

Dr. Warinthorn Songkasiri

ดร. วรินทร์ สงคศิริ

EDUCATIONAL BACKGROUND

Year A.D. 2003 Ph.D. (Civil and Environmental Engineering), Northwestern University, U.S.A.
Year A.D. 1998 M.Eng. (Civil and Environmental Engineering), Stanford University, U.S.A.
Year A.D. 1997 B.Eng. (Chemical Engineering), Carnegie Mellon University, U.S.A.

EXPERTISE

Starch Engineering and Process Optimization; Zero Waste Discharge
Anaerobic Wastewater Treatment Technology for Food and Agro-Industries
Biogas Technology; Biological Processes in Nuclear Waste Treatment

EXECUTIVE POSITIONS

Deputy Executive Director, National Center for Genetic Engineering and Biotechnology (BIOTEC), National Science and Technology Development Agency (NSTDA).
23 May 2025 – 31 December 2025
Research Group Director, Biochemical Engineering and Systems Biology Research Group (IBEG), BIOTEC, 1 January 2019 – 31 December 2025.
Principal Researcher, Excellent Center of Waste Utilization and Management (ECoWaste), KMUTT/BIOTEC, 22 August 2003- 31 December 2025.
Vice President for Research Strategy, King Mongkut's University of Technology Thonburi (KMUTT). 23 December 2020 – 31 August 2021 and 17 January 2022 – 28 March 2023.
Acting Director, Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B), Ministry of Science and Technology, 1 October 2021- 16 January 2022
Assistant Director, PMU-B, 1-30 September 2021)
Advisor to the President on Research Strategy, KMUTT. 20 January 2019 – 22 December 2020.
Director, Excellent Center of Waste Utilization and Management (ECoWaste), King Mongkut's University of Technology, Thonburi (KMUTT), 1 June 2018 – 31 January 2020.

Other related positions

National Level

The Royal Thai Government Scholarship, Ministry of Science and Technology (MOST) to pursue the B.S. to Ph.D. level under the requirement of BIOTEC, NSTDA (1992-2003)

Member Thai Association of Science and Technology (TAST)

Honorary Member Thai Tapioca Starch Association (TTSA)

Co-ordinator Biofuels and Biochemical Industry Programme, Industry Division, the Thailand Research Fund (TRF) (2016-Present)

Co-Chair

Thai Young Scientists Academy (TYSA), 2010-2016

Area Manager Chachengzao Province to support the Royal Initiative Projects of the Mattayom Praratchatarn Nayao High School, HRH Princess Mahachakri Sirindhone's private school (2004-Present)

PUBLICATIONS

International Journal

Trakulvichean, S.; Lerdlattaporn, R.; Lueangwattanapong, K.; Chokmongkol, N.; Saengchan, K.; Songkasiri, W. "Carbon footprint of cassava starch in Thailand: a comprehensive study of production scale and production chain." *Cleaner and Responsible Consumption*. 2025, 18, 100293. (Q1)

Ardhan, N.; Tongpadungrod, P.; Songkasiri, W.; Suttikul, T.; Phalakornkule, C. "Upgrading of biogas generated from shrimp processing effluent using vacuum pressure swing adsorption." *Chem. Eng. Tech.* 2025, 48(2) e202300454

Varongchayakul, S.; Songkasiri, W.; Chaiprasert, P. "High potential lignocellulose-degrading microbial seed exploration from various biogas plants for methane production." *Renewable Energy*, 2024, 231, 120900.

Varongchayakul, S.; Tinrung, N.; Lerdlattaporn, R.; Songkasiri, W.; Chaiprasert, P. "Evaluation of methane production from liquid hot water pretreated *Paspalum atratum* and *Brachiaria ruziziensis* as alternative energy substrates." *Industrial Crops and Products*, 2022, 180, 114784. (Q1, IF 6.40)

Paepatung, N.; Boonapatcharorn, N.; Songkasiri, W.; Yasui, H.; Phalakornkule, C. "Recovery of anaerobic system treating sulfate-rich wastewater using zero-valent iron." *Chem. Eng. J.*, 2022, 435, 135175 (Q1, IF 10.652).

Lerdlattaporn, R.; Phalakornkule, C.; Trakulvichean, S.; Songkasiri, W. "Implementing Circular Economy Concept by Converting Cassava Pulp and Wastewater to Biogas for Sustainable Production in Starch Industry." *Sust. Environ. Res.* 2021, 31(1), 20 (Q1, IF 5.948).

Varongchayakul, S.; Songkasiri, W.; Chaiprasert, P. "Optimization of cassava pulp pretreatment by liquid hot water for biomethane production." 2021, *Bioenerg. Res.*, published online 3 January 2021, <https://doi.org/10.1007/s12155-020-10238-0> (IF 2.195).

Paepatung, N.; Songkasiri, W.; Yasui, H.; Phalakornkule, C. "Enhancing methanogenesis in fed-batch anaerobic digestion of high-strength sulfate-rich wastewater using zero valent scrap iron." 2020, *J. Env. Chem. Eng.*, 8(6), 104508 (IF 4.30).

Saengchan, K.; Nopharatana, A.; Songkasiri, W. "New Hydrocyclone Design for High Starch Yield: Effect of cylindrical-conical length proportion on the starch, sulfur and protein separation efficiencies." 2019, Powder Technology, 346, 1-8 (IF 3.413).

Trakulvichean, S.; Chaiprasert, P.; Otmakhova, J.; Songkasiri, W. "Integrated Economic and Environmental Assessment of Biogas and Bioethanol Production from Cassava Cellulosic Waste." Waste and Biomass Valorization, 2019, 10(3), 691-700 (IF 2.358).

Ruttithiwapanich, T.; Pridasawas, W.; Ruenglerpanyakul, W.; Songkasiri, W. "Effects of Operating Pressure on Granular Sludge Flotation Mechanism Inside an Anaerobic Upflow Reactor." Journal of Environmental Engineering, 2018, 144(12), 04018122 (IF 1.541).

Trakulvichean, S.; Chaiprasert, P.; Otmakhova, J.; Songkasiri, W. "Comparison of Fermented Animal Feed and Mushroom Growth Media as Two Value-Added Options for Waste Cassava Pulp Management." Waste Management & Research, 2017, 35, 12, 1210 – 1219 (IF 1.114).

Saengchan, K.; Lerdlattaporn, R.; Nopharatana, M.; Songkasiri, W., "Enhancement of Starch-Pulp Separation in Centrifugal-Filtration Process: Effect of Particle Size and Verities of Cassava Root on Free Starch Granule Separation", Food and Bioproducts Processing, 2015, 95, 208-217 (IF 3.324).

Ardhan, N.; Ruttithiwapanich, T.; Songkasiri, W.; Phalakornkule, C. "Comparison of performance of continuous-flow and batch electrocoagulators: a case study for eliminating reactive blue 21 using Iron electrodes" Separation and Purification Technology. 2015, 146, 75-84 (IF 5.107).

Saengchan, K. ; Nopharatana, M. ; Songkasiri, W., « Recovery of tapioca starch from pulp in a conical basket centrifuge – Effects of rotational speed and liquid to solid (L/S) ratio on cake formation and starch–pulp separation efficiency. » Separation and Purification Technology, 2014, 127, 192 – 201 (IF 5.107).

Dunn, R.; Anderson, C.; Walter, M.; Songkasiri, W.; Srimanee, C. "Spatial evidence of cross-crop pesticide contamination in small-holder Thai farms. Agronomy for Sustainable Development," Agron. Sustain. Dev., 2014, 34 (4), 773-782. (IF 4.503)

Aichayawanich, S. ; Nopharatana, M. ; Nopharatana, A. ; Songkasiri, W. « Agglomeration mechanisms of cassava starch during pneumatic conveying drying. » Carbohydrate Polymers. 2011, 84(1), 292-298 (IF 6.044).

Deo, R.P. ; Songkasiri, W. ; Rittmann, B.E. ; Reed, D.T. « Surface complexation of Neptunium (V) onto whole cells and cell components of Shewanella alga : modeling and experimental study. « Environ. Sci. Technol. 2010, 44, 4930-4935 (IF 7.149).

Romsaiyud, A.; Songkasiri, W.; Nopharatana, A.; Chaiprasert, P. "Combination effect of pH and acetate on enzymatic cellulose hydrolysis." J. Env. Sci. 2009, 21(7), 965-970 (IF 2.037).

Saengchan, K.; Nopharatana, A.; Songkasiri, W. "Enhancement of Tapioca Starch Separation with a Hydrocyclone: Effects of Apex Diameter, Feed Concentration, and Pressure Drop on

Tapioca Starch Separation with a Hydrocyclone.” *Chemical Engineering and Processing*. 48, 195-202, 2009 (IF 3.031).

Somboonchai W., Songkasiri, W., Nopharatana, M. Kinetics of Cyanide Oxidation by Ozone in Cassava Starch Production Process. *Journal of Food Engineering*. 84 (4), 2008, 563-568 (IF 3.605).

Phalakornkule, C.; Wongnoi, R.; Songkasiri, W. “Influence of a Three-Phase Separator Configuration on the Performance of a UASB Reactor Treating Wastewater from a Fruit Canning Factory.” *Wat. Env. Res.*79 (2), 2007, 199-207 (IF 0.825).

Songkasiri, W.; Reed, D.T.; Rittmann, B.E. “Bio-Sorption of Np(V) by *Pseudomonas fluorescens*.” In *Radiochimica Acta*. 2002, 90, 785-789. (IF 1.202)

Publications - National

Tinrung, N.; Lerdlattaporn, R.; Laosiripoj, N.; Varongchayakul, S.; Songkasiri, W. “Enhancement of Methane Production Potential from Napier Grass and Napier Grass Silage with Liquid Hot Water Pretreatment.” 2021, *KMUTT Research Journal*, 44(2), 237-262.

Ruttithiwapanich, T.; Pridasawas, W.; Ruenglerpanyakul, W.; Songkasiri, W. “Evaluation of the Inhomogeneous Granular Sludge Distribution inside an Industrial-Scale Anaerobic Wastewater Treatment Reactor Using a Three-Phase Flow Model.” 2018, *KMUTT Research Journal*, 41(2), 247-259 (TCI IF 0.386).

Suwanasri, K.; Trakulvichean, S.; Grudloyma, U.; Songkasiri, W.; Commins, T.; Chaiprasert, P.; Tanticharoen, M. “BIOGAS – Key Success Factors for Promotion in Thailand.” *J. Sust. Ener. Environ.* Special issue, June 2015, 25-30.

Tarkulvichean, S.; Patanachan, P.; Suwannathep, S.; Tanchareon, S.; Songkasiri, W. « Wastewater from a trout farm for rice cultivation: case study in Chiang Mai Province, Thailand. » *As. J. Energy Env.* 2010, 11(2), 69-76.

Janphirom, T. ; Chaiprasert, P. ; Thongthieng, T. ; Suwannathep, S. ; Songkasiri, W. « Increasing fish feed stability using guar gum : case study with *Channa striata*. » *As. J. Food Ag-Ind.* 2010, 3(3), 363-370.

Viet, L.H. ; Ngan, N.V.C. ; Hoang, N.X. ; Quynh, D.N. ; Songkasiri, W. ; Stefan, C. ; Commins, T. “Legal and institutional framework for solid waste management in Vietnam” *As. J. Energy Env.* 2009, 10(01), 1-10.

Khouangvichit, S.; Songkasiri, W.; Stefan, C. ; Commins, T.; Touch, V. "Survey on participation of nongtha tai villagers (lao pdr) in household waste management.” *As. J. Energy Env.* 2009, 10(02), 53-61.

Touch, V.; Keo, S.; Songkasiri, W.; Stefan, C.; Commins, T.; Khouangvichit, S.; Green, J."Use of solid waste for small scale biogas production for rural household energy consumption case study in takaev province, cambodia.” *As. J. Energy Env.* 2009, 10(01), 1-10.

Paepatung, N.; Nopharatana, A.; Songkasiri, W. "Bio-Methane Potential of Biological Solid Materials and Agricultural Wastes." *As. J. Energy Env.* 2009, 10(01), 19-27.

ประทีน กุลละวณิชย์, นันทิยา เปปะดั่ง, อรอมล เหล่าปิตินันท์, อรรณพ นพรัตน์, ภาวิณี ชัยประเสริฐ และวรินธร สงคศิริ. “ภาพรวมเชิงสถานภาพ และศักยภาพของเทคโนโลยีก๊าซชีวภาพในประเทศไทย” วารสารวิจัยและพัฒนา มจร.,ต.ค.-ธ.ค.50 ปีที่ 30 ฉบับที่ 4 (TCI IF 0.386).

Tia, S. and Songkasiri, W. “Biomass Potential in Thailand.” *Thailand Research Communication Journal.* 11 (63), 2005.

Book Chapter - International

Otmakhova, Y.S.; Usenko, N.I.; Devyatkin, D.A.; Tarkulvichean, S.; Saengchan, K.; Songkasiri, W. *Agro-Food Export: Challenges and Structural Changes.* 2021, Novosibirsk State University (NSU) Publishing House, Novosibirsk, 172 p. ISBN 978-5-4437-0980-2.

Sawatdeenarunat, C.; Wangnai, C.; Songkasiri, W.; Panichnumsin, P.; Saritpongteeraka, K.; Boonsawang, P.; Khanal, S.K.; Chairapat, S. Book Chapter 32: Biogas Production from Industrial Effluents. *Biofuels: Alternative Feedstocks and Conversion Processes for the Production of Liquid and Gaseous Biofuels.* 2019 Elsevier Inc., 779-816, <https://doi.org/10.1016/B978-0-12-816856-1.0032-4>.

Book Chapter - National

รศ.ดร. สุวิทย์ เตี้ย และ ดร. วรินธร สงคศิริ บทที่ 6 ชีวมวลเพื่อพลังงาน ใน การพัฒนาพลังงานที่ยั่งยืนสำหรับประเทศไทย โดย ศ.ดร.สมชาติ โสภณธณฤทธิ (บรรณาธิการ) ดีพิมพ์โดยมูลนิธิบัณฑิตสภาวิทยาศาสตร์และเทคโนโลยีแห่งประเทศไทย เมษายน 2550

Academic Publicaiton - National

Tia, S. and Songkasiri, W. “Biomass Potential in Thailand.” *Thailand Research Communication Journal.* 11 (63), 2005.

Conference Proceedings – International

Phuimouily, T.; Phongsavath, T.; Thongrueng, M.; Songkasiri, W.; Saengchan, K. “Effects of hydrocyclone underflow discharge and pressure drop on starch recovery efficiency in cassava starch processing.” *The 9th Biotechnology International Congress (BIC2025), Bangkok, Thailand.* 3-4 September 2025, 113-120.

Banditvong, C.; Pitakworapak, N.; Lueangwattanapong, K.; Songkasiri, W. "Sustainable cellulose extraction from cassava pulp: a low chemical approach to agricultural waste valorization." The 9th Biotechnology International Congress (BIC2025), Bangkok, Thailand. 3-4 September 2025, 105-112.

Paepatung, N.; Songkasiri, W.; Yasui, H.; Phalakornkule, C. "Effects of operational factors on the performance of a bio-ZVI system for enhancing anaerobic treatment of sulphate-rich wastewater." AIP Conference Proceedings, 2023, 2907(1), 040005

Paepatung, N.; Songkasiri, W.; Yasui, H.; Phalakornkule, C. "Comparative rates and yields of electrons released from ZVI powder in batch reactors with and without inoculated hydrogenotrophic methanogens." AIP Conference Proceedings, 2022, 2610, 030003.

Lerdlattaporn, R.; Phalakornkule, C.; Ruenglerpanyakul, W.; Luengwattanapong, W.; Songkasiri, W. "Economic and Environmental Assessment of Different Biogas Conversion Technologies for Cassava Pulp Treatment in Thailand: A Case Study." Oral Presentation at the 7th International Conference on Sustainable and Renewable Energy Engineering. May 6-7, 2022, Spain, IOP Conference Series: Earth and Environmental Science, 2022, 1050(1), 012011.

Ruttithiwapanich, T.; Waewsak, C.; Laopitinan, O.; Saengchan, K.; Luengwattanapong, K.; Songkasiri, W. "Comparative Study on Biogas Production from Cassava Pulp in a Sequencing Batch Reactor and a Continuous Stirred Tank Reactor." Oral Presentation at the 7th International Conference on Sustainable and Renewable Energy Engineering. May 6-7, 2022, Spain, IOP Conference Series: Earth and Environmental Science, 2022, 1050(1), 012013.

Saengchan, K.; Ruttithiwapanich, T.; Songkasiri, W. "Potential Economic Benefit of Near-Zero Emissions Concept Implemented in a Cassava Starch Factory." Oral presentation at the 5th International Conference on Technology, Science, and Engineering, September 26-27, 2021, Tokyo, Japan.

Lerdlattaporn, R.; Phalakornkule, C.; Songkairi, W. "Lignocellulosic Biomass to Biogas: Biochemical Methane Potential from Field Grasses in Thailand" Oral presentation at the 15th South East Asian Technical University Consortium (SEATUC) Symposium2021, Virtual online symposium, selected for publication in SEATUC Journal of Science and Engineering (SJSE), 2021, 2(1), 8-14, Online ISSN 2345-2993.

Sonthited, P.; Koolpiruk, D.; Songkasiri, W. "Prediction of Production Performance for Tapioca Industry using LSTM Neuron Network." Oral Presentation at the 16th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology, ECTI-CON 2019, 2019, 147-150, 8955401.

Paepatung, N.; Phalakornkule, C.; Songkasiri, W. "Improvement of Biogas Production from Sulfate-rich Wastewater by the Addition of Zero Valent Scrap Iron." The 3rd International Conference on Green Chemistry and Technology (ICGCT2018), July 14-16, 2018, Kunming, China.

Pimthong, N.; Koolpiruck, D.; Nuratch, S.; Songkasiri, W. "Cyber-physical System Based Real-Time Management for Tapioca Starch Industry." Oral Presentation at the 2017 IEEE Conference on Systems, Process and Control (ICSPC), Malacca, Malaysia, December 15-17, 2017.

Phalakornkule, C.; Khemkhao, M.; Paepatung, N.; Songkasiri, W. "Enhancement of Methanogenic Activities by Key Material Supplementation." Oral Presentation at the 2017 2nd Asia Conference on Environment and Sustainable Development, Tokyo, Japan, November 2-4, 2017.

Sriyakul, H.; Koolpiruck, D.; Nuratch, S.; Songkasiri, W. "Cyber-Physical System Based Production Monitoring for Tapioca Starch Production." Oral Presentation at the 4th International Conference on Information Science and Control Engineering (ICISCE 2017), Changsha, China, July 21-23, 2017.

Buttajeen, S.; Saengchan, K.; Nopharatan, M.; Songkasiri, W. "Effects of sulfur dioxide and pH on blue color and properties of cassava starch product." Oral Presentation at the World Congress on Root and Tuber Crops, Nanning Guangxi, China, January 18-22, 2016.

Songkasiri, W.; Nopharatan, A.; Saengchan, K. "Biogas Technology for Cassava Wastewater Treatment and Energy Recovery in Thailand." Oral Presentation at the World Congress on Root and Tuber Crops, Nanning Guangxi, China, January 18-22, 2016.

Saengchan, K.; Songkasiri, W. "Increase Starch Separation using Hydrocyclone Technology." Oral Presentation at the Starch Update 2017, The 9th International Conference on Starch Technology, Bangkok, Thailand, February 27-28, 2017.

Ariyawong, A.; Koolpiruck, D.; Songkasiri, W. "Performance Monitoring for Separator System in Tapioca Starch Industry using State-Space Model." Oral presentation at the 12th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology, Hua Hin, Thailand, June 24-27, 2015.

Panyavai, G.; Koolpiruck, D.; Songkasiri, W. "Performance Monitoring for Separator System in Tapioca Starch Industry using State-Space Model." Oral presentation at the 12th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology, Hua Hin, Thailand, June 24-27, 2015.

Pairin, A.; Koolpiruck, D.; Songkasiri, W. "Performance Monitoring for Extraction System in Tapioca Starch Industry using State-Space Model." Oral presentation at the 12th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology, Hua Hin, Thailand, June 24-27, 2015.

Lerdlattaporn, R., Saengchan, K., Lerdlattaporn, W. and Songkasiri, W., 2013, "Adoption of near zero waste concept for the tapioca starch production industry: a case study in Thailand", Oral presentation at the 8th GMSARN International Conference on "Green Growth in GMS: Energy, Environment and Social Issues", December 18 – 20, Sedona Hotel, Mandalay, Myanmar.

Saengchan, K., Sarochsuwan, P., Ruenglerpanyakul, W. and Songkasiri, W., 2013, "Enhancement of tapioca starch separation efficiency in a conical-screen extractor: effects of

screen aperture and feed flow rate on cake formation and starch-pulp separation mechanism”, Oral presentation at Starch Update 2013: the 7th International Conference on Starch Technology, November 21 – 22, Miracle Grand Convention Hotel, Bangkok, Thailand.

Lerdlattaporn, R.; Nopharatana, M.; Songkasiri, W., “Effects of Cassava Crush Size and Variety on Starch Extraction Efficiency.” Oral Presentation at the 6th International Conference on Starch Technology, Bangkok, Thailand, February 2012.

Suwannakan, S.; Nopharatana, M.; Songkasiri, W., Viriyarattanasak, C. “Effects of Treatment of Sulfur Dioxide Solution on Functional and Thermal Properties of Cassava Starch.” Poster Presentation at the 6th International Conference on Starch Technology), Bangkok, Thailand, February 2012.

Saengchan, K.; Nopharatana, M.; Songkasiri, W. “Comparison of Centrifugation and Filtration Techniques for Starch Granule – Pulp Extraction during Tapioca Starch Production Process.” Oral Presentation at the International Conference on Chemical, Biological and Environment Sciences (ICCEBS'2011), Bangkok, Thailand, 23-24 December 2011 (Best Paper Award).

Saengchan, K.; Nopharatana, M.; Songkasiri, W. “Influence of Feed Flow Rate on Tapioca Starch Perforation through Filter Medium in a Conical-Screen Centrifuge.” Oral Presentation at the International Conference on Chemical, Ecology and Environmental Sciences (ICCEES2011), Pattaya, Thailand, 17-18 December 2011.

Aichayawanich, S.; Nopharatana, M.; Nopharatana, A.; Songkasiri, W. “Glass Transition of Cassava Starch during Pneumatic Conveying Drying.” Oral Presentation at the International Conference on Agricultural Engineering (TSAE2011), Chonburi, Thailand, 31 March – 1 April 2011.

Ruttithiwapanich, T.; Ruenglerpanyakul, W.; Songkasiri, W. “Two-Phase Flow Simulation Study on Mixing inside an 6,000 m³ Industrial-Scale Anaerobic Wastewater Treatment Reactor by Computational Fluid Dynamics.” Oral Presentation at the 5th SEATUC Symposium (South East Asian Technical University Corporation), Hanoi, Vietnam, 24-25 February 2011.

Saengchan, K.; Nopharatana, M.; Songkasiri, W. “Effects of rotational speed and radial distance on starch perforation and starch extraction in conical-screen extractor.” Oral Presentation at the 5th SEATUC Symposium (South East Asian Technical University Corporation), Hanoi, Vietnam, 24-25 February 2011.

Aichayawanich, S.; Nopharatana, M.; Nopharatana, A.; Songkasiri, W. “Influence of damaged starch content on agglomeration of cassava starch during pneumatic conveying drying.” Oral Presentation at the 5th International Conference on Innovations in Food and Bioprocessing Technology, Bangkok, Thailand, 7-9 December 2010.

Keomany, D.; Pimsama, J.; Songkasiri, W. “Life cycle assessment of cassava starch production in Lao PDR.” Oral Presentation at the Fifth GMSARN International Conference 2010 "Sustainable Development and Climate Change : Challenges and Opportunity in GMS." Luang Prabang, Lao PDR, 17-19 November 2010.

Nuntakumjorn, B.; Ruenglerpanyakul, W.; Songkasiri, W.; Phalakornkule, C. "Effects of chitosan on granulation process and UASB efficiency in wastewater treatment under thermophilic condition." Oral Presentation at the Technology and Innovation for Sustainable Development International Conference (TISD2010). Khonkaen, Thailand, 4-6 March 2010.

Tarkulvichean, S.; Patanachan, P.; Suwannathep, S.; Tanchareon, S.; Songkasiri, W. "Use of Wastewater from a Rainbow Trout Farm for Rice Cultivation: Case Study of Ban Mae Klang Luang, Jom Thong District, Chiang Mai, Thailand." Oral Presentation at the International Conference on the Role of Universities in Hands-On Education. Chiangmai, Thailand, 23-28 August 2009.

Janphirom, T.; Chaiprasert, P.; Thongthieng, T.; Suwannathep, S.; Songkasiri, W. "Increasing Fish Feed Stability in Water using Guar Gum: Case Study with *Channa striata*." Oral Presentation at the International Conference on the Role of Universities in Hands-On Education. Chiangmai, Thailand, 23-28 August 2009.

Songkasiri, W.; Nopharatana, A.; Nopharatana, M.; Ruenglerpanyakul, W. "Starch Engineering and Process Optimization (SEPO) Program: A Public-Academia-Private Partnership for M.E. Degree Study in Thailand." Oral Presentation at the International Conference on the Role of Universities in Hands-On Education. Chiangmai, Thailand, 23-28 August 2009.

Songkasiri, W.; Koonsrisuk, S.; Tanchareon, S.; Pawakul, W.; Patumtanaruk, S. "Practicing Hands-On in Schools: Case Study of Integrated Resource Development Curriculum for a Rural School in Thailand." Oral Presentation at the International Conference on the Role of Universities in Hands-On Education. Chiangmai, Thailand, 23-28 August 2009.

Khongkittikhon, W.; Saengchan, K.; Nopharatana, A.; Songkasiri, W. "Reducing Sulfur Residue in Tapioca Starch Product." Oral Presentation at the International Conference on Innovations in Agricultural, Food and Renewable Energy Productions for Mankind. Nakornratchsima, Thailand, April 1-3, 2009.

Patamarajvichian, P.; Saengchan, K.; Nopharatana, A.; Songkasiri, W. "Enhancement of Tapioca Starch Collection by Post Cyclone." Oral Presentation at the International Conference on Innovations in Agricultural, Food and Renewable Energy Productions for Mankind. Nakornratchsima, Thailand, April 1-3, 2009.

Rutthitiwapanich, T.; Chaiprasert, P.; Songkasiri, W. "Feeding Effect on the Flow Behavior within Distribution Pipe of Industrial Scale Biogas Reactor." Poster Presentation at the International Conference on Innovations in Agricultural, Food and Renewable Energy Productions for Mankind. Nakornratchsima, Thailand, April 1-3, 2009.

Plylaharn, N.; Ruenglerpanyakul, W.; Wanichpongpan, P.; Chanin, C.; Songkasiri, W. "Development of a Low-Temperature Bio-filter and Photocatalyst Reactor for a Rainbow Trout Farm." Oral Presentation at the Regional Conference on Tropical Aquaculture: Applications, Environmental and Social Impacts, Rayong, Thailand, March 27-29, 2008.

Wajanakunanan, R.; Pejaranonda, B.; Jaruwan, C.; Sirithanasak, W.; Songkasiri, W. "Effect of Toxicity of Agro-Chemical Usage on the Trout Farm at Inthanond Royal Project Research Station." Oral Presentation at the Regional Conference on Tropical Aquaculture: Applications, Environmental and Social Impacts, Rayong, Thailand, March 27-29, 2008.

Laopitinan, O.; Horthong, M.; Ruenglerpanyakul, W.; Nopharatana, A.; Wanichpongpan, P.; Unsrison, G.; Songkasiri, W. "Development of Nutrient Budgets of A Rainbow Trout Farm." Oral Presentation at the Regional Conference on Tropical Aquaculture: Applications, Environmental and Social Impacts, Rayong, Thailand, March 27-29, 2008.

Tipwong, S.; Saengchan, K.; Nopharatana, A.; Songkasiri, W. "Study of Hydrocyclone with Solid Core for a Tapioca Starch Separation Unit." Oral Presentation at the 2nd International South East Asian Technical University Consortium (SEATUC) Symposium, Bandung, Indonesia, February 26-27, 2008.

Boonya, S.; Ruenglerpanyakul, W.; Songkasiri, W. "Effects of Liquid Upflow Velocity and Reactor Configuration on Solid Flow Pattern inside UASB Reactors Using Computational Fluid Dynamics (CFD)." Oral Presentation at the International Conference on Engineering, Applied Sciences, and Technology, Bangkok, Thailand, November 21-23, 2007.

Songkasiri, W.; Sasadoor, W.; Wisitrungruang, W.; Tipwong, S.; Nopharatana, A. "Increase of Dewatering Efficiency and Starch Recovery using Extractors in Pulp Management for a Native Cassava Starch Production Factory." Oral Presentation at International Symposium on Air Quality and Waste Management for Agriculture, Broomfield, CO, USA, September 15-19, 2007.

Songkasiri, W.; Phalapornkule, C.; Ruenglerpanyakul, W. "Comparison of Fluid Flow Through UASB Three-Phase Separators with Different Designs." Oral Presentation at Asia Pacific Confederation of Chemical Engineering, Kuala Lumpur, Malaysia, August 27-30, 2006.

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