

Biographical Data

Institute of Engineering,
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Asst. Prof. Atthaphon Maneedaeng, Ph.D.

ผู้ช่วยศาสตราจารย์ ดร.อรรถพล มณีแดง

Education and Qualifications:

- 2005 B. Eng. (Chemical Engineering) (First Class Honors),
Suranaree University of Technology, Thailand.
- 2010 Ph.D. (Chemical Engineering), Suranaree University of Technology,
Thailand.

Present Position:

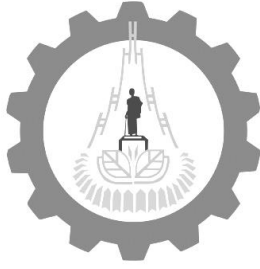
- 2015 - Present Assistant Professor of School of Chemical Engineering,
Suranaree University of Technology, Thailand.

Work Experience:

- 2018 - 2020 Deputy Director of Technopolis (Division of Innovation Management),
Suranaree University of Technology, Thailand.
- 10/2018-2020 Office Manager of Science and Innovation Park,
Technopolis, Suranaree University of Technology, Thailand.
- 07/2017-09/2018 TLO Manager, Technology Licensing Office, Technopolis,
Suranaree University of Technology, Thailand.
- 2018 Research Scholar - Researcher Links: Travel Grant by
Newton Fund at Department of Mechanical Engineering,
University of Birmingham, United Kingdom (UK).
- 2011 - 2015 Lecturer of School of Chemical Engineering,
Suranaree University of Technology, Thailand.
- 2005 - 2010 Research Assistant at Crystallization Research Unit at
School of Chemical Engineering, Suranaree University of
Technology, Thailand.
- 2008 Research Scholar at School of Chemical, Biological, and
Materials Engineering, The University of Oklahoma, USA.

Current Research and Fund:

- 2017-2018 "Effects of Binary Mixed Emulsifiers on Phase Boundaries, Fuel
Properties, and Lubricity of Microemulsion-Based Biofuels" the
project is under the support of Newton Fund through Researcher
Links Program (Travel Grant) (Finished)
- 2016-2017 "Effects of Counterions on Property Enhancement of Mixed Cationic
Surfactant Systems" the project is under the support of SUT
Research and Development Support Fund (Fiscal Year 2017).
[Project Leader] (Finished)



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- 2013-2015 "Precipitation Behavior of Novel Anionic Gemini Surfactant in Hard Water", the project is under the support of Thailand Research Fund through the New Researchers Grant (Fiscal Year 2013). [Project Leader] (Finished)
- 2013-2015 "The pH-Dependence of Precipitation Behavior of Zwitterionic Surfactant in Hard Water" the project is under the support of SUT Research and Development Support Fund (Fiscal Year 2013). [Project Leader] (Finished)
- 2014-2016 "Synthesis of Silicon Nano-Composite Inks for Novel and Low-Cost Solar Cell Fabrication" the project is under a support of National Research Council of Thailand (Fiscal Year 2014). [Co-Researcher] (Finished)
- 2012-2013 "Influence of Mixed Surfactants on Morphology of Nano Zinc Oxide Synthesized by Hydrothermal and Solvothermal Techniques" the project is under the support of SUT Research and Development Support Fund (Fiscal Year 2012). [Project Leader] (Finished)

Teaching Subjects:

Separation Processes
Equilibrium-Staged Separation
Process Dynamics and Control
Chemical Engineering Thermodynamics

Recognitions and Prestige:

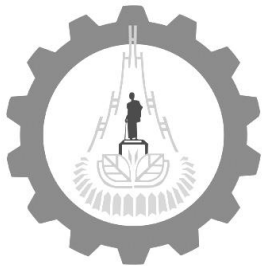
- 2017 - 2018 Awarded Newton Fund under Researcher Links Program: Travel Grant by British Council and Thailand Research Fund (TRF)
- 2013 Awarded the New Researchers Grant by Thailand Research Fund (TRF).
- 2005 – 2010 Awarded the Royal Golden Jubilee Ph.D. grant funded by Thailand Research Fund (TRF).

Recent Publications:

□ International Peer-Review Publications

Jamrunroj P., Wongsakulphasatch S., **Maneedaeng A.**, Cheng C. K., Assabumrungrat S. (2019) Surfactant Assisted Cao-Based Synthesis and Their Application to High-Temperature CO₂ Capture. *Powder Technology*. 344, 208-221.

Pecharaumporn P., Wongsakulphasatch S., Glinrun T., **Maneedaeng A.**, Hassan Z., Assabumrungrat S. (2019) Synthetic CaO-based sorbent for high-temperature CO₂ capture in sorption-enhanced hydrogen production. *International Journal of Hydrogen Energy*, 44(37), 20663-20677.



- Maneedaeng A.**, Phoemboon S., Chanthasena P., Chudapongse N. (2018) Synthesis, Interfacial Properties, and Antimicrobial Activity of a New Cationic Gemini Surfactant. *Korean Journal of Chemical Engineering*, 35(11), 2313-2320.
- Laohawiroj S., Mangkornkaew A., **Maneedaeng A.**, Fangsuwannarak T. (2018) Silicon composite ink for advanced photovoltaic generation prepared by low-cost technique. *Journal of Renewable Energy and Smart Grid Technology*, 13(2), 1-9.
- Maneedaeng A.**, Flood, A.E. (2017). Synergisms in Binary Mixtures of Anionic and pH-insensitive Zwitterionic Surfactants and Their Precipitation Behavior with Calcium Ions. *Journal of Surfactants and Detergents*, 20(1): 263-275.
- Kongsamai P., **Maneedaeng A.**, Flood C., ter Horst J.H., Flood A.E. (2017). Effect of additives on the preferential crystallization of L- asparagine monohydrate. *The European Physical Journal Special Topics*, 226 (5): 823-835..
- Maneedaeng A.** (2016). High Uniformity of ZnO Nanoparticles Synthesized by Surfactant Assisted Solvothermal Technique. *Advanced Materials Research*, 1131: 43-48.
- Maneedaeng A.**, Flood, A.E., Haller, K. J. and Grady, B. P (2012). Modeling of Precipitation Phase Boundaries in Mixed Surfactant Systems using an Improved Counterion Binding Model. *Journal of Surfactants and Detergents*, 15(5): 523-531.
- Maneedaeng A.**, Flood, A.E., Grady, B. P. and Haller, K. J. (2011). Explanation for the increased induction times in binary mixed anionic surfactant mixtures. *Crystal Growth & Design*. 11(7): 2948-2956.
- Maneedaeng A.**, Haller K. J., Grady B. P., and Flood A. E. (2011). Thermodynamic Parameters and Counterion Binding to the Micelle in Binary Anionic Surfactant Systems. *Journal of Colloid and Interface Science*, 356(2): 598-604.

□ Selected Conference Proceedings

- Maneedaeng A.**, Lawtae P., Boonma A. and Buathonglang W. (2019). Preparation and Physicochemical Properties of Nanoporous Magnesium Oxide Using Microemulsion Technique. Conference Proceedings of The 2nd International Conference on Research in Science, Engineering and Technology. Paris, France. 22-24 November 2019.
- Maneedaeng A.**, Sukjit E. and Dearn K.D. (2019). Synergistic effects of mixed emulsifier systems in phase behaviours and tribology of microemulsion-based biofuels from corn oil and ethanol. Conference Proceedings of The 22nd International Conference on Wear of Materials (WEAR 2019), Miami, USA. 14-18 April 2019.



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- Phoemboon S., **Maneedaeng A.** (2017) Microemulsion-based Biofuels from Rice Bran Oil and Ethanol: Production and Fuel Properties. Conference Proceedings of The 3rd International Conference on Environmental Science and Technology (ICOEST), Budapest, Hungary. 19-23 October 2017.
- Maneedaeng A.**, Lertwilairatanapong P., Phetlertanan J., Punyafuang T. (2017) Effects of Binary Mixed Emulsifiers on Fuel Properties and Phase Boundaries of Microemulsion-Based Biofuels. Conference Proceedings of The 3rd International Conference on Environmental Science and Technology (ICOEST), Budapest, Hungary. 19-23 October 2017.
- Simla S., **Maneedaeng A.** (2016) Phase Behaviors and Physical Properties of Microemulsion of Palm Oil and Ethanol Emulsified by Low HLB Type of Anionic and Cationic Surfactants. Conference Proceedings of The American Institute of Chemical Engineering – Annual Meeting 2016 (AIChE 2016), San Francisco, USA. 13-18 November 2016.
- Kongsamai P., **Maneedaeng A.**, Flood C., ter Horst J.H., Flood A.E. (2016) Mechanisms of the Effect of Additives on the Preferential Crystallization of L-Asparagine Monohydrate. Conference Proceedings of The 12th International Workshop of the Crystal Growth of Organic Materials (GCOM12), Leeds, United Kingdom. 26-30 June 2016.
- Flood A.E., Kongsamai P., **Maneedaeng A.**, ter Horst J.H. (2015). Effect of D-Aspartic Acid on the Preferential Crystallization of L-Asparagine monohydrate. Proceedings of The 22nd International Workshop on Industrial Crystallization (BIWIC 2015), Daejeon, South Korea. 9-11 September 2015.
- Maneedaeng A.** Synergistic Interaction between Anionic Surfactant Mixtures in a Presence of Ethanol and Sodium Chloride. Conference Proceedings of The 6th Asian Conference on Colloid and Interface Science (ACCIS2015), Sasebo, Nagasaki, Japan. 24-27 November 2015.