yeast *Pichia stipitis* for ethanol production (2020) *Energy Reports*, 6, pp. 710-713.
67. Totong, S., Daorattanachai, P., Laosiripojana, N., Idem, R. Catalytic depolymerization of alkaline lignin to value-added phenolic-based compounds over Ni/CeO₂-ZrO₂ catalyst synthesized with a one-step chemical reduction of Ni species using NaBH₄ as the reducing agent (2020) *Fuel Processing Technology*, 198, art. no. 106248, .
68. Ngoensawat, A., Tongnan, V., Laosiripojana, N., Kim-Lohsoontorn, P., Hartley, U.W. Effect of La and Gd substitution in BaFeO_{3-δ} perovskite structure on its catalytic

- performance for thermochemical water splitting (2020) *Catalysis Communications*, 135, art. no. 105901, In Press.
69. Khamhangdatepon, T., Tongnan, V., Hartley, M., Sornchamni, T., Siri-Nguan, N., Laosiripojana, N., Li, K., Hartley, U.W. Mechanisms of synthesis gas production via thermochemical cycles over $\text{La}_{0.3}\text{Sr}_{0.7}\text{Co}_{0.7}\text{Fe}_{0.3}\text{O}_3$ (2020) *International Journal of Hydrogen Energy*, In Press.
 70. Chotirotsukon, C., Raita, M., Champreda, V., Laosiripojana, N. Fractionation of sugarcane trash by oxalic-acid catalyzed glycerol-based organosolv followed by mild solvent delignification (2019) *Industrial Crops and Products*, 141, art. no. 111753.
 71. Chuetor, S., Champreda, V., Laosiripojana, N. Evaluation of combined semi-humid chemo-mechanical pretreatment of lignocellulosic biomass in energy efficiency and waste generation (2019) *Bioresource Technology*, 292, art. no. 121966.
 72. Wanmolee, W., Beltramini, J.N., Atanda, L., Bartley, J.P., Laosiripojana, N., Doherty, W.O.S. Effect of HCOOK/Ethanol on Fe/HUSY, Ni/HUSY, and Ni-Fe/HUSY Catalysts on Lignin Depolymerization to Benzyl Alcohols and Bioaromatics (2019) *ACS Omega*, 4 (16), pp. 16980-16993.
 73. Thongkumkoon, S., Kiatkittipong, W., Hartley, U.W., Laosiripojana, N., Daorattanachai, P. Catalytic activity of trimetallic sulfided Re-Ni-Mo/ γ - Al_2O_3 toward deoxygenation of palm feedstocks (2019) *Renewable Energy*, 140, pp. 111-123.
 74. Khajonvittayakul, C., Tongnan, V., Kangsadan, T., Laosiripojana, N., Jindasuwan, S., Hartley, U.W. Thermodynamic and mechanism study of syngas production via integration of nitrous oxide decomposition and methane partial oxidation in the presence of $10\%\text{NiO}-\text{La}_{0.3}\text{Sr}_{0.7}\text{Co}_{0.7}\text{Fe}_{0.3}\text{O}_3-\Delta$ (2019) *Reaction Kinetics, Mechanisms and Catalysis*, 127 (2), pp. 839-855.
 75. Sarabut, J., Charojrochkul, S., Sornchamni, T., Laosiripojana, N., Assabumrungrat, S., Wetwattana-Hartely, U. and Kim-Lohsoontorn, P. (2019). "Effect of strontium and zirconium doped barium cerate on the performance of proton ceramic electrolyser cell for syngas production from carbon dioxide and steam". *International Journal of Hydrogen Energy*, pp. 20634-20640.
 76. Nimmas, T., Jamrunroj, P., Wongsakulphasatch, S., Kiatkittipong, W., Laosiripojana, N., Gong, J., Assabumrungrat, S. (2019). "Influence of CaO precursor on CO_2 capture performance and sorption-enhanced steam ethanol reforming". *International Journal of Hydrogen Energy*, pp. 20649-20662.
 77. Likhittaphon, S., Panyadee, R., Fakyam, W., Charojrochkul, S., Sornchamni, T., Laosiripojana, N., Assabumrungrat, S., Kim-Lohsoontorn, P. Effect of CuO/ZnO catalyst preparation condition on alcohol-assisted methanol synthesis from carbon dioxide and hydrogen (2019) *International Journal of Hydrogen Energy*, pp. 20782-20791.
 78. Totong, S., Daorattanachai, P., Quitain, A.T., Kida, T., Laosiripojana, N. Catalytic Depolymerization of Alkaline Lignin into Phenolic-Based Compounds over Metal-Free Carbon-Based Catalysts (2019) *Industrial and Engineering Chemistry Research*, 58 (29), pp. 13041-13052.

79. Laosiripojana, W., Kiatkittipong, W., Sakdaronnarong, C., Assabumrungrat, S., Laosiripojana, N. Catalytic hydrotreatment of pyrolysis-oil with bimetallic Ni-Cu catalysts supported by several mono-oxide and mixed-oxide materials (2019) *Renewable Energy*, 135, pp. 1048-1055.
80. Mangkorn, N., Kanokratana, P., Roongsawang, N., Laobuthee, A., Laosiripojana, N., Champreda, V. (2019). "Synthesis and characterization of *Ogataea thermomethanolica* alcohol oxidase immobilized on barium ferrite magnetic microparticles". *Journal of Bioscience and Bioengineering*, 127(3), pp. 265-272.
81. Intaramas, K., Sakdaronnarong, C., Liu, C.-G., Mehmood, M.A., Jonglertjunya, W., Laosiripojana, N. Sequential catalytic-mixed-milling and thermohydrolysis of cassava starch improved ethanol fermentation (2019) *Food and Bioproducts Processing*, 114, pp. 72-84.
82. Boonyakarn, T., Wataniyakul, P., Boonnoun, P., Quitain, A.T., Kida, T., Sasaki, M., Laosiripojana, N., Jongsomjit, B., Shotipruk, A. Enhanced Levulinic Acid Production from Cellulose by Combined Brønsted Hydrothermal Carbon and Lewis Acid Catalysts (2019) *Industrial and Engineering Chemistry Research*, 58 (8), pp. 2697-2703.
83. Asawaworarit, P., Daorattanachai, P., Laosiripojana, W., Sakdaronnarong, C., Shotipruk, A., Laosiripojana, N. Catalytic depolymerization of organosolv lignin from bagasse by carbonaceous solid acids derived from hydrothermal of lignocellulosic compounds (2019) *Chemical Engineering Journal*, 356, pp. 461-471.
84. Tantikhajorngosol, P., Laosiripojana, N., Jiratananon, R., Assabumrungrat, S. Physical absorption of CO₂ and H₂S from synthetic biogas at elevated pressures using hollow fiber membrane contactors: The effects of Henry's constants and gas diffusivities (2019) *International Journal of Heat and Mass Transfer*, 128, pp. 1136-1148.
85. Ngoenthong, N., Tongnan, V., Sornchamni, T., Siri-nguan, N., Laosiripojana, N., Hartley, U.W. Application of a micro-channel reactor for process intensification in high purity syngas production via H₂O/CO₂ co-splitting (2019) *International Journal of Hydrogen Energy*, In Press.
86. Isarapakdeetham, S., Kim-Lohsoontorn, P., Wongsakulphasatch, S., Kiatkittipong, W., Laosiripojana, N., Gong, J., Assabumrungrat, S. Hydrogen production via chemical looping steam reforming of ethanol by Ni-based oxygen carriers supported on CeO₂ and La₂O₃ promoted Al₂O₃ (2019) *International Journal of Hydrogen Energy*, In Press.
87. Saupsor, J., Kasempremchit, N., Bumroongsakulsawat, P., Kim-Lohsoontorn, P., Wongsakulphasatch, S., Kiatkittipong, W., Laosiripojana, N., Gong, J., Assabumrungrat, S. Performance comparison among different multifunctional reactors operated under energy self-sufficiency for sustainable hydrogen production from ethanol (2019) *International Journal of Hydrogen Energy*, In Press.
88. Ngoenthong, N., Hartley, M., Sornchamni, T., Siri-nguan, N., Laosiripojana, N., Hartley, U.W. Comparison of packed-bed and micro-channel reactors for hydrogen production via thermochemical cycles of water splitting in the presence of ceria-based catalysts (2019) *Processes*, 7 (10), art. no. 767.

89. Bawornruttanaboonya, K., Devahastin, S., Mujumdar, A.S., Laosiripojana, N. Comparative numerical evaluation of autothermal biogas reforming in conventional and split-and-recombine microreactors (2018) *International Journal of Hydrogen Energy*, 43 (51), pp. 22874-22884.
90. Panyadee, R., Posoknistakul, P., Jonglertjunya, W., Kim-Lohsoontorn, P., Laosiripojana, N., Matsagar, B.M., Wu, K.C.-W., Sakdaronnarong, C. Sequential Fractionation of Palm Empty Fruit Bunch and Microwave-Assisted Depolymerization of Lignin for Producing Monophenolic Compounds (2018) *ACS Sustainable Chemistry and Engineering*, 6 (12), pp. 16896-16906.
91. Srisasiwimon, N., Chuangchote, S., Laosiripojana, N., Sagawa, T. TiO₂/Lignin-Based Carbon Compositated Photocatalysts for Enhanced Photocatalytic Conversion of Lignin to High Value Chemicals (2018) *ACS Sustainable Chemistry and Engineering*, 6 (11), pp. 13968-13976.
92. Tongnan, V., Sornchamni, T., Laosiripojana, N., Hartley, U.W. Study of crystal growth and kinetic parameters of Zn/ZnO oxidation in the presence of H₂O and CO₂ (2018) *Reaction Kinetics, Mechanisms and Catalysis*, 125 (1), pp. 99-110.
93. Mangkorn, N., Kanokratana, P., Roongsawang, N., Laosiripojana, N., Champreda, V. Purification, characterization, and stabilization of alcohol oxidase from *Ogataea thermomethanolica* (2018) *Protein Expression and Purification*, 150, pp. 26-32.
94. Hartley, U.W., Tongnan, V., Laosiripojana, N., Kim-Lohsoontorn, P., Li, K. Nitrous oxide decomposition over La_{0.3}Sr_{0.7}Co_{0.7}Fe_{0.3}O_{3-Δ} catalyst (2018) *Reaction Kinetics, Mechanisms and Catalysis*, 125 (1), pp. 85-97.
95. Cheephat, C., Daorattanachai, P., Devahastin, S., Laosiripojana, N. Partial oxidation of methane over monometallic and bimetallic Ni-, Rh-, Re-based catalysts: Effects of Re addition, co-fed reactants and catalyst support (2018) *Applied Catalysis A: General*, 563, pp. 1-8.
96. Bawornruttanaboonya, K., Devahastin, S., Mujumdar, A.S., Laosiripojana, N. Comparative evaluation of autothermal reforming of biogas into synthesis gas over bimetallic Ni-Re/Al₂O₃ catalyst in fixed-bed and coated-wall microreactors: A computational study (2018) *International Journal of Hydrogen Energy*, 43 (29), pp. 13237-13255.
97. Weerasai, K., Champreda, V., Sakdaronnarong, C., Shotipruk, A., Laosiripojana, N. Hydrolysis of eucalyptus wood chips under hot compressed water in the presence of sulfonated carbon-based catalysts (2018) *Food and Bioproducts Processing*, 110, pp. 136-144.
98. Wataniyakul, P., Boonnoun, P., Quitain, A.T., Kida, T., Laosiripojana, N., Shotipruk, A. Preparation of hydrothermal carbon acid catalyst from defatted rice bran (2018) *Industrial Crops and Products*, 117, pp. 286-294.
99. Daorattanachai, P., Laosiripojana, W., Laobuthee, A., Laosiripojana, N. Catalytic activity of sewage sludge char supported Re-Ni bimetallic catalyst toward cracking/reforming of biomass tar (2018) *Renewable Energy*, 121, pp. 644-651.

100. Inkrod, C., Raita, M., Champreda, V., Laosiripojana, N. Characteristics of Lignin Extracted from Different Lignocellulosic Materials via Organosolv Fractionation (2018) *Bioenergy Research*, 11 (2), pp. 277-290.
101. Bawornruttanaboonya, K., Laosiripojana, N., Mujumdar, A.S., Devahastin, S. Catalytic partial oxidation of CH₄ over bimetallic Ni-Re/Al₂O₃: Kinetic determination for application in microreactor (2018) *AIChE Journal*, 64 (5), pp. 1691-1701.
102. Suriyachai, N., Champreda, V., Kraikul, N., Techanan, W., Laosiripojana, N. Fractionation of lignocellulosic biopolymers from sugarcane bagasse using formic acid-catalyzed organosolv process (2018) *3 Biotech*, 8 (5), art. no. 221.
103. Likhittaphon, S., Pukkrueapun, T., Seeharaj, P., Wetwathana Hartley, U., Laosiripojana, N., Kim-Lohsoontorn, P. Effect of sintering additives on barium cerate based solid oxide electrolysis cell for syngas production from carbon dioxide and steam (2018) *Fuel Processing Technology*, 173, pp. 119-125.
104. Sakdaronnarong, C., Pipathworapoom, W., Vichitsrikamol, T., Sema, T., Posoknistakul, P., Koo-amornpattana, W., Laosiripojana, N. Integrative process for a sugarcane bagasse biorefinery to produce glucose, bio-oil and carbon microspheres (2018) *Process Safety and Environmental Protection*, 116, pp. 1-13.
105. Intaramas, K., Jonglertjunya, W., Laosiripojana, N., Sakdaronnarong, C. Selective conversion of cassava mash to glucose using solid acid catalysts by sequential solid state mixed-milling reaction and thermo-hydrolysis (2018) *Energy*, 149, pp. 837-847.
106. Wanmolee, W., Laosiripojana, N., Daorattanachai, P., Moghaddam, L., Rencoret, J., Del Río, J.C., Doherty, W.O.S. Catalytic Conversion of Organosolv Lignins to Phenolic Monomers in Different Organic Solvents and Effect of Operating Conditions on Yield with Methyl Isobutyl Ketone (2018) *ACS Sustainable Chemistry and Engineering*, 6 (3), pp. 3010-3018.
107. Tantikhajorngosol, P., Laosiripojana, N., Jiratananon, R., Assabumrungrat, S. A modeling study of module arrangement and experimental investigation of single stage module for physical absorption of biogas using hollow fiber membrane contactors (2018) *Journal of Membrane Science*, 549, pp. 283-294.
108. Wataniyakul, P., Boonnoun, P., Quitain, A.T., Sasaki, M., Kida, T., Laosiripojana, N., Shotipruk, A. Preparation of hydrothermal carbon as catalyst support for conversion of biomass to 5-hydroxymethylfurfural (2018) *Catalysis Communications*, 104, pp. 41-47.
109. Upajak, S., Laosiripojana, N., Champreda, V., Kreethachart, T., Imman, S. Effect of combination of liquid hot water system and hydrogen peroxide pretreatment on enzymatic saccharification of corn cob (2018) *International Journal of GEOMATE*, 15 (51), pp. 31-38.
110. Bawornruttanaboonya, K., Devahastin, S., Mujumdar, A.S., Laosiripojana, N. A computational fluid dynamic evaluation of a new microreactor design for catalytic partial oxidation of methane (2017) *International Journal of Heat and Mass Transfer*, 115, pp. 174-185.

111. Payormhorm, J., Chuangchote, S., Laosiripojana, N. CTAB-assisted sol-microwave method for fast synthesis of mesoporous TiO₂ photocatalysts for photocatalytic conversion of glucose to value-added sugars (2017) *Materials Research Bulletin*, 95, pp. 546-555.
112. Phimsen, S., Kiatkittipong, W., Yamada, H., Tagawa, T., Kiatkittipong, K., Laosiripojana, N., Assabumrungrat, S. Nickel sulfide, nickel phosphide and nickel carbide catalysts for bio-hydrotreated fuel production (2017) *Energy Conversion and Management*, 151, pp. 324-333.
113. Tantikhajorngosol, P., Laosiripojana, N., Jiratananon, R., Assabumrungrat, S. Analytical study of membrane wetting at high operating pressure for physical absorption of CO₂ using hollow fiber membrane contactors (2017) *Chemical Engineering Research and Design*, 126, pp. 265-277.
114. Raita, M., Denchokepraguy, N., Champreda, V., Laosiripojana, N. Effects of alkaline catalysts on acetone-based organosolv pretreatment of rice straw (2017) *3 Biotech*, 7 (5), art. no. 340.
115. Sakdaronnarong, C., Jiratanakittiwat, K., Tangkitthanasakul, T., Laosiripojana, N. Ionosolv pretreatment of sugarcane bagasse and rice straw assisted by catalytic hydrothermal and microwave heating for biorefining (2017) *Food and Bioproducts Processing*, 105, pp. 104-116.
116. Payormhorm, J., Chuangchote, S., Kiatkittipong, K., Chiarakorn, S., Laosiripojana, N. Xylitol and gluconic acid productions via photocatalytic-glucose conversion using TiO₂ fabricated by surfactant-assisted techniques: Effects of structural and textural properties (2017) *Materials Chemistry and Physics*, 196, pp. 29-36.
117. Suriyachai, N., Champreda, V., Sakdaronnarong, C., Shotipruk, A., Laosiripojana, N. Sequential organosolv fractionation/hydrolysis of sugarcane bagasse: The coupling use of heterogeneous H₃PO₄-activated carbon as acid promoter and hydrolysis catalyst (2017) *Renewable Energy*, 113, pp. 1141-1148.
118. Phimsen, S., Yamada, H., Tagawa, T., Kiatkittipong, W., Kiatkittipong, K., Laosiripojana, N., Assabumrungrat, S. Epoxidation of methyl oleate in a TiO₂ coated-wall capillary microreactor (2017) *Chemical Engineering Journal*, 314, pp. 594-599.
119. Wattanathana, W., Wannapaiboon, S., Veranitisagul, C., Laosiripojana, N., Koonsaeng, N., Laobuthee, A. Preparation of Palladium-Impregnated Ceria by Metal Complex Decomposition for Methane Steam Reforming Catalysis (2017) *Advances in Materials Science and Engineering*, 2017, art. no. 5828067.
120. Wanmolee, W., Sornlake, W., Rattanaphan, N., Suwannarangsee, S., Laosiripojana, N., Champreda, V. Biochemical characterization and synergism of cellulolytic enzyme system from *Chaetomium globosum* on rice straw saccharification (2016) *BMC Biotechnology*, 16 (1), art. no. 82
121. Boonpoke, A., Chiarakorn, S., Laosiripojana, N., Chidthaisong, A. Enhancement of carbon dioxide capture by amine-modified rice husk mesoporous material (2016) *Environmental Progress and Sustainable Energy*, 35 (6), pp. 1716-1723.

122. Phimsen, S., Kiatkittipong, W., Yamada, H., Tagawa, T., Kiatkittipong, K., Laosiripojana, N., Assabumrungrat, S. Oil extracted from spent coffee grounds for bio-hydrotreated diesel production (2016) *Energy Conversion and Management*, 126, pp. 1028-1036.
123. Arpavate, W., Chuangchote, S., Laosiripojana, N., Wootthikanokkhan, J., Sagawa, T. ZnO nanorod arrays fabricated by hydrothermal method using different thicknesses of seed layers for applications in hybrid photovoltaic cells (2016) *Sensors and Materials*, 28 (5), pp. 403-408.
124. Klamrassamee, T., Tana, T., Laosiripojana, N., Moghaddam, L., Zhang, Z., Rencoret, J., Gutierrez, A., Del Rio, J.C., Doherty, W.O.S. Effects of an alkali-acid purification process on the characteristics of eucalyptus lignin fractionated from a MIBK-based organosolv process (2016) *RSC Advances*, 6 (95), pp. 92638-92647.
125. Tripathi, A., Faungnawakij, K., Laobuthee, A., Assabumrungrat, S. and Laosiripojana, N. Catalytic Activity of Bimetallic Cu-Ag/MgO-SiO₂ Toward the Conversion of Ethanol to 1,3-Butadiene. *International Journal of Chemical Reactor Engineering*. 14(5), (2016). October 2016
126. Tepamatr, P., Laosiripojana, N. and Charojrochkul, S. Water gas shift reaction over monometallic and bimetallic catalysts supported by mixed oxide materials. *Applied Catalysis A: General*. 523(2016): p. 255-262. August 2016
127. Sakdaronnarong, C., Saengsawang, A., Siriyutta, A., Jonglertjunya, W., Nasongkla, N. and Laosiripojana, N. An integrated system for fractionation and hydrolysis of sugarcane bagasse using heterogeneous catalysts in aqueous biphasic system. *Chemical Engineering Journal*. 285(2016): p. 144-156. February 2016
128. Phimsen, S., Kiatkittipong, W., Yamada, H., Tagawa, T., Kiatkittipong, K., Laosiripojana, N. and Assabumrungrat, S. Oil extracted from spent coffee grounds for bio-hydrotreated diesel production. *Energy Conversion and Management*. 126(2016): p. 1028-1036. October 2016
129. Marisa Raita, Jantima Arnthong, Verawat Champreda, Navadol Laosiripojana, Modification of magnetic nanoparticle lipase designs for biodiesel production from palm oil, *Fuel Processing Technology*, Volume 134, 2015, Pages 189-197
130. Marisa Raita, Navadol Laosiripojana, Verawat Champreda, Biocatalytic methanolysis activities of cross-linked protein-coated microcrystalline lipase toward esterification/transesterification of relevant palm products, *Enzyme and Microbial Technology*, Volume 70, 2015, Pages 28-34
131. Apirat Laobuthee, Chatchai Veranitisagul, Worawat Wattanathana, Nattamon Koonsaeng, Navadol Laosiripojana, Activity of Fe supported by Ce_{1-x}Sm_xO₂ derived from metal complex decomposition toward the steam reforming of toluene as biomass tar model compound, *Renewable Energy*, Volume 74, 2015, Pages 133-138
132. Thepparat Klamrassamee, Navadol Laosiripojana, Dylan Cronin, Lalehvash Moghaddam, Zhanying Zhang, William O.S. Doherty, Effects of mesostructured silica catalysts on the depolymerization of organosolv lignin fractionated from woody eucalyptus, *Bioresource Technology*, Volume 180, 2015, Pages 222-229

133. Pornlada Daorattanachai, Pongtanawat Khemthong, Nawin Viriya-empikul, Navadol Laosiripojana, Kajornsak Faungnawakij, Effect of calcination temperature on catalytic performance of alkaline earth phosphates in hydrolysis/dehydration of glucose and cellulose, *Chemical Engineering Journal*, In Press
134. Marisa Raita, Worapon Kiatkittipong, Navadol Laosiripojana, Verawat Champreda, Kinetic study on esterification of palmitic acid catalyzed by glycine-based crosslinked protein coated microcrystalline lipase, *Chemical Engineering Journal*, In Press
135. Saksit Imman, Jantima Arnthong, Vorakan Burapatana, Verawat Champreda, Navadol Laosiripojana, fluence of alkaline catalyst addition on compressed liquid hot water pretreatment of rice straw, *Chemical Engineering Journal*, In Press
136. Saksit Imman, Jantima Arnthong, Vorakan Burapatana, Verawat Champreda, Navadol Laosiripojana, Effects of acid and alkali promoters on compressed liquid hot water pretreatment of rice straw, *Bioresource Technology*, Volume 171, November 2014, Pages 29-36
137. N. Laosiripojana, W. Sutthisripok, S. Charojrochkul, S. Assabumrungrat, Development of Ni-Fe bimetallic based catalysts for biomass tar cracking/reforming: Effects of catalyst support and co-fed reactants on tar conversion characteristics, *Fuel Processing Technology*, Volume 127, November 2014, Pages 26-32
138. Unalome Wetwatana Hartley, Suksun Amornraksa, Pattaraporn Kim-Lohsoontorn, Navadol Laosiripojana, Thermodynamic analysis and experimental study of hydrogen production from oxidative reforming of n-butanol, *Chemical Engineering Journal*, In Press
139. Worawat Wattanathana, Nollapan Nootsuwan, Chatchai Veranitisagul, Nattamon Koonsaeng, Navadol Laosiripojana, Apirat Laobuthee, Simple cerium-triethanolamine complex: Synthesis, characterization, thermal decomposition and its application to prepare ceria support for platinum catalysts used in methane steam reforming, *Journal of Molecular Structure*, Volume 1089, 5 June 2015, Pages 9-15
140. P. Prapainainar, A. Theampetch, P. Kongkachuichay, N. Laosiripojana, S.M. Holmes, C. Prapainainar, Effect of solution casting temperature on properties of nafion composite membrane with surface modified mordenite for direct methanol fuel cell, *Surface and Coatings Technology*, Volume 271, 15 June 2015, Pages 63-73
141. N. Laosiripojana, W. Sutthisripok, S. Charojrochkul, S. Assabumrungrat, Conversion of biomass tar containing sulphur to syngas by Gd-CeO₂ coated Ni-Fe bimetallic-based catalysts, *Applied Catalysis A: General*, Volume 478, 20 May 2014, Pages 9-14
142. Russamee Sitthikhankaew, David Chadwick, Suttichai Assabumrungrat, Navadol Laosiripojana, Effects of humidity, O₂, and CO₂ on H₂S adsorption onto upgraded and KOH impregnated activated carbons, *Fuel Processing Technology*, Volume 124, 2014, Pages 249-257
143. R. Sitthikhankaew, D. Chadwick, S. Assabumrungrat, N. Laosiripojana, Effect of KI and KOH Impregnations over Activated Carbon on H₂S Adsorption Performance

- at Low and High Temperatures, Separation Science and Technology, Volume 49, 2014, Pages 354-366
144. R. Sitthikhankaew, D. Chadwick, S. Assabumrungrat, N. Laosiripojana, Performance of Sodium-Impregnated Activated Carbons toward Low and High Temperature H₂S Adsorption, Chemical Engineering Communications, Volume 201, 2014, Pages 257-271
 145. W. Wittanadecha, N. Laosiripojana, A. Ketcong, N. Ningnuek, P. Prasertthdam, J.R. Monnier, S. Assabumrungrat, Preparation of Au/C catalysts using microwave-assisted and ultrasonic-assisted methods for acetylene hydrochlorination, Applied Catalysis A: General, Volume 475, 2014, Pages 292-296
 146. Panu Panitchakarn, Navadol Laosiripojana, Nawin Viriya-empikul, Prasert Pavasant, Synthesis of High Purity of NaA and NaX Zeolite from Coal Fly Ash, Journal of the Air & Waste Management Association, In Press
 147. Pornlada Daorattanachai, Nawin Viriya-empikul, Navadol Laosiripojana, Kajornsak Faungnawakij, Effects of Kraft lignin on hydrolysis/dehydration of sugars, cellulosic and lignocellulosic biomass under hot compressed water, Bioresource Technology, Volume 144, 2013, Pages 504-512
 148. Worapon Kiatkittipong, Songphon Phimsen, Kunlanan Kiatkittipong, Suwimol Wongsakulphasatch, Navadol Laosiripojana, Suttichai Assabumrungrat, Diesel-like hydrocarbon production from hydroprocessing of relevant refining palm oil, Fuel Processing Technology, Volume 116, 2013, Pages 16-26
 149. W. Wittanadecha, N. Laosiripojana, A. Ketcong, N. Ningnuek, P. Prasertthdam, J.R. Monnier, S. Assabumrungrat, Development of Au/C catalysts by the microwave-assisted method for the selective hydrochlorination of acetylene, Reaction Kinetics, Mechanisms and Catalysis, In Press
 150. Saksit Imman, Jantima Arnthong, Vorakan Burapatana, Navadol Laosiripojana, Verawat Champreda, Autohydrolysis of Tropical Agricultural Residues by Compressed Liquid Hot Water Pretreatment. Applied Biochemistry and Biotechnology, Volume 170, 2013, Pages 1982-1995
 151. Thepparat Klamrassamee, Verawat Champreda, Vasimon Reunglek, Navadol Laosiripojana, Comparison of homogeneous and heterogeneous acid promoters in single-step aqueous-organosolv fractionation of eucalyptus wood chips, Bioresource Technology, Volume 147, 2013, Pages 276-284
 152. Nopparat Suriyachai, Khatiya Weerasaia, Navadol Laosiripojana, Verawat Champreda, Pornkamol Unrean, Optimized simultaneous saccharification and co-fermentation of rice straw for ethanol production by *Saccharomyces cerevisiae* and *Scheffersomyces stipitis* co-culture using design of experiments, Bioresource Technology, Volume 142, 2013, Pages 171-178
 153. Naruewan Chanburanasiri Ana M. Ribeiro, Alirio E. Rodrigues, Navadol Laosiripojana, Suttichai Assabumrungrat, Simulation of Methane Steam Reforming Enhanced by in Situ CO₂ Sorption Using K₂CO₃-Promoted Hydrotalcites for H₂ Production. Energy & Fuels, Volume 27, 2013, Pages 4457-4470.

154. P. Chanchaochai, P. Boonnoun, N. Laosiripojana, M. Goto, B. Jongsomjit, J. Panpranot, O. Mekasuwandumrong, A. Shotipruk, Transesterification of palm oil at near-critical conditions using sulfonated carbon-based acid catalyst, *Chemical Engineering Communications*, Volume 200, 2013, Pages 1542-1552
155. Pornlada Daorattanachai, Pongtanawat Khemthong, Nawin Viriya-empikul, Navadol Laosiripojana, Kajornsak Faungnawakij, Conversion of fructose, glucose, and cellulose to 5-hydroxymethylfurfural by alkaline earth phosphate catalysts in hot compressed water, *Carbohydrate Research*, Volume 363, 2012, Pages 58-61
156. Pornlada Daorattanachai, Supawadee Namuangruk, Nawin Viriya-empikul, Navadol Laosiripojana, Kajornsak Faungnawakij, 5-Hydroxymethylfurfural production from sugars and cellulose in acid- and base-catalyzed conditions under hot compressed water, *Journal of Industrial and Engineering Chemistry*, Volume 18, Issue 6, 2012, Pages 1893-1901
157. Chatchai Veranitisagul, Nattamon Koonsaeng, Navadol Laosiripojana, Apirat Laobuthee, Preparation of gadolinia doped ceria via metal complex decomposition method: Its application as catalyst for the steam reforming of ethane, *Journal of Industrial and Engineering Chemistry*, Volume 18, Issue 3, 2012, Pages 898-903
158. Somnuk Boributh, Wichitpan Rongwong, Suttichai Assabumrungrat, Navadol Laosiripojana, Ratana Jiratananon, Mathematical modeling and cascade design of hollow fiber membrane contactor for CO₂ absorption by monoethanolamine, *Journal of Membrane Science*, Volumes 401–402, 2012, Pages 175-189
159. Boonpoke, S. Chiarakorn, N. Laosiripojana, S. Towprayoon, A. Chidthaisong, Investigation of CO₂ adsorption by bagasse-based activated carbon. *Korean Journal of Chemical Engineering*, Volume 29, 2012, Pages 89 -94
160. Pongtanawat Khemthong, Pornlada Daorattanachai, Navadol Laosiripojana, Kajornsak Faungnawakij, Copper phosphate nanostructures catalyze dehydration of fructose to 5-hydroxymethylfurfural, *Catalysis Communications*, Volume 29, 2012, Pages 96-100
161. Surisa Suwannarangsee, Benjarat Bunternngsook, Jantima Arnthong, Atchara Paemane, Arinthip Thamchaipenet, Lily Eurwilaichitr, Navadol Laosiripojana, Verawat Champreda, Optimisation of synergistic biomass-degrading enzyme systems for efficient rice straw hydrolysis using an experimental mixture design, *Bioresource Technology*, Volume 119, 2012, Pages 252-261
162. S. Assabumrungrat, J. Phromprasit, S. Boonkrue, W. Kiatkittipong, W. Wiyaratn, A. Soottitantawat, A. Arpornwichanop, N. Laosiripojana, J. Powell, Energy efficiency evaluation for a green power generation with minimum effort on carbon dioxide capture and storage, *Chemical Engineering Communications*, Volume 199, 2012, Pages 1642-1651
163. Thirasak Pairojpiriyakul, Worapon Kiatkittipong, Apinan Soottitantawat, Amornchai Arpornwichanop, Navadol Laosiripojana, Wisitsree Wiyaratn, Eric Croiset, Suttichai Assabumrungrat, Thermodynamic analysis of hydrogen production from glycerol at

- energy self-sufficient conditions. *The Canadian Journal of Chemical Engineering*, Volume 90, 2012, Pages 1112-1119.
164. N. Laosiripojana, S. Assabumrungrat, Conversion of poisonous methanethiol to hydrogen-rich gas by chemisorption/reforming over nano-scale CeO₂: The use of CeO₂ as catalyst coating material, *Applied Catalysis B: Environmental*, 102, 2011, Pages 267-275.
165. Wachiraporn Daengprasert, Panatpong Boonnoun, Navadol Laosiripojana, Motonobu Goto, Artiwan Shotipruk, Application of Sulfonated Carbon-Based Catalyst for Solvothermal Conversion of Cassava Waste to Hydroxymethylfurfural and Furfural. *Industrial & Engineering Chemistry Research*, Volume 50, 2011, Pages 7903-7910.
166. W. Dedsuksophon, K. Faungnawakij, V. Champreda, N. Laosiripojana, Hydrolysis/dehydration/aldol-condensation/ hydrogenation of lignocellulosic biomass and biomass-derived carbohydrates in the presence of Pd/WO₃-ZrO₂ in a single reactor, *Bioresource Technology*, Volume 102, 2011, Pages 2040-2046.
167. N. Laosiripojana, W. Sutthisripok, S. Charojrochkul, S. Assabumrungrat, Steam reforming of LPG over Ni and Rh supported on Gd-CeO₂ and Al₂O₃: Effect of support and feed composition, *Fuel*, 90, 2011, Pages 136-141.
168. N. Laosiripojana, W. Kiatkittipong, S. Assabumrungrat, Partial oxidation of palm fatty acids over Ce-ZrO₂: Roles of catalyst surface area, lattice oxygen capacity, mobility, *AIChE Journal*, Volume 57, 2011, Pages 2861-2869
169. P. Kim-Lohsoontorn, N. Laosiripojana, Joongmyeon Bae, Performance of solid oxide electrolysis cell having bi-layered electrolyte during steam electrolysis and carbon dioxide electrolysis, *Current Applied Physics*, Volume 11, 2011, Pages S223-S228
170. S. Pavasupree, N. Laosiripojana, S. Chuangchote, T. Sagawa, Fabrication and Utilization of TiO₂ Nanofibers from Natural Leucoxene Mineral in PV Applications, *Japanese Journal of Applied Physics*, Volume 50, 2011, Article ID 01BJ16.
171. M. Raita, T. Laathanachareon, V. Champreda, N. Laosiripojana, Biocatalytic esterification of palm oil fatty acids for biodiesel production using glycine-based cross-linked protein coated microcrystalline lipase, *Journal of Molecular Catalysis B: Enzymatic*, Volume 73, Issues 1-4, 2011, Pages 74-79
172. Choedkiatsakul, S. Charojrochkul, W. Kiatkittipong, W. Wiyaratn, A. Soottitantawat, A. Arpornwichanop, N. Laosiripojana, S. Assabumrungrat, Performance improvement of bioethanol-fuelled solid oxide fuel cell system by using pervaporation, *International Journal of Hydrogen Energy*, 36, 2011, Pages 5067-5075.
173. P. Kim-Lohsoontorn, Y.M. Kim, N. Laosiripojana, Joongmyeon Bae, Gadolinium doped ceria-impregnated nickel-yttria stabilised zirconia cathode for solid oxide electrolysis cell, *International Journal of Hydrogen Energy*, Volume 36, Issue 16, 2011, Pages 9420-9427.
174. W. Kiatkittipong, S. Wongsakulphasatch, N. Tintan, N. Laosiripojana, P. Praserttham, S. Assabumrungrat, Gasoline upgrading by self-etherification with ethanol on modified beta-zeolite, *Fuel Processing Technology*, Volume 92, Issue 10, 2011, Pages 1999-2004.

175. W. Khaodee, S. Wongsakulphasatch, W. Kiatkittipong, A. Arpornwichanop, N. Laosiripojana, S. Assabumrungrat, Selection of appropriate primary fuel for H₂ production for different fuel cell types: Comparison between decomposition and steam reforming, *International Journal of Hydrogen Energy*, 36, 2011, Pages 7696-7706.
176. W. Kiatkittipong, P. Intarachoen, N. Laosiripojana, C. Chaisuk, P. Praserttham, S. Assabumrungrat, Glycerol ethers synthesis from glycerol etherification with tert-butyl alcohol in reactive distillation, *Computers & Chemical Engineering*, 35, 2011, Pages 2034-2043.
177. Boributh, S., Assabumrungrat, S., Laosiripojana, N., Jiraratananon, R. (2011). "A modeling study on the effects of membrane characteristics and operating parameters on physical absorption of CO₂ by hollow fiber membrane contactor". *Journal of Membrane Science*, 380(1-2), pp. 21-33.
178. S. Boributh, S. Assabumrungrat, N. Laosiripojana, R. Jiraratananon, Effect of membrane module arrangement of gas-liquid membrane contacting process on CO₂ absorption performance: A modeling study, *Journal of Membrane Science*, 372, 2011, Pages 75-86.
179. Laosiripojana, N., Charojrochkul, S., Lohsoontorn, P., Assabumrungrat, S. (2010). "Role and advantages of H₂S on the catalytic steam reforming over nano-scale CeO₂-based catalysts". *Journal of Catalysis*, 276(1), pp. 6-15.
180. P. Dokmaingam, S. Assabumrungrat, A. Soottitantawat, N. Laosiripojana, Modelling of tubular-designed solid oxide fuel cell with indirect internal reforming operation fed by different primary fuels, *Journal of Power Sources*, 195, 2010, Pages 69-78
181. Wetwatana U., Lohsoontorn P., Assabumrungrat S., N. Laosiripojana, Catalytic steam and autothermal reforming of use lubricating oil over Rh- and Ni-based catalysts. *Industrial & Engineering Chemistry Research*, 2010, 49 (21), 10981-10985
182. P. Dokmaingam, S. Assabumrungrat, A. Soottitantawat, N. Laosiripojana, Alternative concept for SOFC with direct internal reforming operation: Benefits from inserting catalyst rod, *AIChE Journal*, 56 (2010), Pages 1639-1650
183. Chareonlimkun, V. Champreda, A. Shotipruk, N. Laosiripojana, Catalytic conversion of sugarcane bagasse, rice husk and corncob in the presence of TiO₂, ZrO₂ and mixed-oxide TiO₂-ZrO₂ under hot compressed water (HCW) condition, *Bioresource Technology*, Volume 101, Issue 11, 2010, Pages 4179-4186.
184. Chareonlimkun, V. Champreda, A. Shotipruk, N. Laosiripojana, Reactions of C₅ and C₆-sugars, cellulose, and lignocellulose under hot compressed water in the presence of heterogeneous acid catalysts, *Fuel*, Volume 89, 2010, Pages 2873-2880.
185. N. Laosiripojana, W. Kiatkittipong, S. Assabumrungrat, Effects of support and co-fed elements on steam reforming of palm fatty acid distillate (PFAD) over Rh-based catalysts, *Applied Catalysis A: General*, Volume 383, 2010, Pages 50-57.
186. M. Sansernnivet, N. Laosiripojana, S. Assabumrungrat, S. Charojrochkul, Fabrication of La_{0.8}Sr_{0.2}CrO₃ Film via Flame Assisted Vapour Deposition Technique, *Chemical Vapor Deposition*, Volume 10-12, 2010, Pages 311-321

187. N. Laosiripojana, W. Sutthisripok, P. Kim-Lohsoontorn, S. Assabumrungrat, Hydrogen production from partial oxidation of liquefied petroleum gas over Ce-ZrO₂ doped with La-, Gd-, Nb-, and Sm-: The application as primary oxidative catalyst, *International Journal of Hydrogen Energy*, Volume 35, Issue 13, 2010, Pages 6747-6756.
188. Chettapongsaphan, S. Charojrochkul, S. Assabumrungrat, N. Laosiripojana, Synthesis and testing of highly active La_{0.8}Sr_{0.2}Cr_{0.9}Ni_{0.1}O₃ toward H₂O and CO₂ reforming of CH₄: Effect of co-reactant/CH₄ on its reforming characteristic, *Applied Catalysis A: General*, Volume 386, 2010, Pages 194-200.
189. P. Mongkolbovornkij, V. Champreda, A. Shotipruk, N. Laosiripojana, Reactivity of modified ZrO₂ with WO₃-, SO₄- and TiO₂- toward esterification of palm fatty acid distillate: Effects of catalyst preparation, co-solvent adding and water formation, *Fuel Processing Technology*, Volume 91, 2010, Pages 1510-1516.
190. N. Laosiripojana, W. Kiatkittipong, W. Sutthisripok, S. Assabumrungrat, Synthesis of methyl esters from relevant palm products in near-critical methanol with modified-zirconia catalysts: Effects of catalyst, co-solvent and water formation, *Bioresource Technology*, Volume 101, Issue 21, 2010, Pages 8416-8423.
191. Laobuthee, C. Veranitisagul, N. Koonsaeng, V. Bhavakul, N. Laosiripojana, Catalytic activity of ultrafine CexGdySmzO₂ synthesized by metal organic complex method toward steam reforming of methane, *Catalysis Communications*, Volume 12, Issue 1, 2010, Pages 25-29
192. P. Dokmaingam, J.T.S. Irvine, S. Assabumrungrat, S. Charojrochkul, N. Laosiripojana, Modeling of IT-SOFC with indirect internal reforming operation fueled by methane: Effect of oxygen adding as autothermal reforming, *International Journal of Hydrogen Energy*, 35, Issue 24, 2010, Pages 13271-13279.
193. Kiatkittipong, W., Suwanmanee, S., Laosiripojana, N., Prasertthdam, P., Assabumrungrat, S., Cleaner gasoline production by using glycerol as fuel extender, *Fuel Processing Technology*, 91, 2010, Pages 456-460
194. N. Tangchupong, W. Khaodee, B. Jongsomjit, N. Laosiripojana, P. Prasertthdam, S. Assabumrungrat, Effect of calcination temperature on characteristics of sulfated zirconia and its application as catalyst for isosynthesis, *Fuel Processing Technology*, 91, 2010, Pages 121-126
195. P. Kim-Lohsoontorn, D.J.L. Brett, N. Laosiripojana, Y-M. Kim, J-M. Bae, Performance of solid oxide electrolysis cells based on composite La_{0.8}Sr_{0.2}MnO₃ yttria stabilized zirconia and Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O₃ oxygen electrodes, *International Journal of Hydrogen Energy*, Volume 35, 2010, Pages 3958-3966.
196. W. Khaodee, N. Tangchupong, B. Jongsomjit, N. Laosiripojana, P. Prasertthdam, S. Assabumrungrat, Isosynthesis via CO hydrogenation over SO₄-ZrO₂ catalysts, *Journal of Industrial and Engineering Chemistry*, Volume 16, Issue 3, 2010, Pages 411-418.
197. Petchmala, N. Laosiripojana, B. Jongsomjit, M. Goto, J. Panpranot, O. Mekasuwandumrong, A. Shotipruk, Transesterification of palm oil and esterification of palm fatty acid in near- and super-critical methanol with SO₄-ZrO₂ catalysts, *Fuel*, 89, 2010, Pages 2387-2392.

198. M. Raita, V. Champreda, N. Laosiripojana, Biocatalytic ethanolysis of palm oil for biodiesel production using microcrystalline lipase in tert-butanol system, *Process Biochemistry*, Volume 45, Issue 6, 2010, Pages 829-834.
199. S. Assabumrungrat, P. Sonthisanga, W. Kiatkittipong, N. Laosiripojana, A. Arpornwichanop, A. Soottitantawat, W. Wiyaratn, P. Praserttham, Thermodynamic analysis of calcium oxide assisted hydrogen production from biogas, *Journal of Industrial and Engineering Chemistry*, Volume 16, Issue 5, 2010, Pages 785-789
200. P. Boonoun, N. Laosiripojana, C. Muangnapoh, B. Jongsomjit, J. Panpranot, O. Mekasuwandurong, A. Shotipruk, Application of sulfonated carbon-based catalyst for reactive extraction of 1,3-propanediol from model fermentation mixture, *Industrial and Engineering Chemistry Research*, 49 (24), Page 12352-12357.
201. T. Pairojpiriyakul, W. Kiatkittipong, W. Wiyaratn, A. Soottitantawat, A. Arpornwichanop, N. Laosiripojana, E. Croiset, S. Assabumrungrat, Effect of mode of operation on hydrogen production from glycerol at thermal neutral conditions: Thermodynamic analysis, *International Journal of Hydrogen Energy*, 35, 2010, Pages 10257-10270.
202. P. Piroonlerkgul, W. Kiatkittipong, A. Arpornwichanop, A. Soottitantawat, W. Wiyaratn, N. Laosiripojana, A.A. Adesina, S. Assabumrungrat, Technical and economic study of integrated system of solid oxide fuel cell, palladium membrane reactor, and CO₂ sorption enhancement unit, *Chemical Engineering and Processing: Process Intensification*, Volume 49, Issue 10, 2010, Pages 1006-1016.
203. P. Dokamaingam, S. Assabumrungrat, A. Soottitantawat, N. Laosiripojana, Effect of operating conditions and gas flow patterns on the system performances of IIR-SOFC fueled by methanol, *International Journal of Hydrogen Energy*, Volume 34, Issue 15, 2009, Pages 6415-6424
204. P. Dokamaingam, S. Assabumrungrat, A. Soottitantawat, I. Sramala, N. Laosiripojana, Modeling of SOFC with indirect internal reforming operation: Comparison of conventional packed-bed and catalytic coated-wall internal reformer, *International Journal of Hydrogen Energy*, Volume 34, 2009, Pages 410-421
205. R. Kempegowda, S. Assabumrungrat, N. Laosiripojana, Thermodynamic Analysis for Gasification of Thailand Rice Husk with Air, Steam, and Mixed Air/Steam for Hydrogen-Rich Gas Production, *International Journal of Chemical Reactor Engineering*, In Press
206. Shotipruk, S. Assabumrungrat, P. Pavasant, N. Laosiripojana, Reactivity of CeO₂ and Ce-ZrO₂ toward steam reforming of palm fatty acid distilled (PFAD) with co-fed oxygen and hydrogen, *Chemical Engineering Science*, 64, 2009, Pages 459-466
207. P. Piroonlerkgul, W. Wiyaratn, A. Soottitantawat, W. Kiatkittipong, A. Arpornwichanop, N. Laosiripojana, S. Assabumrungrat, Operation viability and performance of solid oxide fuel cell fuelled by different feeds, *Chemical Engineering Journal*, 155, 2009, Pages 411-418
208. W. Jamsak, P.L. Douglas, E. Croiset, R. Suwanwarangkul, N. Laosiripojana, S. Charojrochkul, S. Assabumrungrat, Design of a thermally integrated bioethanol-fueled

- solid oxide fuel cell system integrated with a distillation column, *Journal of Power Sources*, Volume 187, Issue 1, 2009, Pages 190-203
209. P. Piroonlerkgul, N. Laosiripojana, A.A. Adesina, S. Assabumrungrat, Performance of biogas-fed solid oxide fuel cell systems integrated with membrane module for CO₂ removal, *Chemical Engineering and Processing: Process Intensification*, 48, 2009, Pages 672-682
 210. P. Piroonlerkgul, W. Kiatkittipong, A. Arpornwichanop, A. Soottitantawat, W. Wiyaratn, N. Laosiripojana, A.A. Adesina, S. Assabumrungrat, Integration of solid oxide fuel cell and palladium membrane reactor: Technical & economic analysis, *International Journal of Hydrogen Energy*, 34, 2009, Pages 3894-3907
 211. S. Assabumrungrat, N. Ruangrassamee, S. Vivanpatarakij, N. Laosiripojana, A. Arpornwichanop, Influence of stack arrangement on performance of multiple-stack solid oxide fuel cells with non-uniform potential operation, *Journal of Power Sources*, Volume 187, Issue 1, 2009, Pages 1-7
 212. S. Vivanpatarakij, N. Laosiripojana, A. Arpornwichanop, S. Assabumrungrat, Performance improvement of SOFC system using Pd membrane reactor with different operation modes, *Chemical Engineering Journal*, 146, 2009, Pages 112-119
 213. S. Assabumrungrat, S. Charoenseri, N. Laosiripojana, W. Kiatkittipong, P. Prasertthdam, Effect of oxygen addition on catalytic performance of Ni/SiO₂•MgO toward carbon dioxide reforming of methane under periodic operation, *International Journal of Hydrogen Energy*, 34, 2009, Pages 6211-6220
 214. Pholjaroen, N. Laosiripojana, P. Prasertthdam, S. Assabumrungrat, Reactivity of Ni/SiO₂•MgO toward carbon dioxide reforming of methane under steady state and periodic operations, *Journal of Industrial and Engineering Chemistry*, 15, 2009, Pages 488-497
 215. S. Vivanpatarakij, N. Laosiripojana, W. Kiatkittipong, A. Arpornwichanop, A. Soottitantawat, S. Assabumrungrat, Simulation of solid oxide fuel cell systems integrated with sequential CaO–CO₂ capture unit, *Chemical Engineering Journal*, Volume 147, Issues 2-3, 2009, Pages 336-341
 216. N. Laosiripojana, S. Assabumrungrat, Kinetic dependencies and reaction pathways in hydrocarbon and oxyhydrocarbon conversions catalyzed by ceria-based materials, *Applied Catalysis B: Environmental*, Volume 82, 2008, Pages 103-113
 217. N. Laosiripojana, D. Chadwick, S. Assabumrungrat, Effect of high surface area CeO₂ and Ce-ZrO₂ supports over Ni catalyst on CH₄ reforming with H₂O, *Chemical Engineering Journal*, Volume 138, 2008, Pages 264-273
 218. Kempegowda, R.S., N. Laosiripojana, Assabumrungrat, S., High temperature desulfurization over nano-scale high surface area ceria for application in SOFC, *Korean Journal of Chemical Engineering* 25 (2), pp. 223-230
 219. Promaros, E., Assabumrungrat, S., Laosiripojana, N., Prasertthdam, P., Tagawa, T., Goto, S., Carbon dioxide reforming of methane under periodic operation, *Korean Journal of Chemical Engineering* 24 (1), Pages 44-50

220. W. Sangtongkitcharoen, S. Vivanpatarakij, N. Laosiripojana, A. Arpornwichanop, S. Assabumrungrat, Performance analysis of methanol-fueled SOFC system incorporated with palladium membrane reactor, *Chemical Engineering Journal*, 138, 2008, 436-441
221. P. Piroonlerkgul, S. Assabumrungrat, N. Laosiripojana, A.A. Adesina, Selection of appropriate fuel processor for biogas-fuelled SOFC system, *Chemical Engineering Journal*, Volume 140, Issues 1-3, 2008, Pages 341-351
222. N. Laosiripojana, S. Assabumrungrat, Catalytic steam reforming of methane, methanol, and ethanol over Ni/YSZ: The possible use of these fuels in internal reforming SOFC, *Journal of Power Sources*, Volume 163, Issue 2, 2007, Pages 943-951
223. N. Laosiripojana, S. Assabumrungrat, S. Charojrochkul, Steam reforming of ethanol with co-fed oxygen and hydrogen over Ni on high surface area ceria support, *Applied Catalysis A: General*, 327, 2007, Pages 180-188
224. N. Laosiripojana, W. Sutthisripok, S. Assabumrungrat, Reactivity of high surface area CeO₂ synthesized by surfactant-assisted method to ethanol decomposition with and without steam, *Chemical Engineering Journal*, 127, 2007, Pages 31-38
225. N. Laosiripojana, S. Assabumrungrat, Catalytic steam reforming of dimethyl ether (DME) over high surface area Ce-ZrO₂ at SOFC temperature: The possible use of DME in indirect internal reforming operation (IIR-SOFC), *Applied Catalysis A: General*, 320, 2007, Pages 105-113
226. S. Vivanpatarakij, S. Assabumrungrat, N. Laosiripojana, Improvement of solid oxide fuel cell performance by using non-uniform potential operation, *Journal of Power Sources*, Volume 167, Issue 1, 2007, Pages 139-144
227. W. Jamsak, S. Assabumrungrat, P.L. Douglas, E. Croiset, N. Laosiripojana, R. Suwanwarangkul, S. Charojrochkul, Thermodynamic assessment of solid oxide fuel cell system integrated with bioethanol purification unit, *Journal of Power Sources*, 174, 2007, Pages 191-198
228. Jamsak, W., Assabumrungrat, S., Douglas, P.L., Laosiripojana, N., Suwanwarangkul, R., Charojrochkul, S. (2007). "Croiset, Performance of ethanol-fuelled solid oxide fuel cells: Proton and oxygen ion conductors". *Chemical Engineering Journal*, 133, pp. 187-194.
229. N. Laosiripojana, S. Assabumrungrat, Catalytic steam reforming of ethanol over high surface area CeO₂: The role of CeO₂ as an internal pre-reforming catalyst, *Applied Catalysis B: Environmental*, 66, 2006, 29-39
230. N. Laosiripojana, S. Assabumrungrat, The effect of specific surface area on the activity of nano-scale ceria catalysts for methanol decomposition with and without steam at SOFC operating temperatures, *Chemical Engineering Science*, 61, 2006, Pages 2540-2549
231. N. Laosiripojana, S. Assabumrungrat, Hydrogen production from steam and autothermal reforming of LPG over high surface area ceria, *Journal of Power Sources*, Volume 158, Issue 2, 2006, Pages 1348-1357
232. N. Laosiripojana, W. Sangtongkitcharoen, S. Assabumrungrat, Catalytic steam reforming of ethane and propane over CeO₂-doped Ni/Al₂O₃ at SOFC temperature:

- Improvement of resistance toward carbon formation by the redox property of doping CeO₂, *Fuel*, Volume 85, Issue 3, 2006, Pages 323-332
233. S. Assabumrungrat, N. Laosiripojana, P. Piroonlerkgul, Determination of the boundary of carbon formation for dry reforming of methane in a solid oxide fuel cell, *Journal of Power Sources*, 159, 2006, Pages 1274-1282
 234. W. Jamsak, S. Assabumrungrat, P.L. Douglas, N. Laosiripojana, S. Charojrochkul, Theoretical performance analysis of ethanol-fueled SOFC with different electrolyte, *Chemical Engineering Journal*, 119, 2006, Pages 11-18
 235. N. Laosiripojana, and S. Assabumrungrat, Catalytic dry reforming of methane over high surface area ceria-based catalyst, *Applied Catalysis B: Environmental*, 60, 2005, Pages 107-116
 236. N. Laosiripojana, W. Sutthisripok, S. Assabumrungrat, Synthesis gas production from dry reforming of methane over CeO₂ doped Ni/Al₂O₃: Influence of the doping ceria on the resistance toward carbon formation, *Chemical Engineering Journal*, 112, 2005, Pages 13-22
 237. N. Laosiripojana, S. Assabumrungrat, Methane steam reforming over Ni/Ce–ZrO₂ catalyst: Influences of Ce–ZrO₂ support on reactivity, resistance toward carbon formation, and intrinsic reaction kinetics, *Applied Catalysis A: General*, 290, 2005, Pages 200-211
 238. S. Assabumrungrat, N. Laosiripojana, V. Pavarajarn, W. Sangtongkitcharoen, A. Tangjitmatee, P. Prasertthdam, Thermodynamic analysis of carbon formation in a solid oxide fuel cell (SOFC) with a direct internal reformer fuelled by methanol, *Journal of Power Sources*, Volume 139, 2005, Pages 55-60
 239. S. Assabumrungrat, W. Sangtongkitcharoen, N. Laosiripojana, A. Arpornwichanop, S. Charojrochkul, P. Prasertthdam, Effects of electrolyte type and flow pattern on performance of methanol-fuelled solid oxide fuel cells, *Journal of Power Sources*, 148, 2005, Pages 18-23
 240. W. Sangtongkitcharoen, S. Assabumrungrat, V. Pavarajarn, N. Laosiripojana, P. Prasertthdam, Comparison of carbon formation boundary in different modes of solid oxide fuel cells fueled by methane, *Journal of Power Sources*, 142, 2005, Pages 75-80
 241. Assabumrungrat, S., Pavarajarn, V., Charojrochkul, S., Laosiripojana, N. (2004). "Thermodynamic analysis for a solid oxide fuel cell with direct internal reforming fueled by ethanol". *Chemical Engineering Science*, 59, pp. 6015-6020.
 242. Ramírez-Cabrera, E., Laosiripojana, N., Atkinson, A., Chadwick, D. (2003). "Methane conversion over Nb-doped ceria". *Catalysis Today*, 78(1-4), pp. 433-438.

International Patents

1. Patent "Catalyst for 1,3-butadiene production from ethanol" Applicant: Siam Cement Public Company Limited (WO 2016182516 A1)
2. Patent "Method for lignocellulose pretreatment" Applicant: PTT Global Chemicals PCL (US20170241076)

3. Patent “A process for fractionation of lignocellulosic biomass” Applicant: PTT Global Chemicals (WO2017086887)

National Patents

1. สิทธิบัตร กระบวนการปรับสภาพลิกโนเซลลูโลส (ยื่นจดร่วมกับบริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน)) (no. 1401005962)
2. สิทธิบัตร กระบวนการแยกองค์ประกอบของชีวมวลลิกโนเซลลูโลส (ยื่นจดร่วมกับบริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน)) (no. 1501006873)
3. อนุสิทธิบัตร กระบวนการปรับสภาพชีวมวลลิกโนเซลลูโลสโดยการใช้ของเหลวปรับสภาพที่ประกอบด้วยสารประกอบอัลคอกไซด์ของโลหะอัลคาไลน์ (alkali metal alkoxide) (ยื่นจดร่วมกับบริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน)) (no. 1603001146)
4. สิทธิบัตร การพัฒนาตัวเร่งปฏิกิริยาสำหรับกระบวนการผลิต 1,3 Butadiene แบบ One-step process (ยื่นจดร่วมกับบริษัทปูนซิเมนต์ไทย จำกัด (มหาชน)) (no. 1701006588)
5. อนุสิทธิบัตร กระบวนการผลิตแอลดีไฮด์โดยใช้เอนไซม์แอลกอฮอล์ออกซิเดสจากยีสต์ที่ทนร้อน (no. 1803001066)
6. อนุสิทธิบัตร เอนไซม์ตรึงรูปสำหรับผลิตแอลดีไฮด์จากแอลกอฮอล์และกรรมวิธีการผลิตแอลดีไฮด์โดยใช้เอนไซม์ตรึงรูปดังกล่าวเป็นตัวเร่งปฏิกิริยา (no. 1803001718)
7. สิทธิบัตร กระบวนการผลิตไซลิทอลจากน้ำตาลโมเลกุลเดี่ยวด้วยการเร่งปฏิกิริยาเชิงแสง วันที่ยื่นจด 31 มี.ค. 2560 (เลขที่ยื่นจด 1401007893)
8. การบำบัดชีวมวลด้วยกระบวนการนำร้อนความดันสูงที่มีการเติมตัวเร่งปฏิกิริยาต่าง (โจทยวิจัยจากบริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน)) (no. 1403000889)
9. กรรมวิธีการสกัดลิกนินจากน้ำยางดำจากกระบวนการผลิตเยื่อกระดาษ (โจทยวิจัยจากบริษัท SCG Paper) (no. 1301005102)
10. ตัวเร่งปฏิกิริยากลุ่มโลหะฟอสเฟตในการผลิตอนุพันธ์ฟิวแรนจากชีวมวลและอนุพันธ์ของชีวมวลและกรรมวิธีการเตรียมตัวเร่งดังกล่าว (โจทยวิจัยจากบริษัท ปตท. จำกัด) (no. 1101003175)
11. ตัวเร่งปฏิกิริยาชีวภาพสำหรับกระบวนการผลิตไบโอดีเซล และการใช้ (โจทยวิจัยจากโรงงานน้ำมันพืช ปทุม) (no. 1101001495)

12. กระบวนการผลิตตัวดูดซับจำพวกโมเลกูลาร์ซีฟจากถ้ำลอยโรงไฟฟ้าถ่านหิน (โจทยวิจัยจากบริษัท อินเตอร์แปซิฟิกเปเปอร์) (no. 1201003154)
13. เทคนิคการชะล้างสิ่งเจือปนด้วยกรดสำหรับการปรับปรุงคุณภาพถ้ำลอยจากถ่านหิน (โจทยวิจัยจาก บริษัทอินเตอร์แปซิฟิกเปเปอร์) (no. 1001001732)
14. การแยกอลูมิเนียมและกระดาษออกจากกล่องบรรจุเครื่องดื่มยูเอชทีโดยใช้วิธีการสกัดโดยตัวทำละลาย (โจทยวิจัยจากบริษัทด้าแพค จำกัด) (no. 1203001259)