

Faculty Vitae

PHAVANEE NARATARUKSA

1. PHAVANEE NARATARUKSA Associate Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering
University of Manchester Institute of Science and Technology (UMIST) - 2000
- M.Sc. Process Integration
University of Manchester Institute of Science and Technology (UMIST) – 1996
- B.Eng. Chemical Engineering
King Mongkut's University of Technology Thonburi –1993

3. Academic Experience King Mongkut's University of Technology North Bangkok

- 2000-Present: Lecture, Department of Chemical Engineering, Faculty of Engineering, King Mongkut's University of Technology North Bangkok

4. Non-academic (Research)

- Project Leader of Laboratory Scale Demonstration Units for Biomass-to-Liquid (BTL) Phase 1 and 2, Sponsored by National Research Council of Thailand
- Project Leader of Technology Development for Deoxygenation of Bio-Oil Using Reactive Distillation, Sponsored by National Science and Technology Development Agency (NSTDA)
- Researcher of the Production of Synthesis Gas from Natural Gas via Catalytic Reforming in Modified Packed Bed Reactor, Sponsored by Research and Development of Petroleum and Petrochemical Process Technology PTT, Research and Technology Institute, PTT Public Company Limited
- Project Leader of Prototype Reactor for Production of Liquid Fuels from Biomass Derived Syngas by Fischer-Tropsch Synthesis, Sponsored by National Science and Technology Development Agency (NSTDA)

Non-academic (Consulting) -None-

5. Certification or professional organization -None-

6. Current membership in professional organizations

- 2016 – present Project Coordinator of Entrepreneurial University/Innovative Startup, KMUTNB
- 2015 – 2016 Dean of Faculty of Engineering and Technology, KMUTNB Rayong Campus
- 2016 – Present Sub-director of Certificate Program and Educational Institute in Chemical Engineering, Council of Engineer
- 2017 – Present Sub-director of Thailand Accreditation Board of Engineering Education (TABEE) in Chemical Engineering, Council of Engineer

7. Honors and awards

- Research Award 2010 (Award for good level research) from National Research Council of Thailand on Title of production of liquid fuels from biomass derived syngas by fischer–tropsch synthesis in Engineering and Industrial Research, Work Done by Dr. Sabaithip Tungkamani, Assoc. Prof. Dr. Phavanee Narataruksa, Asst. Prof. Dr. Karn Pana-Suppamassadu, and Asst. Prof. Dr. Phongsak Keeratiwintakorn.
- Second Best Award 2010 of Research and Academic Contest in Engineering Works (Renewable Energy) on Title of production of liquid fuels from biomass derived syngas by fischer–tropsch synthesis, Work Done by Dr. Sabaithip Tungkamani, Assoc. Prof. Dr. Phavanee Narataruksa, Asst. Prof. Dr. Karn Pana-Suppamassadu, and Asst. Prof. Dr. Phongsak Keeratiwintakorn.

8. Service activities

-None-

9. Principal publications of last five years (selected)

- Piyapong Hunpinnyo, Phavanee Narataruksa, Sabaithip Tungkamani, Nuwong Chollacoop, Peam Cheali. Techno-economic Assessment of FT Unit for Synthetic Diesel Production in Existing Stand-alone Biomass Gasification Plant Using Process Simulation Tool, Chemical Engineering Transaction, Vol. 39 (2014) pp. 1135-1140.
- Angsana Kantama, Chaiwat Prapainainar, Phavanee Narataruksa, Piyapong Hupinnyo, Feasibility Study of Bio-Hydrogenated Diesel (BHD) Production: A Case Study in Thailand, Advanced Materials Research, Vols. 931-932 (2014) pp. 162-167.
- Piyapong Hunpinnyo, Peam Cheali, Phavanee Narataruksa, Sabaithip Tungkamani, Nuwong Chollacoop. Alternative route of process modification for biofuel production by embedding the Fischer–Tropsch plant in existing stand-alone power plant (10 MW) based on biomass gasification – Part I: A conceptual modeling and simulation approach (a case study in Thailand), Energy Conversion and Management 88 (2014) pp. 1179–1192.

10. Most recent professional development activities

- Workshop on “Corporate Entrepreneurship”, under Project of “Supporting University for the Development of Appropriate Ecosystems towards Entrepreneurial University”, Ministry of Science and Technology, Ambassador Hotel, Bangkok, 2017.
- Workshop on “Temasek Foundation International @ 10 Conceive – Design – Implement – Operate (CDIO) Forum 2017”, Singapore Polytechnic International, Singapore, 2017.
- Workshop on “New Product Development Bootcamp”, under Project of “Supporting University for the Development of Appropriate Ecosystems towards Entrepreneurial University”, Ministry of Science and Technology, KX KMUTT, Bangkok, 2017.
- Workshop on “Service Design for Business”, under Project of “Supporting University for the Development of Appropriate Ecosystems towards Entrepreneurial University”, Ministry of Science and Technology, The Sukosol, Bangkok, 2017.

CHAIWAT PRAPAINAINAR

1. CHAIWAT PRAPAINAINAR Assistant Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering and Analytical Science
The University of Manchester, 2010
- M.Eng. Chemical Engineering
King Mongkut's Institute of Technology North Bangkok, 2003
- B.Eng. Chemical Engineering
King Mongkut's Institute of Technology North Bangkok, 2001

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok, 17 Years of Service: 2003 to present
- 2015 – 2017 Program Director of Bachelor Program in Chemical Engineering (International Program)
- 2014 – Present Assistant Professor
- 2013 – 2017 Deputy Head for Academic Affairs
- 2014 – 2016 Acting Chair of School of Chemical and Process Technology Engineering, KMUTNB Rayong Campus
- 2010 – 2012 Deputy Head for Graduate Study

4. Non-academic (Research)

- 2015 – 2017 Technology Development for Gas-to-Liquid Process: Pilot Plant, co-researcher, PTT
- 2015 – 2016 Synthesis of Nafion/Mordenite Composite Membrane for Direct Methanol Fuel Cell by Spraying Method, MUA

Non-academic (Consulting)

-None-

5. Certification or professional organization

- Council of Engineers, Chemical Engineering, Associate Engineer 2754

6. Current membership in professional organizations

- Thai Institute of Chemical Engineering and Applied Chemistry, 580061
- Council of Engineers, 209035

7. Honors and awards

-None-

Patents awarded:

-None-

8. Service activities

- 2016 – Present Programme assessor for Thailand Accreditation Board of Engineering Education: TABEE, Thailand
- 2016 – Present Programme assessor (Novice) for Internal Quality Assurance Assessment (CUPT QA), Thailand

- Peer Review Service: reviewer for the following journals:
Bioresource Technology, Energy, International Journal of Hydrogen Energy, Journal of Electroanalytical Chemistry

9. Principal publications of last five years (selected)

- P. Prapainainar, N. Pattanapisutkun, C. Prapainainar, and P. Kongkachuichay. (2018). “Incorporating graphene oxide to improve the performance of Nafion-mordenite composite membranes for a direct methanol fuel cell.” International Journal of Hydrogen Energy, Accepted manuscript. IF 4.229, DOI doi.org/10.1016/j.ijhydene.2018.08.008
- P. Prapainainar, S. Maliwan, K. Sarakham, Z. Du, C. Prapainainar, S. M. Holmes, and P. Kongkachuichay. (2018). “Homogeneous polymer/filler composite membrane by spraying method for enhanced direct methanol fuel cell performance.” International Journal of Hydrogen Energy, vol. 43, pp. 14675 – 14690. IF 4.229, DOI doi.org/10.1016/j.ijhydene.2018.05.173
- P. Inbamrung, T. Sornchamni, C. Prapainainar, S. Tungkamani, P. Narataruksa, and G. N. Jovanovic. (2018). “Modeling of a square channel monolith reactor for methane steam reforming.” Energy, vol. 152, pp. 383–400. IF 4.968, DOI doi.org/10.1016/j.energy.2018.03.139

10. Most recent professional development activities

- 2018 Leading and Teaching in Higher Education, UK Professional Standard Framework, Professional and Organizational Development Network of Thailand Higher Education
- 2018 Outcome-Based Education (OBE), The Council of University President of Thailand (CUPT)
- 2017 Problem Based Learning and Online Learning with Open Networked Learning (ONL 172)
- 2017 Workshop on “The Third Scholarship of Teaching and Learning (SoTL): Transformation towards University 4.0, Khon Kaen THAILAND
- 2016 – 2017 Workshop on “Training and development of assessors for Thailand Accreditation Board of Engineering Education (TABEE), Council of Engineers, Bangkok THAILAND
- 2016 – 2017 Workshop on “Training and development of assessors for the internal quality assurance in CUPT QA”, Bangkok THAILAND

KRAIPAT CHEENKACHORN

1. KRAIPAT CHEENKACHORN Associate Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering
The Pennsylvania State University, University Park- 2003
- M.Sc. Chemical Engineering
The Pennsylvania State University, University Park – 1999
- B.Eng. Chemical Engineering
King Mongkut's Institute of Technology North Bangkok –1995

3. Academic Experience

- 2003-Present: Lecture, Department of Chemical Engineering, Faculty of Engineering, King Mongkut's University of Technology North Bangkok

4. Non-academic (Research) -None-
Non-academic (Consulting) -None-

5. Certification or professional organization -None-

6. Current membership in professional organizations -None-

7. Honors and awards -None-

8. Service activities

- Leader/Coacher for Design Thinking Student Projects
- Advisor of Makerspace in the Faculty of Engineering KMUTNB
- Team member of ASEAN Students Design Thinking Summer Project
- Advisory board for the Center of International Engineering Program
- Vice Chairman of KMUTNB Engineering Alumni Association for fund raising
- Industrial outreach for the Faculty of Engineering KMUTNB

9. Principal publications of last five years (selected)

- Malinee Sririyanun, Parita Mutrakulcharoen, Surapun Tepasamorndech, Kraipat Cheenkachorn and Kittipong Rattanaporn (2019), A rapid spectrophotometric method for quantitative determination of ethanol in fermentation products, *Oriental Journal of Chemistry*, 35, 2, 744-750
- Tantayotai P, Rattanaporn K, Tepasamorndech S, Cheenkachorn K, Sririyanun M. (2018), Analysis of an ionic liquid and salt tolerant microbial consortium which is useful for enhancement of enzymatic hydrolysis and biogas production. *Waste and Biomass Valorization*. Online published.
- Rattanaporn K, Roddecha S, Sririyanun, Cheenkachorn K. (2017). Improving saccharification of oil palm shell by acetic acid pretreatment for biofuel production. *Energy Procedia*, 141, 146-149.

- Amnuaycheewa P, Rodiahwati W, Sanvarinda P, Cheenkachorn K, Tawai A, Sriariyanun M. (2017) Effect of organic acid pretreatment on Napier grass (*Pennisetum purpureum*) straw biomass conversion. *KMUTNB Int J Appl Sci Technol.* 10, 107-117
- Cheenkachorn K, Douzou T, Roddecha S, Tantayotai P, Sriariyanun M. (2016) Enzymatic saccharification of rice straw under influence of recycled ionic liquid pretreatments. *Energy Procedia.* 100, 160-165
- Amnuaycheewa P, Hengaroonprasan R, Rattanaporn K, Kirdponpattara S, Cheenkachorn K, Sriariyanun M. (2016). Enhancing enzymatic hydrolysis and biogas production from rice straw by pretreatment with organic acids. *Industrial Crops and Products*, 84, 247-254.
- Sriariyanun M, Tantayotai P, Yasurin P, Pornwongthong P, Cheenkachorn K. (2016), Production, purification and characterization of an ionic liquid tolerant cellulase from *Bacillus* sp. isolated from rice paddy field soil, *Electron J Biotechnol*, 19, 23-28.
- Anh DHQ, Tantayotai P, Cheenkachorn K, Sriariyanun M. (2015), Anammox process: the principle, the technological development and recent industrial applications. *KMUTNB Int J Appl Sci Technol.*, 8, 237-244.
- Hengaroonprasan R, Sriariyanun M, Tantayotai P, Roddecha S, Cheenkachorn K. (2015), Optimization of diluted organic acid pretreatment on rice straw using response surface methodology. *International Journal of Biological, Food, Veterinary and Agricultural Engineering*, 9, 455-459.
- Kangrang S, Cheenkachorn K, Rattanaporn K, Sriariyanun M. (2015), Analysis of a lignocellulose degrading microbial consortium to enhance the anaerobic digestion of rice straws. *International Journal of Biological, Food, Veterinary and Agricultural Engineering*. 9, 441-445.
- Sriariyanun M, Yan Q, Nowik I, Cheenkachorn K, Phusantisampan T, Modigell M. (2015), Efficient pretreatment of rice straw by combination of screw press and ionic liquid to enhance enzymatic hydrolysis. *Kasetsart Journal (Natural Science)*, 49, 146-154.
- Sriariyanun M., Cheenkachorn K., Douzoub T., Roddechac S., and Tantayotai P. (2016) Enzymatic Saccharification of Rice Straw under Influence of Recycled Ionic Liquid Pretreatments, *Energy Procedia*, 100, 160-165.

10. Most recent professional development activities

- Design Thinking Train-the-trainer workshop at Singapore Polytechnic, April 2018
- Growth Mindset train-the-trainer workshop at Singapore Polytechnic, May 2019

SUWIMOL WONGSAKULPHASATCH

1. SUWIMOL WONGSAKULPHASATCH Associate Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering & Analytical Science
The University of Manchester – 2010
- B.Eng. Chemical Engineering
Khon Kaen University – 2002

3. Academic Experience

- February 2019-Present Academic Affairs and Quality Management, Department of Chemical Engineering, King Mongkut's University of Technology North Bangkok, Thailand.
- January 2016-January 2019 Postgraduate and Research Affairs, Department of Chemical Engineering, King Mongkut's University of Technology North Bangkok, Thailand.
- March 2017-Present Assistant Professor, Department of Chemical Engineering, King Mongkut's University of Technology North Bangkok, Thailand.
- January 2016-February 2017 Full-time lecturer, Department of Chemical Engineering, King Mongkut's University of Technology North Bangkok, Thailand.
- April 2013-December 2015 Assistant Professor, Department of Chemical Engineering, Silpakorn University, Thailand.
- February 2010-April 2013 Full-time lecturer, Department of Chemical Engineering, Silpakorn University, Thailand.

4. Non-academic (Research)

- May-October 2014 Post-doctoral (Dr. Christian Serre), Institut Lavoisier, Université de Versailles Saint-Quentin-en-Yvelines, France (MOF synthesis)
- March-June 2008 Visiting scholar (Prof. Alberto Striolo), University of Oklahoma, School of Chemical, Biological and Materials Engineering, Oklahoma, USA.

5. Certification or professional organization -None-

6. Current membership in professional organizations -None-

7. Honors and awards

- 2014 Thai Junior Research Fellowship Program 2014, AMBASSADE DE FRANCE EN THAÏLANDE
- 2005-2010 Ph.D.-Full scholarship from the Royal Thai Government

8. Service activities

- Peer Review Service - Review proposals and publications for the following organizations and journals:
 - International of Hydrogen Energy
 - Industrial & Engineering Chemistry Research
 - Engineering Journal
 - 23rd International Symposium on Chemical Reaction Engineering (ISCRE 23) and 7th Asia Pacific Chemical Reaction Engineering Symposium (APCRE 7)
- Reviewer for Sci & Tech Initiative and Sustainability Awards (STISA)
- The Thai Institute of Chemical Engineering and Applied Chemistry conference (TiChE)

9. Principal publications of last five years (selected)

- P. Jamrunroj, S. Wongsakulphasatch, A. Maneedaeng, C.K. Cheng, S. Assabumrungrat, “Surfactant assisted CaO-based sorbent synthesis and their application to high-temperature CO₂ capture”, Powder Technology 344 (2019) 208-21 (IF-2018 = 3.230).
- T. Nimmas, P. Jamrunroj, S. Wongsakulphasatch, W. Kiatkittipong, N. Laosiripojana, J. Gong, S. Assabumrungrat, “Influence of CaO precursor on CO₂ capture performance and sorption-enhanced steam ethanol reforming”, International Journal of Hydrogen Energy (2018, *in press*) (IF-2017 = 4.229).
- S. Wongsakulphasatch, W. Kiatkittipong, J. Saupsor, J. Chaiwisesphol, P. Piroonlerkgul, V. Parasuk, S. Assabumrungrat, “Effect of Fe open metal site in metal-organic frameworks on post- combustion CO₂ capture performance” , Greenhouse Gases Science and Technology 7 (2016) 383-94 (IF-2015 = 1.92).
- T. Udomchoke, S. Wongsakulphasatch, W. Kiatkittipong, A. Arpornwichanop, W. Khaodee, J. Powell, J. Gong, S. Assabumrungrat, “Performance evaluation of sorption enhanced chemical- looping reforming for hydrogen production from biomass with modification of catalyst and sorbent regeneration”, Chemical Engineering Journal 303 (2016) 338-47 (IF-2015 = 5.310).
- S. Wongsakulphasatch, F. Nouar, J. Rodriguez, L. Scott, C. Le Guillouzer, T. Devic, P. Horcajada, J.M. Grenèche, P.L. Llewellyn, A. Vimont, G. Clet, M. Daturi, and C. Serrea, “Direct accessibility of Mixed-Metal (III/II) Acid Sites through the Green, Scalable and Rational Synthesis of Porous Metal Carboxylates”, Chemical Communications 51 (2015) 10194-7 (IF-2013 = 6.718).

10. Most recent professional development activities -None-

RUNGROTE KOKOO

1. RUNGROTE KOKOO

Assistant Professor of Chemical Engineering

2. Education

- Ph.D. Chemical & Biological Engineering
The University of Sheffield – 2015
- MS Chemical Engineering
King Mongkut's University of Technology North Bangkok – 2008
- B.Eng. Chemical Engineering
King Mongkut's University of Technology North Bangkok – 2005

3. Academic Experience

- 2008 – present Full-time Lecturer, Department of Chemical Engineering, King Mongkut's University of Technology North Bangkok

4. Non-academic

-None-

5. Certification or professional organization

-None-

6. Current membership in professional organizations

-None-

7. Honors and awards

- 2012-2015 Ph.D., Full scholarships from the Royal Thai Government.

Patents awarded:

- “Ammonia Removal from Natural Latex using Microbubbles”, Thai Pretty Patent No. 12983
- “Natural Rubber Latex Foam Production using Microbubbles”, Thai Pretty Patent No. 14401

8. Service activities

-None-

9. Principal publications of last five years (selected)

- R. Kokoo, M. Khangkhamano and W.B. Zimmerman. (2017). “Simulation of Production Formation from Ozonolysis of Monounsaturated omega-9 Fatty Acid.” *KMUTNB Int J Appl Sci Technol*, Special Issue, pp. 151-158.
- W. B. Zimmerman and R. Kokoo. (2018). “Esterification for biodiesel production with phantom catalyst: Bubble mediated reactive distillation.” *Applied Energy*, Vol. 221, pp. 28-40.
- M. Khangkhamano, S. Singsarothai, R. Kokoo, and S. Niyomwas. (2018). “Conversion of Bagasse Ash Waste to Nanosized SiC Powder.” *International Journal of Self-Propagating High-Temperature Synthesis*, Vol. 27, No. 2 pp. 98-102.
- H. N. Soe, M. Khangkhamano, S. Sangkert, J. Meesane, and R. Kokoo. (2018). “TiC-coated carbon particles as bioactive substrates for inducing of mineralization in bone healing.” *Materials Letters*, Vol. 229, pp. 118-121.

- H. N. Soe, M. Khanghamano, S. Sangkert, J. Meesane, and R. Kokoo. (2018). “TiC-coated carbon black particles as a bioactive ceramic compound for application of bone tissue engineering.” *Solid State Phenomena*, Vol. 280, pp. 109-114.

10. Most recent professional development activities -None-

PATCHARIN WORATHANAKUL

1. PATCHARIN WORATHANAKUL Associate Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering
Kasetsart University, 2008
- M.Eng. Chemical Engineering
King Mongkut's University of Technology Thonburi, 1999
- B.Eng. Chemical Engineering
Kasetsart University, 1997

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok, 12 Years of Service, 2008 to present
- 2000 Extra Lecturer, Chemical Engineering, Srinakharinwirot University
- 1999 Lecturer, Chemical Engineering, Srinakharinwirot University

4. Non-academic (Research)

- 2017-2018 Zeolite soap from rice husk, KS Cosmetology (Thailand) Co., Ltd.
- 2014-2015 Synthesis zeolite Y from rice husk ash for catalytic degradation of recycled plastic, U-thong Biomass Co. Ltd
- 2013-2014 Carbon footprint and water footprint of natural sugar and high polarization sugar product, KBS

Non-academic (Consulting)

- Committee/Carbon Offsetting Program, VGREEN, KU

5. Certification or professional organization

- Council of Engineers, Chemical Engineering, Assistance Engineer 23

6. Current membership in professional organizations

- Member of Professional and Organizational Development Network of Thailand Higher Education

7. Honors and awards

- Outstanding Advisor Thesis 2018
- Best Paper Award. "Zeolite Soap from Rice Husk", Thailand 2018
- Best award for oral presentation, HERP Congress IV, February 8-10, 2016
- Best award for oral presentation, HERP Congress II, January 22-24, 2014

8. Service activities

- Chairman/Technical Committee/International Scientific Committee for the International Conference
- Mini committee on Product Category Rule for Textile industries
- Committee on Carbon Footprint of Product and Service, TGO and NSTDA

- External expert for Master's and Doctoral's students defense examination
- Invited speakers, Life Cycle Assessment, Cleaner Technology, Carbon footprint, Waste Utilization, Biofuel
- Co-advisor for Ph.D student of JGSEE
- Co-advisor for Ph.D student of Chiangmai University
- Review publications for the following journals:

Journal of Cleaner Production, Journal of Polymers and the Environment, Colloids and Surfaces A: Physicochemical and Engineering Aspects, International Journal of Life Cycle Assessment, KKU journal, STOU journal, Naresuan University Journal

- Review proposals for the following organizations:

KMUTNB, Mahidol University, Kasetsart University, NSTDA, ARDA, NRCT, STOU

9. Principal publications of last five years (selected)

- Peeradaphan Saisuwanisiri and Patcharin Worathanakul, A study of CO₂ Thermodynamic Adsorption and Desorption with Bi-Metal Loading on Zeolite Y, *Materials Today: Proceedings*, 17 (2019) 1458–1465.
- S. Sangsuradet and P. Worathanakul, Simulation of CO₂ Adsorption to Enhance Adsorbent Material Efficiency, *Key Engineering Materials*, Vol. 777, pp. 251-255, 2018.
- Aroon Kongnoo, Supak Tontisirin, Patcharin Worathanakul, Chantaraporn Phalakornkule, Surface characteristics and CO₂ adsorption capacities of acid-activated zeolite 13X prepared from palm oil mill fly ash, *Original Research Article, Fuel*, Volume 193, April 2017, Pages 385-394.
- Aroon Kongnoo, Punyanich Intharapat, Patcharin Worathanakul, Chantaraporn Phalakornkule, Diethanolamine impregnated palm shell activated carbon for CO₂ adsorption at elevated temperatures, *Journal of Environmental Chemical Engineering*, 4(1); 73-81, March 2016.

10. Most recent professional development activities

- 2019 Design thinking as a teaching approach, Professional and Organizational Development Network of Thailand Higher Education

CHANTARAPORN PHALAKORNKULE

1. CHANTARAPORN PHALAKORNKULE Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering
Carnegie Mellon University – 2000
- B.S. Chemical Engineering
Cornell University –1996

3. Academic Experience

- 2002 to present Assistant Professor – Associate Professor – Professor, KMUTNB
- 2017 to present Deputy Director, Science and Technology Research Institute, Science and Technology Research Institute, KMUTNB
- 2004-2009 Assistant Dean for Special Affairs, Faculty of Engineering, KMUTNB

4. Non-academic (Research)

- Reviewers of journals in ISI and Scopus (Selected): Chemical Engineering Journal, Environmental Engineering and Management Journal, Process Safety and Environmental Protection, Water Research, Journal of Environmental Engineering

Non-academic (Consulting)

- Member of consulting team for Department of Alternative Energy Development and Efficiency, Ministry of Energy, Thailand. Project Title: Roadmap for Alternative Energy Research and Development (October 2003 – May 2004)
- Member of consulting team for National Center for Genetic Engineering and Biotechnology, Thailand. Project Title: Status, Projection and Roadmap for Energy and Environment Biotechnology (April 2003 – August 2003)

5. Certification or professional organization -None-

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6. Current membership in professional organizations -None-

7. Honors and awards (Selected)

- Outstanding researcher award, KMUTNB 2010-2015
- Academic advisor for the 1st prize in MWA Innovation Awards “Solar-driven electrochemical cell for electrocoagulation” Metropolitan Waterworks Authority 2013
- Outstanding research project award “Effect of freeze-thaw process on physical properties, microbial activities and population structures of anaerobic sludge” from the Office of Higher Education Commission Thailand 2014
- Excellent poster presentation award “Simultaneous treatment of raw palm oil mill effluent and biodegradation of palm fiber in a high-rate CSTR” from the HERP Congress IV, the Office of Higher Education Commission Thailand 2015
- Research scholar, Thailand Research Fund 2016
- Academic advisor for the outstanding poster presentation award “Efficiency of production of ozone from oxygen generated on-site by pressure swing adsorption” from the RRi University Forum 2018, Thailand Research Fund

- Academic advisor for the outstanding oral presentation award “A Study of CO₂ Separation and Concentration from Flue Gas from Cement Production Process Using Pressure Swing Adsorption Process” from the RRI University Forum 2018, Thailand Research Fund

8. Service activities (Selected)

- Academic evaluator, The 5th Srinakharinwirot University Research Conference
- Academic evaluator, The Research Symposium on Petrochemical and Materials Technology and The PPC Symposium on Petroleum, Petrochemicals, and Polymers, Chulalongkorn University
- Academic consultant, Innovation Business Plan Grant Program, Thailand Research Fund
- Academic evaluator, The Thai Institute of Chemical Engineering and Applied Chemistry
- Academic evaluator for professional promotion, Sirindhorn International Institute of Technology, Thammasat University, Burapha University, King Mongkut’s University of Technology Thonburi, Nakhon Pathom Rajabhat University
- Academic evaluator for outstanding PhD thesis, Khon Kaen University
- Invited speaker – Thai Society for Biotechnology, November, 2017, Bangkok, Thailand
- Scientific committee – Energy Security and Chemical Engineering Congress, July 17-19, 2019, Kuala Lumpur, Malaysia
- Editor of KMUTNB International Journal of Applied Science and Technology 2014-present

9. Principal publications of last five years (Selected)

- Nuchdang S., Frigon J.-C., Roy C., Pilon G., Phalakornkule C., Guiot S.R. 2018. Hydrothermal post-treatment of digestate to maximize the methane yield from the anaerobic digestion of microalgae. *Waste Management*, 71, 683-688. (2017 Impact Factor 4.723)
- Kongnoo A., Tontisirin S., Worathanakul P., Phalakornkule C. 2017. Surface characteristics and CO₂ adsorption capacities of acid-activated zeolite 13X prepared from palm oil mill fly ash. *Fuel*, 193, 385-394. (2017 Impact Factor 4.908)
- Phalakornkule C., Nuchdang S., Khemkhao M., Mhuantong W., Wongwilaiwalin S., Tangphatsornruang S., Champreda V., Kitsuwat J., Vatanyoopaisarn S. 2017. Effect of freeze-thaw process on physical properties, microbial activities and population structures of anaerobic sludge. *Journal of Bioscience and Bioengineering*, 123, 4. 474-481. (2017 Impact Factor 2.015)
- Phalakornkule C., Luanwuthi T., Neragae P., Moore E.J. 2016. A continuous-flow sparged packed-bed electrocoagulator for dye decolorization. *Journal of the Taiwan Institute of Chemical Engineers*, 64, 124-133. (2017 Journal Impact Factor 3.849)
- Khemkhao M., Techkarnjanaruk S., Phalakornkule C. 2016. Effect of chitosan on reactor performance and population of specific methanogens in a modified CSTR treating raw POME. *Biomass & Bioenergy*, 86, 11-20. (2017 Journal Impact Factor 3.358)

10. Most recent professional development activities -None-

THIRAWUDH PONGPRAYOON

1. THIRAWUDH PONGPRAYOON Associate Professor of Chemical Engineering

2. Education

- Ph.D. Petrochemical Technology
Chulalongkorn University – 2001
- M.Eng. Chemical Engineering
King Mongkut's University of Technology Thonburi – 1994
- B.Sc. Chemistry
Prince of Songkla University – 1998

3. Academic Experience

- King Mongkut's University of Technology North Bangkok
1995-2005 Lecturer
2005-2012 Assistant Professor
2012-present Associate Professor

4. Non-academic (Research)

- 2004 (6 months) Certification (Cleaner Production), Kitakyushu International Techno-cooperative Association, Japan
- 2006 (6 months) Research Fellowship (Microemulsion Polymerization), Chemical Engineering Department, The University of Delaware, USA
- 2011 (1 week) Certification (Basic Radiation Processing of Polymer and Recycling of Polymeric Waste), Korea Atomic Energy Research Institute, Republic of Korea
- 2014 (1 week) Certification (Advanced Radiation Grafting of Polymeric Matrices for Environmental and Industrial Application), Viet Nam Atomic Energy Institute, Viet Nam
- 2016 (1 week) Certification (Scaling Up of Radiated-Grafting of Polymeric), Malaysia Atomic Energy Institute, Malaysia

5. Certification or professional organization -None-

6. Current membership in professional organizations -None-

7. Honors and awards -None-

Patents awarded:

- “Method for Making an article water resistant and articles made therefrom”, U.S. Patent No. 7,879,403

8. Service activities -None-

9. Principal publications of last five years (selected)

- Seneewong-Na-Ayutthaya M., Pongprayoon T.*, “Water-dispersible carbon nanotube prepared by non-destructive functionalization technique of admicellar polymerization,” *Diamond & Related Materials*, 60, 2015, 111-116.

- Hemvichian K., Suwanmala P., Kangsumrith W., Sudcha P., Inchoto K., Pongprayoon T., Guven O. “Enhancing compatibility between poly(lactic acid) and thermoplastic starch using admicellar polymerization,” *J. Appl. Polym. Sci.*, 43755, 2016, 1-11.
- Seneewong-Na-Ayutthaya M., Pongprayoon T.* O’Rear E.A., “Colloidal stability in water of modified carbon nanotube: comparison of different modification techniques,” *Macromol. Chem. Phys.*, 127, 2016, 2635-2646.
- Pongprayoon T.*, Seneewong-Na Ayutthaya M. and Poochai C., “Electrochemical capacitor improvement fabricated by carbon microfiber composite with admicellar-modified carbon nanotube,” *Applied Surface Science*, 396, 2017, 723-731.
- Yuenyongsuwan J., Nithiyakorn N., Sabkird P., O’Rear E.A., Pongprayoon T.*, “Surfactant effect on phase-controlled synthesis and photocatalyst property of TiO₂ nanoparticle,” *Materials Chemistry and Physics*, 214, 2018, 330-336.
- Yuenyongsuwan J., Sinthupinyo S., O’Rear E.A., Pongprayoon T.*, “Hydration accelerator and photocatalyst of nanotitanium dioxide synthesis via surfactant-assisted method in cement mortar,” *Cement and concrete composites*, 96, 2019, 182-193.

10. Most recent professional development activities -None-

SUPAK TONTISIRIN

1. SUPAK TONTISIRIN

Assistant Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Technology
Technical University of Kaiserslautern – 2010
- M.Sc. Chemical Engineering
University of Erlangen-Nurnberg –2003
- B.Eng. Chemical Engineering
Chulalongkorn University –1996

3. Academic Experience

- King Mongkut’s University of Technology North Bangkok, 7 Years of Service: 2013 to present
2013-2015 Lecturer and researcher
2016-present Assistant Professor

4. Non-academic (Research)

- 2003 – 2007 Researcher focusing in Zeolite Synthesis, Characterization, and its Applications, in working group of Prof. Dr.-Ing. Stefan Ernst, Institute of Chemical Technology, Department of Chemistry, Technical University of Kaiserslautern, Kaiserslautern, Germany

Non-academic (Industry)

- 1996 – 1998 Process Engineer in start-up the EB/SM plant and Production Engineer in Latex plant, Dow Chemical Thailand Ltd. (SCG-DOW group), Rayong, Thailand

5. Certification or professional organization

-None-

6. Current membership in professional organizations

- International Zeolite Association

7. Honors and awards

- 2015 Poster Award in International Symposium on Zeolite and Microporous Crystals (ZMPC2015) by Japanese Zeolite Association, Sapporo, Japan.
- 2016 Thailand Research Fund (TRF) Grant for New Researcher

Patents awarded:

- “Synthesis of Low-Silica-X Zeolite (LSX) with High Surface Area and Pore Volume by Utilizing Rice Husk as Silica Source”, Thailand, Petty Patent No. 10579

8. Service activities

- Peer Review Service:
- Review proposals and publications for the following organizations and journals:

- The Thai Institute of Chemical Engineering and Applied Chemistry (Conference)
- Microporous and Mesoporous Materials (Journal)

9. Principal publications of last five years (selected)

- Nitikriengkrai, T., and Tontisirin, S., “Environmentally Friendly Route of Organic Structure-Directing Agent Free Synthesis of Medium-Pore ZSM-23 Zeolite Catalyst,” Proceedings of Pure and Applied Chemistry International Conference (PACCON2019), Bangkok, Thailand, February 2019 (accepted)
- Sawangduen, S., and Tontisirin, S., “Interzeolite Conversion of Y Zeolite into Chabazite Zeolite and Study the Performance of Methane Purification from Simulated Biogas,” Proceedings of the 28th National Thai Institute of Chemical Engineering and Applied Chemistry Conference (TICHE2018), November 2018, pp. 20-28
- Tontisirin, S., “Seed-Assisted Synthesis of MCM-71 Zeolite,” Proceedings of the 8th International Thai Institute of Chemical Engineering and Applied Chemistry Conference (ITICHE2018), November 2018, pp. 6-11
- Kongsupapkul, P., Cheenkachorn, K., and Tontisirin, S., “Effect of MgO-ZSM-23 Zeolite Catalyst on the Pyrolysis of PET Bottle Waste,” KMUTNB: International Journal of Applied Science and Technology 2017, 10(3), 205.
- Kongnoo, A., Tontisirin, S., Worathanakul, P., and Phalakornkult, C., “Surface Characteristics and CO₂ Adsorption Capacities of Acid-Activated Zeolite 13X Prepared from Palm Oil Mill Fly Ash,” Fuel 2017, 193, 385, <https://doi.org/10.1016/j.fuel.2016.12.087>
- Tontisirin, S., “Synthesis and Characterization of Co-Crystalline Zeolite Composite of LSX/A,” Microporous and Mesoporous Materials 2017, 239, 123, <https://doi.org/10.1016/j.micromeso.2016.09.051>
- Tontisirin, S., “Highly Crystalline LSX Zeolite Derived from Biosilica for Copper Adsorption: The Green Synthesis for Environmental Treatment,” Journal of Porous Materials 2015, 22, 437, <https://doi.org/10.1007/s10934-015-9912-1>

10. Most recent professional development activities

- Outcome Based Education Training, January 2019
- AUN-QA Training, January 2017

SUCHATA KIRDPONPATTARA

1. SUCHATA KIRDPONPATTARA Assistant Professor of Chemical Engineering

2. Education

- D.Eng. Chemical Engineering
Chulalongkorn University – 2013
- B.Eng. Chemical Engineering
Prince of Songkla University – 2007

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok, 6 Years of Service: 2014 to present
2017 – Present Assistant Professor
2016 Deputy Head for Student Affairs
2015 Deputy Head for Research and Graduate Study
2014 – 2017 Lecturer at Department of Chemical Engineering

4. Non-academic (Research)

- 2018 – 2020 Biofuels Production from Duckweed Cultivated with Wastewater, TRF
- 2016 – 2018 Enhancement of Ethanol Production from *Brachiaria mutica* Grass by Supplementing Different Carbon Sources, co-researcher, NRCT
- 2015 – 2017 Bacterial Cellulose-Gelatin Nanocomposite in Tissue Engineering and Medical Application, MUA

Non-academic (Consulting) -None-

5. Certification or professional organization -None-

6. Current membership in professional organizations

- Council of Engineers, 198152

7. Honors and awards

- Outstanding Young Researcher in Science and Technology, 2017

Patents awarded: -None-

8. Service activities

- Peer Review Service:
- Review publications for the following journals: International Journal of Applied Science and Technology, Current Pharmaceutical Biotechnology
- Review proposals for the following organizations: Faculty of Engineering, KMUTNB

9. Principal publications of last five years (Selected)

- S. Nuchdang, V. Thongtus, M. Khemkhao, S. Kirdponpattara, E.J.Moore, H.B.D. Setiabudi, C. Phalakornkule. (2020). "Enhanced production of reducing sugars from paragrass using microwave-assisted alkaline pretreatment." Biomass Conversion Biorefinery, IF 2.326, DOI doi.org/10.1007/s13399-020-00624-1

- S. Kirdponpattara, M. Phisalaphong, S. Kongruang. (2017). “Gelatin-bacterial cellulose composite sponges thermally cross-linked with glucose for tissue engineering applications.” *Carbohydrate Polymer*, vol. 177, pp. 361-368. IF 6.044, DOI doi.org/10.1016/j.carbpol.2017.08.094
- P. Amnuaycheewa, R. Hengaroonprasan, K. Rattanaporn, S. Kirdponpattara, K. Cheenkachorn, M. Sriariyanun. (2016). “Enhancing enzymatic hydrolysis and biogas production from rice straw by pretreatment with organic acids.” *Industrial Crops and Products*, vol. 87, pp. 247-254. IF 4.191, DOI doi.org/10.1016/j.indcrop.2016.04.069
- Alghunaim, S. Kirdponpattara, B.Z. Newby. (2016). “Techniques for determining contact angle and wettability of powders.” *Powder Technology*, vol. 287, pp. 201-215. IF 3.413, DOI doi.org/10.1016/j.powtec.2015.10.002

10. Most recent professional development activities -None-

SANTI CHUETOR

1. SANTI CHUETOR

Lecturer of Chemical Engineering

2. Education

- D.Ing Chemical Engineering
Montpellier Supagro – 2015
- M.Sc. Food & Environmental Engineering
Montpellier University – 2012
- B.Sc. Chemical Engineering
Aix-Marseille University – 2010

3. Academic Experience

- King Mongkut's University of Technology North Bangkok, 2019 – Present: Lecture, Department of Chemical Engineering, Faculty of Engineering
- Chandrakasem Rajabhat University, 2015 – 2018: Lecturer, Faculty of Science

4. Non-academic (Research)

- 2017-2019, Project leader: Liquid hot water and dry chemo-mechanical pretreatment of sugarcane bagasse for biofuel production: energy efficiency and environmental impacts (Thailand Research Fund-MRG-2560)
- 2018- 2019, Project leader: Irradiation technology: Electron beam pretreatment of sugarcane bagasse prior to bioethanol production
- 2018-2019, Project leader: Development of biosurfactant cleaning liquid from natural based materials (iTAP project 2018)

Non-academic (Consulting)

- Consultant for Mitr Phol Group, Bangkok: Innovation & Research Center

5. Certification or professional organization -None-

6. Current membership in professional organizations -None-

7. Honors and awards

- 2017: Researcher award- Faculty of Science Chandrakasem Rajabhat University
- 2013-2015: French Government Scholarship (Franco-Thai) Ph.D. degree
- 2011-2015: Thai Government Scholarship (Ministry of Sciences and Technology) Master-Ph.D. degree
- 2006-2010: Thai Government Scholarship (One District One Scholarship) Bachelor degree

8. Service activities

- Peer Review Service: Review proposals and publications for the following organizations and journals:
 - King Mongkut's University of Technology North Bangkok
 - Chandrakasem Rajabhat Univeristy

9. Principal publications of last five years (selected)

- Barakat, A., S. Chuetor, et al. (2014). "Eco-friendly dry chemo-mechanical pretreatments of lignocellulosic biomass : Impact on energy and yield of the enzymatic hydrolysis." *Applied Energy* 113(0): 97-105 (IF: 7.182)
- Chuetor, S., R. Luque, et al. (2015). "Innovative combined dry fractionation technologies for rice straw valorization to biofuels." *Green Chemistry* (IF : 9.125)
- Rondet, E., Delalonde, M., Chuetor, S., et Ruiz T. (2016). "Modelling of granular material's packing: equivalence between vibrated solicitations and consolidation" *Powder Technology* Ref. No.: POWTEC-D-16-01439R2 (IF: 2.942)
- Chuetor Santi, Barakat Abdellatif, Rouau Xavier, Ruiz Thierry, Analysis of ground rice straw with a hydro- textural approach, *Powder Technology* (2016) , doi:10.1016/j.powtec.2016.12.072 (IF: 2.942)
- Innovative semi- humid chemo- mechanical fractionation of lignocellulosic biomass: impact on energy consumption and enzymatic accessibility Chuetor Santi, Verawat Champreda, Navadol Laosiripojana (in preparation)

10. Most recent professional development activities -None-

PRAKORN KITTIPOOMWONG

1. PRAKORN KITTIPOOMWONG Assistant Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering
University of Wisconsin-Madison – 2007
- MSc Chemical Engineering
Kyoto University – 1996
- B.Eng. Chemical Engineering
Chulalongkorn University – 1993

3. Academic Experience

- King Mongkut's University of Technology-North Bangkok, 8 Years of Service: 2012 to present
2012 – 2015 Lecturer
2015 – present Assistant Professor

4. Non-academic (Research)

- 2010 – 2012 Post-doctoral Fellow, School of Aerospace Mechanical & Mechatronic Engineering, The University of Sydney
- 2007 – 2010 Post-doctoral Fellow, School of Chemical and Biological Engineering, The University of Sydney

Non-academic (Consulting)

- Industrial consulting in product development of adhesive and sealant

5. Certification or professional organization -None-

6. Current membership in professional organizations

- Society of Rheology
- Thailand Institute of Chemical Engineering

7. Honors and awards

- 2006 Recipient of Vilas travel grant
- 2001 Recipient of Roland Ragatz Outstanding Teaching Award

8. Service activities

- Peer Review Service, Review proposals and publications for the following organizations and journals:
 - Journal of Rheology
 - Journal of Non-Newtonian Fluid Mechanics
 - TIChE conferences

9. Principal publications of last five years (Selected)

- P. Subsumran, P. Kittipoomwong, M. Narasingha and W. Soontornrangson, “Stability of water and pyrolysis oil emulsion”, *Adv. Mat. Res.*, 953-954, 1238-1241 (2014)
- P. Kittipoomwong and M. Narasingha, “Emulsification of Water and Pyrolysis Oil by Sorbitol Derivative Surfactants”, *Appl. Mech. Mater.*, 633-634, 537-540 (2014)
- P. Kittipoomwong and M. Narasingha, “Emulsification of Water and Pyrolysis Oil”, *Energy Procedia*, 79, 752-758 (2015)
- P. Kittipoomwong and T. Phongprayoon, “Degree of Vulcanization of Rubber Latex by Capillary Viscometer”, *Keys Eng. Mater.*, 728, 313-317 (2017)

10. Most recent professional development activities -None-

PANITNAD CHANDRANUPAP

1. PANITNAD CHANDRANUPAP Assistant Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering
Monash University, 2001
- M.Sc Chemical Technology
Chulalongkorn University, 1989
- B.Sc. Chemistry
Kasetsart University, 1984

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok, 28 Years of Service: 1992 to present
2005 – Present Assistant Professor
1992 – 1994 Lecturer at Department of Industrial Chemistry

4. Non-academic (Research) -None-
Non-academic (Consulting) -None-

5. Certification or professional organization -None-

6. Current membership in professional organizations -None-

7. Honors and awards -None-
Patents awarded -None-

8. Service activities -None-

9. Principal publications of last five years (Selected)

- T. Semachai, P. Chandranupap and P. Chandranupap. "Preparation of Microcrystalline Cellulose from Water Hyacinth Reinforced Polylactic Acid Biocomposite Film" (2018). MATEC Web of Conferences, vol 187, 02003 (2018) ICCMP 2018. doi.org/10.1051/mateccconf/201818702003
- P. Chandranupap and P. Chandranupap, "Enzymatic Deinking of Xerographic Waste Paper with Non-ionic Surfactant" Applied Science and Engineering Progress, vol. 13, no. 2, pp. 136-145, Apr. 2020.

10. Most recent professional development activities -None-

PICHAN TANTICHAIPAKORN

1. PICHAN TANTICHAIPAKORN Assistant Professor of Chemical Engineering

2. Education

- M.Eng. Chemical Engineering
Chulalongkorn University, 1998
- B.Eng. Chemical Engineering
Chulalongkorn University, 1996

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok, 21 Years of Service: 1999 to present
2010 – Present Assistant Professor at Department of Chemical Engineering KMUTNB
1999 – 2010 Lecturer at Department of Chemical Engineering KMUTNB

4. Non-academic (Research)

- 2001 – 2005 Membrane Distillation and Membrane Contactor, RWTH-Aachen, Germany

Non-academic (Consulting) -None-

5. Certification or professional organization

- Council of Engineers, Chemical Engineering, Associate Engineer

6. Current membership in professional organizations

- Thai Institute of Chemical Engineering and Applied Chemistry
- Council of Engineers

7. Honors and awards -None-

Patents awarded -None-

8. Service activities -None-

9. Principal publications of last five years (Selected) -None-

10. Most recent professional development activities -None-

WANNAKUL BUMRUNGSALEE

1. WANNAKUL BUMRUNGSALEE Assistant Professor of Chemical Engineering

2. Education

- M. Eng . Petrochemical Technology
Chulalongkorn University, 1989
- B.Sci. Chemical Technology
Chulalongkorn University - 1983

3. Academic Experience

- King Mongkut's University of Technology North Bangkok, 25 Years of Service: 1994 to present
1994 – 2011 Lecturer
2012 – present Assistant Professor

4. Non-academic

- 2000 – 2002 Head of Department of Chemical Engineering
- 2004– 2007 Deputy director of central library

6. Current membership in professional organizations -None-

7. Honors and awards -None-

8. Service activities -None-

9. Principal publications of last five years

- Bumrungsalee W. (2012), “Composting of Food Waste in a Horizontal Rotating Drum”, Proceeding of 4th International Conference on Sustainable Energy and Environment (SEE 2011), 27 – 29 February 2012, Bangkok, Thailand, pp.100 – 105.

10. Most recent professional development activities -None-

KARN PANASUPPAMASSADU

1. KARN PANASUPPAMASSADU Assistant Professor of Chemical Engineering

2. Education

- Ph.D. Mechanical Engineering and Mechanics
Lehigh University, Pennsylvania, USA, 2003
- M.S. Mechanical Engineering and Mechanics
Lehigh University, Pennsylvania, USA, 1999
- B.S.(1st Hons) Mechanical Engineering
Srinakarinwirot University, 1996

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok
2005 – Present Head of the Research and Development Center for Chemical Engineering Unit Operations & Catalyst Design (RCC)
- 2004 – Present Full-Time Faculty of the Department of Chemical Engineering, KMUTNB
- 2014 – 2018 Head of the Department of Chemical Engineering
- 2010 – 2014 Deputy Dean for Research and Academic Affairs, Faculty of Engineering
- 2006 – 2013 Invited Faculty of The Sirindhorn International Thai-German Graduate School of Engineering (TGGS)
- 2006 – Present Invited Faculty of Sirindhorn International Institute of Technology (SIIT):
Thammasat University

4. Non-academic (Research)

- Size Separation of Rubber Particles from Natural Rubber Latex by Hydrocyclone Technique (The Thailand Research Fund – TRF)
- Prototype Reactor for Production of Liquid Fuels from Biomass Derived Syngas by Fischer-Tropsch Synthesis – Phase I (National Science and Technology Development Agency – NSTDA)
- The Bio-Oil Upgrading via Hydroprocessing I (Reactive Distillation) & II (Catalytic Hydrodeoxygenation) (National Science and Technology Development Agency – NSTDA, Japan International Cooperation Agency – JICA)

Non-academic (Consulting)

- Industries under the Upgrading of Energy Efficiency for Industries using Hot Oil Boilers Project (Department of Industrial Work – DIW, the Ministry of Industry)
- LabTech Engineering (Bangphu Industrial Estate): Computational Approach to Develop Optimum Design and Improve Existing Polymer Processing Machines and Production Processes
- Ensol Co. Ltd.: Biomass-to-Liquid Technology for Feasibility Study for Thai Government on Energy Sector

5. Certification or professional organization

- Council of Engineers, Mechanical Engineering, Associate Engineer, 13721

6. Current membership in professional organizations

- Thai Institute of Chemical Engineering and Applied Chemistry
- Council of Engineers

- Thai Association of Boiler and Pressure Vessel

7. Honors and awards

- Second Best Research and Academic Contest in Engineering Works (Renewable Energy) on Title of production of liquid fuels from biomass derived syngas by fischer–tropsch synthesis, Work Done by Dr. Sabaithip Tungkamani, Assoc. Prof. Dr. Phavanee Narataruksa, Asst. Prof. Dr. Karn Pana-Suppamassadu, and Asst. Prof. Dr. Phongsak Keeratiwintakorn.
- Outstanding Inventor from National Research Council of Thailand on Title of a Prototype Reactor for the Production of Liquid Fuels from Biomass by Fischer Tropsch Process, Work done by Assoc. Prof. Dr. Phavanee Narataruksa, Dr. Sabaithip Tungkamani, Asst. Prof. Dr. Karn Pana-Suppamassadu, Asst. Prof. Dr. Phongsak Keeratiwintakorn, Hussanai Sukkathanyawat, Prayut Jiamrittivong, Piyapong Hunpinyo, and Vitsarut Nopparat

Patents awarded:

- “Ammonia Removal from Natural Latex using Microbubbles”, Thai Pretty Patent No. 12983
- “Natural Rubber Latex Foam Production using Microbubbles”, Thai Pretty Patent No. 14401

8. Service activities

- 2019 Training for Industries under the Upgrading of Energy Efficiency for Industries using Hot Oil Boilers Project (Department of Industrial Work – DIW, the Ministry of Industry)
- 2007 – Present Training for Federal Thai Industry (FTI) in Certificated Boiler Operator Training Program
- 2011 – Present Training for Institute of Technological Development for Industry, KMUTNB in Certificated Boiler Operator Training Program and In-House Boiler Operation Training Program for Industry

9. Principal publications of last five years (Selected)

- P. Sooklon, P. Jiamrittivong, K. Pana-Suppamassadu, R. Kokoo, and T. Srisurat, “The Influences of Fluid Dynamics in the Calciner for Cement Production,” ENERGY SECURITY AND CHEMICAL ENGINEERING CONGRESS 2019–Empowering Growth in Sustainable Energy, Penang, Malaysia, July 17-19, 2019.
- W. Sudlapa, K. Pana-Suppamassadu, R. Kokoo, P. Jiamrittivong, and T. Srisurat, “Effect of Biomass-to-Coal Ratio on Combustion Behavior of Co-Firing in Steam Power Plant,” Proceedings of 163rd The IRES International Conference, Bangkok, Thailand, June 5-6, 2019.
- N. Chutichairattanaphum, P. Narataruksa, K. Pana-suppamassadu, S. Tungkamani, Prapainainar, S. Chotiwan, and W. Wattanathanae, “Effects of Raschig Ring Packing Patterns on Pressure Drop, Heat Transfer, Methane Conversion, and Coke Deposition on a Semi-pilot-scale Packed Bed Reformer,” Chem. Biochem. Eng. Q., 33 (2) 191–211, 2019.

10. Most recent professional development activities

- 2019 Workshop on “Problem-Based Learning: PBL, Professional and Organizational Development Network of Thailand Higher Education

ANURAK PETIRAKSAKUL

1. ANURAK PETIRAKSAKUL

Associate Professor of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering
Loughborough University, UK. – 2000
- M.Eng Chemical Engineering
King Mongkut's Institute of Technology Thonburi, Thailand. –1989
- B.Sc. Industrial Chemistry
King Mongkut's Institute of Technology Ladkrabang, Thailand. –1985

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok, 30 Years of Service: 1989 to present
1989 – 1994 King Mongkut's Institute of Technology Thonburi
1994 – present Associate Professor

4. Non-academic (Research)

- 1987 – 1988 Research Assistant, King Mongkut's Institute of Technology Thonburi

Non-academic (Consulting)

- Consulting in chemical industries such as tanning, aeration and biogas production

5. Certification or professional organization

- Innovative Startup with Business Brotherhood, June – October, 2017, KMUTNB.
- Ethics of use to Animals for Scientific Work, 15 Aug. 2016, Bangkok,
- Application number U1-06996-2017.
- Innovative startup @ university, 25-26 Mar. 2017, Bangkok, SET.
- Train the Trainer for Research, Gp.10, Bangkok, NRCT.

6. Current membership in professional organizations -None-

7. Honors and awards

-None-

Patents awarded:

- Thai Petty Patent No. 11652, 23 Jun. 2016 “Process of Ammonium-Magnesium Silicate for Dry Washing in Biodiesel Production”
- Thai Petty Patent No. 11827, 10 Aug. 2016 “Turbine Pump Aerator with Air Suction Device”
- Thai Petty Patent No. 12405, 9 Feb. 2017 “Turbine Pump Aerator with Fin in Pump Casting”
- Thai Petty Patent No. 13564, 16 Feb. 2018 “Aerator for Fine Air Bubble by Peripheral Pump”
- Thai Petty Patent No. 14080, 12 July 2018 “A Screwed Static Tube Aerator attached with vibrator”

8. Service activities

- Peer Review Service, Review proposals and publications for the following organizations:
 - Thailand Research Fund - STRI, KMUTNB - Faculty of Engineering, KMUTNB
 - Serve as external reviewer for promotion and tenure of Thai universities
- Institute Service
 - Department Committee on Master program in Chemical Engineering -Member

9. Principal publications of last five years (Selected)

- Anurak Petiraksakul Jitra Namkod, Thipawan Papakchan and Kitti Thumasattaya “High speed turbine aerators with air feeding into hollowed shaft” The Journal of KMUTNB., Vol. 28, No. 1, Jan.–Apr. 2018, pp. 103-111.
- Sangnuan Srirathchatchawarn and Anurak Petiraksakul “Dissolved Air Flotation Processes” The Journal of KMUTNB., Vol. 27, No. 1, Jan.–Apr. 2017.
- Panuwat Takham and Anurak Petiraksakul “A Design of Static Tube Aerator” 26th TiChe conference, 26-27 Oct. 2016, Science Park Conference Center, PaTumThanee, Thailand.
- Wattana Tungthirawanich and Anurak Petiraksakul “A Study on Curved Turbine Aerator” 26th TiChe conference, 26-27 Oct. 2016, Science Park Conference Center, PaTumThanee, Thailand.
- Naphatcha Wongkia and Anurak Petiraksakul “Effects of mixing energy on flotation efficiencies in continuous dissolved air flotation” 26th TiChe conference, 26-27 Oct. 2016, Science Park Conference Center, PaTumThanee, Thailand.
- Jurarat Kwakong and Anurak Petiraksakul “Synthesis of Ammonium Magnesium Silicate for Biodiesel Purification” National and International Graduate Research Conference 2016, 15 Jan. 2016 Pot Building, Khon Kaen University, pp. 74-81.
- Mintapa Phapteerayut and Anurak Petiraksakul “Removal of Hydrogen sulfide in air by Fe-EDTA solution” Journal of energy and Environment Technology of Graduate school Siam Technology college, Vol.2, No.1, Jan-June 2015, pp.8-16.
- Panyadee S., Petiraksakul A., Phalakornkule C. (2013) “Biogas production from co-digestion of Phyllanthus emblica residues and food waste” The Environmental Engineering Journal, Vol. 27, No.1-2, pp. 33-42.
- Panyadee S., Petiraksakul A., Phalakornkule C. (2013) “Biogas production from co-digestion of Phyllanthus emblica residues and food waste” Energy for Sustainable Development, 17, 515-520. (2012 Impact Factor = 2.221).
- Ponsak Jairurob, Chantaraporn Phalakornkule, Anamai Na-udom, Anurak Petiraksakul, "Reactive extraction of after-stripping sterilized palm fruit to biodiesel" Fuel, Vol. 107, pp. 282, 2013, DOI: 10.1016/j.fuel.2013.01.051.
- Passawron Krongtanin and Anurak Pitiraksakul (2013) “Ultrasonic-assisted Biodiesel Production from Plam oil using adsorption of homogeneous catalysts over solid sodium silicate” Advanced Materials Research, Vols. 781-784, pp 2396-2399.

10. Most recent professional development activities

- Research member of gasification power plant from solid waste, 2019-2020.

MONPILAI NARASINGHA

1. MONPILAI NARASINGHA Assistant Professor of Chemical Engineering

2. Education

- Ph.D. Mining and Minerals Engineering
Virginia Polytechnic Institute and State University, 1999
- M.Sc. Chemical Technology
Chulalongkorn University, 1992
- B.Sc. Chemical Technology (Chemical Engineering)
Chulalongkorn University, 1989

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok, 28 Years of Service: 1992 to Present
- 2014 – 2018 Dean of The Sirindhorn International Thai-German Graduate School of Engineering (TGGS), KMUTNB
- 2004 – Present Assistant Professor
- 2013 – 2014 Head of the Committee for the Curriculum Development of the Bachelor of Engineering Program in Chemical Engineering (International Program) and the Coordinator of the Collaborative Projects (2+2 Program) between KMUTNB and University of Manchester, UK.
- 2004 – 2014 Coordinator of the Collaborative Projects between KMUTNB and University of Applied Science Bremerhaven, Germany
- 2005 – 2008 Deputy Director of The Sirindhorn International Thai-German Graduate School of Engineering (TGGS), KMUTNB
- 2003 – 2005 Head of the Committee for the Chemical and Process Engineering (CPE) Curriculum Development at The Sirindhorn International Thai-German Graduate School of Engineering (TGGS), KMUTNB; CPE Lecturer and Coordinator with Aachen University, Germany
- 2000 – 2002 Deputy Head in Academic Affairs of Department of Chemical Engineering
- 1999 – 2000 Team Leader for the Development of Graduate Study Program in Chemical Engineering, Department of Chemical Engineering, Faculty of Engineering
- 1992 – 2004 Lecturer at Department of Chemical Engineering, Faculty of Engineering

4. Non-academic (Research)

- 2012 – 2014 Emulsification of Water and Pyrolysis Oil, researcher, TISTR
- 2010 – 2012 The Preparation of Highly-Loaded Coal-Water Slurry, researcher, SCG

Non-academic (Consulting) -None-

5. Certification or professional organization -None-

6. Current membership in professional organizations

- Thai Institute of Chemical Engineering and Applied Chemistry

7. Honors and awards -None-

Patents awarded -None-

8. Service activities

- 2016 – Present Programme assessor (Novice) for Internal Quality Assurance Assessment (CUPT QA), Thailand
- Peer Review Service, Review publications for the following journals, Ladkrabang Engineering Journal

Institute Service

-None-

9. Principal publications of last five years (Selected)

- P. Subsumran, P. Kittipoomwong, M. Narasingha and W. Soontornrangson. (2014). “Stability of water and pyrolysis oil emulsion.” *Advance Material Research*, vol. 953-954, pp. 1238-1241.
- P. Kittipoomwong and M. Narasingha. (2014). “Emulsification of Water and Pyrolysis Oil by Sorbitol Derivative Surfactants.” *Appl. Mech. Mater.*, vol. 633-634, pp.537-540.
- P. Kittipoomwong and M. Narasingha. (2015). “Emulsification of Water and Pyrolysis Oil.” *Energy Procedia*, vol. 79, pp. 752-758.
- P. Kittipoomwong, K. Pana-Suppamassadu, and M.H. Narasingha. (2016). “Potential of Biomass Feedstock as a Co-Firing Fuel for Mae Moh Power Plant.” *The 6th International Thai Institute of Chemical Engineering and Applied Chemistry Conference 2016 (ITICHe 2016)*, November 8-9, 2016, Pattaya, Thailand.
- P. Kittipoomwong, C. Poompipatpong, K. Pana-Suppamassadu and M. Narasingha. (2015). “Production and Engine Performance Characteristics of Pyrolysis Oil from Recycled High Density Polyethylene.” *5th International Conference on Engineering and Applied Science (ICEAS 2015)*, July 20-22, 2015, Sapporo, Hokkaido, Japan. pp. 240-247.
- Muenmuang, M.H. Narasingha, T. Phusantisampan, and M. Sriariyanun. (2017). “Chemical Profiling of Morinda Citrifolia Extract From Solvent and Soxlet Extraction Method.” *The 6th International Conference on Bioinformatics and Biomedical Science*, June 2017, Singapore.
- D. Taweetamnusin, M. Narasingha, K. Panasupamassadu, and P. Kittipoomwong. (2019). “Effect of Biomass Ratio on Co-Firing of Biomass with Coal on Pozzolanic Properties.” *International Conference on Sustainable Energy and Green Technology (SEGT 2019)*, December 11-14, 2019, Bangkok, Thailand.

10. Most recent professional development activities

- 2019 Workshop on “Go Goal Together”, Bangkok, Thailand
- 2018 Training the Trainer Program on “Growth Mindset”, Singapore
- 2015 – 2017 Workshop on “Training and development of assessors for the internal quality assurance in CUPT QA”, Bangkok THAILAND

KITTI THAMSATTAYA

1. KITTI THAMSATTAYA Lecturer of Chemical Engineering

2. Education

- M.Eng. Chemical Engineering
Chulalongkorn University, 1992
- B.Eng. Chemical Engineering
King Mongkut's University of Technology North Bangkok, 1988

2. Academic Experience

- King Mongkut's Institute of Technology North Bangkok, 28 Years of Service: 1992 to Present
1992 – Present Lecturer at Department of Chemical Engineering, Faculty of Engineering

4. Non-academic (Research) -None-
Non-academic (Consulting) -None-

5. Certification or professional organization -None-

6. Current membership in professional organizations -None-

7. Honors and awards -None-
Patents awarded -None-

8. Service activities -None-

9. Principal publications of last five years (Selected) -None-

10. Most recent professional development activities -None-

PAIROJ WONGVIROJTANA

1. PAIROJ WONGVIROJTANA Lecturer of Chemical Engineering

2. Education

- M.Eng. Chemical Engineering
King Mongkut's Institute of Technology Thonburi, 1992
- B.Eng. Chemical Engineering
King Mongkut's Institute of Technology North Bangkok, 1988

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok, 32 Years of Service: 1988 to present
- 1999 – Present Lecturer at Department of Chemical Engineering
2003 – 2008 Part-time Lecturer (Technical Drawing) at Ramkhumhaeng University
1993 – 1999 Part-time Lecturer at Department of Chemical Engineering
1988 – 1992 Lecturer at Department of Chemical Engineering

4. Non-academic Work Experience

- 1993 – 1996 Rieckermann Thai Engineering Co., Ltd.
Design Engineer
- 1996 – 1999 Rieckermann Thai Engineering Co., Ltd.
Senior Design Engineer

Non-academic (Consulting)

- 1995 –1999 CT Tech Co., Ltd.
Part-Time Consulting Engineer

Working experience in calculation, design, construction drawing, price estimation, project procurement and construction supervision of various pipelines including pressure vessels in the chemical, food and pharmaceutical industry.

5. Patents awarded

- S. Hirunpraditkoon, P. Jiamvarangkul, P. Wongvirojtana, T. Sawatthiphat, and P. Kosulwit, Thai petty patent No.7983, "Compressed charcoal biomass briquette hydraulic machine", King Mongkut's University of Technology North Bangkok, 2013
- S. Hirunpraditkoon, S. Pakaakaralertkul, P. Wongvirojtana, A. Pethiraksakul, S. Phuang Siri, and T. Foonoi, Thai petty patent No.10399, "Upper compression molding machine for leaf container production", King Mongkut's University of Technology North Bangkok, 2015
- Pethiraksakul, P. Wongvirojtana, S. Wichaitanapat, N. Wonggear, and A. Phunyamann, Thai petty patent No. 11827, "Turbine pump aerators that supply air to the suction side", King Mongkut's University of Technology North Bangkok, 2016

6. Publications

- S. Hirunpraditkoon, S. Intharit, S. Srisumran, and P. Wongvirojtana.(2014). "Combustion Properties of Briquette Charcoal from Durian Peel" Applied Mechanics and Materials

Vol. 666 (2014) pp. 41- 45. Trans Tech Publications. Switzerland doi. 10.4028/www.scientific.net/AMM.666.41

- P. Jiamvarankul, K. Kiattinadisakul, K. Vongluanggam, and P. Wongvirojtana. “Combustion properties of briquette charcoals produced from Jatropha seed shell” The 24th Annual Meeting of the Thai Society for Biotechnology “Renewable Energy and Global Care”

PHISIT JAISATHAPORN

1. PHISIT JAISATHAPORN Lecturer of Chemical Engineering

2. Education

- Ph.D. Chemical Engineering
Lehigh University, 2003
- M.S. Chemical Engineering
Lehigh University, 1998
- B.Eng. Chemical Engineering
King Mongkut's University of Technology North Bangkok, 1995

3. Academic Experience

- King Mongkut's Institute of Technology North Bangkok
1995 – Present Lecturer at Department of Chemical Engineering, Faculty of Engineering

4. Non-academic (Research) -None-

Non-academic (Consulting) -None-

5. Certification or professional organization -None-

6. Current membership in professional organizations -None-

7. Honors and awards -None-

Patents awarded -None-

8. Service activities -None-

9. Principal publications of last five years (Selected) -None-

10. Most recent professional development activities -None-