

ดร.ประยูร ฟองสทิติกุล

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Position: Associate Professor, Sanitary Engineering Department and
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Education

Ph.D. in Environmental Engineering, Department of Civil Engineering, University of British Columbia, CANADA, 1992.

M.Sc in Environmental Technology and Management, Department of Environmental Engineering, Asian Institute of Technology, Bangkok, THAILAND, 1978.

B.Sc in Sanitary Science, Department of Sanitary Science, Faculty of Public Health, Mahidol University, Bangkok, THAILAND, 1975.

Expertise

Research Areas: Wastewater Engineering (Biological Nutrient Removal, BNR),
Solid and Hazardous Waste Management, Water Quality Model

Research Technology: AnA2/O2 SBR (Sequencing Batch Reactor), Water quality
Model Program (Mike 11)

Researches and Professional Experiences

Project Director, Alcohol Production and color removal from Palm Oil Mill Effluent (POME), financially supported by Center of Excellence on Environmental Health, Toxicology and management of Chemicals, COE-ETM

Project Director, Immobilization of *Saccharomyces cerevisiae* to produce ethanol from wastewater ethanol plant industry, financially supported by Center of Excellence on Environmental Health and Toxicology, COE-EHT, PERDO

Planning and design of solid waste collection and disposal systems for a feasibility study of solid waste management for Laem Chabang Municipality, Chonburi, Public Works Dept, 1993.

Feasibility study of solid waste management systems for Chonburi (Bo Win) Industrial Estate, Phase 2 and 3, Chonburi, IEAT-Hemaraj Land Development Public Company Limited, 1993-1994.

Feasibility Study of Solid Waste Management by Incineration for Ayuthaya Municipality, Ayuthaya, May 1994.

Feasibility study and detailed design of solid waste management System for Eastern Seaboard Industrial Estate(Rayong), Rayong, IEAT-Hemaraj Land Development Public Company Limited, 1994-1995.

Environmental Impact Assessment for EGAT Lignite Mine, responsible for public health and nutrition aspect, Lam Pang, Electricity Generating Authority of Thailand (EGAT), July, 1994.

Environmental Impact Assessment for 3 large scale multipurpose Water resources development project: Upper Nam Pai, Lower Nam Pai, and Moei-Mae Song-Phumibhol Reservoir Transbasin Diversion Project, responsible for surface water quality aspect and public health and nutrition aspect, Mae Hongson and Tak, Department of Energy Development and Promotion, 1995.

Feasibility of Solid Waste Management System for Klong Luang Municipality, Pathum Thani, serving as project adviser, January 1995.

Feasibility Study of Solid Waste Management Systems for Nakorn Panom Municipality and Bang Bua Thong Municipality, Nakorn Panom and Nonthaburi, serving as project adviser, September 1995.

Feasibility Study of Solid Waste Management System for Surin Municipality and Sungai-Kolok Municipality, Surin and Narathiwat, serving as project adviser, August 1995.

Feasibility Study and Detailed Design of Solid Waste Management System for Pak Panang Municipality, Nakorn SriThammarat, serving as project adviser, August 1995.

Provincial Implementation Plan and Priority Ranking for investment in Environmental Problem/Mitigation of 5 provinces: Trad, Mukdahan, Chainat, Narkorn Sawan, and Surin, serving as project adviser, 1996.

Environmental Impact Assessment for Pa-sak Basin Under the Royal Initiative Project, responsible for Public Health and Environmental Aspects, Ministry of Public Health, serving as project adviser, 1996.

Feasibility Study and Detailed Design of Solid Waste Management System for Nan Municipality, Nan Province and Pra-in Racha Sanitary District, Ayuthaya, serving as project adviser, 1997.

Feasibility Study and Detailed Design of Solid Waste Management System for Yala Municipality, Yala and Chiang Yun Sanitary District, serving as project adviser, 1998.

Feasibility Study of Drainage, Sewerage and Wastewater Treatment Systems for Sung-Kha Sanitary District, Surin, serving as project adviser, 1998.

Deputy Project Director, Master and Implementation Plans for Comprehensive Solid Waste Minimization and Recycle Technology, Department of Pollution Control, Ministry of Science, Technology, And Environment, 1998.

Booklet on ASEAN Achievements and Future Directions in Pollution Control : Hazardous Waste Management Department of Pollution Control, Ministry of Science, Technology, and Environment, 1999.

Capacity Building of Sub-district Authority in the Management of Provincial Environment (Sara-buri Province), Regional office 2 (Saraburi), The office of Environmental Policy and Planning, Ministry of Science, Technology, and Environment 1999.

Environmental Impact Assessment for Huay Hin-kong, Ubon – Ratchathani, responsible for Water Quality Aspect. Department of Irrigation. 2000

Environmental Impact Assessment for Huay – Hai, Nong – Kai Province, responsible for Water Quality Aspect. Department of Irrigation. 2000

Environmental Impact Assessment for Huay Kitti, Kanchana – buri Province, responsible for Water Quality Monitoring and Mathematical Modeling Aspect. Department of Energy Development and Promotion 2002.

Comprehensive Training Program on Environmental Quality Control, Monitoring, and Enforcement for Pollution Control Officer, Department of Pollution Control, Ministry of Science, Technology, and Environment, 2002.

Environmental Impact Assessment for Mae – Nueng River, Lam-Pang Province, responsible for Water Quality Monitoring and Mathematical Modeling Aspect, Department of Irrigation, 2003.

Environmental Impact Assessment for Klong Chom-pu, Pitsanulok Province, responsible for Water Quality Aspect. Department of Irrigation. 2004.

Environmental Impact Assessment for Klong Prapa Flyover Road Project, responsible for Water Quality Monitoring Program with an Application of Mathematical Modeling (MIKE11). Department of High way, Ministry of Interior, 2004.

Environmental Impact Assessment for Lum-ta-kong River, Nakorn Ratchasrima Province, responsible for Water Quality Aspect with an application of Mathematical Modeling (MIKE11). Department of Irrigation, 2005.

Drafting a specific laws and regulations under the requirements of Basal Convention on the control of Transboundary Movements of Hazardous Waste and Their Disposal (3.86 Million Baht Project), responsible for Storage Collection-Transport and disposal of Hazardous Waste Aspects. Department of Pollution Control. Ministry of Natural Resource and Environment, serving as project adviser on Environmental Protection and Management, 2005.

Drafting a specific laws and regulations under the requirements of National Master Plan on the Control of Opened Burning (2 Million Baht Project). Department of Pollution Control, Ministry of Natural Resource and Environment, serving as project advisor, 2006.

Environmental Impact Assessment for Mae Ngao River, Chiang Mai and Tak Provinces, responsible for Water Quality and its Utilization as well as Public Health and Nutritional Aspects. Department of Alternative Energy Development and Conservation, Ministry of Energy, 2008-2009.

Publications

Fongsatitkul P, Mavinic DS, Lo KV. A Two-phase anaerobic digestion (UASB-UASB) process: A Two-phase concept, process failure and maximum system loading rate. *J Water Environment Federation* 1994; 66 (23): 243.

Fongsatitkul P, Mavinic DS, Lo KV. A Two-phase anaerobic digestion (UASB-UASB) process: Induced failure and system recovery using a step loading reduction approach and modified recycle ratio (RR). *Environmental Technology* 1995; 16: 137-46.

Fongsatitkul P, Mavinic DS, Lo KV. A Two-phase anaerobic digestion (UASB-UASB) process: Design criteria and optimal system loading capacity. *Canadian Journal of Civil Engineering* 1995; 22: 551-65.

Fongsatitkul P, Srisawat P. Can we treat organics, nitrogen, and phosphorus from domestic wastewater simultaneously. *Journal of Technology* 1996; 129: 96.

Fongsatitkul P, Huangprasert, S, and Srisawat, P. Efficiency of sequencing batch reactor (SBR) in the removal of organics, nitrogen, and phosphorus from the domestic wastewater. *Thai Environmental Engineering Journal* 1998; 12 (13) : 33-6.

Fongsatitkul P, Srisawat, P, and Karchanubarn, R. Factors affecting the efficiency of sequencing batch reactor in the removal of organics, nitrogen, and phosphorus from domestic wastewater. *Safety and Environment Journal* 1999; 7(3): 43-52.

Fongsatitkul P, Shumnumsirivath, S, and et al. Efficiency of sequencing batch reactor in the removal of organics and microorganisms from the hospital wastewater. *Public Health Nurse Journal*; 11 (1).

Fongsatitkul P, Huangprasert, S, and et al. Removal of cyanide from the zinc electroplating process effluent using permanganate oxidation method. *Journal of Public Health* 1999; 29 (3): 38-47.

Fongsatitkul P, Charupoonpol, P, and et al. Attitude towards infectious waste management and related factors among working staff in Nopparatrajthanee hospital. *Journal of Lerdsin Hospital* 1999; 2: 68-78.

Polpimolthep C, **Fongsatitkul P**. Optimum expansion of dual-filters on the efficiency of backwash system. *Engineering Transaction (Group A)* 1999; 2: 70-7.

Polpimolthep C and **Fongsatitkul P**. Utilization of alum sludge from the clarifier of water treatment plant to improve the effluent quality of textile dye-stuff industry. *Thai Journal of Epidemiology* 1999; 7(2): 67-75.

Elefsiniotis P, **Fongsatitkul P**, et al. Electrochemical treatment of a sulfur dye wastewater from a textile industry. Presented at IWA-Asia Pacific regional conference on Asian Waterqual 2003, Bangkok, Thailand. October 19-23, 2003

Fongsatitkul P, Elefsiniotis P, Yoosook S, Karcharnubarn R. Simultaneous removal of organic carbon, nitrogen, and phosphorus from a domestic wastewater using anaerobic sequencing batch reactors. *Malaysian J Sci* 2004; 23: 151-9.

Fongsatitkul P, Elefsiniotis P, Yamasmit A, Yamasmit N. "Use of Sequencing Batch Reactors and Fenton's Reagent to Treat a Wastewater from a Textile Industry" *Biochemical Engineering Journal (BEJ)* 2004; 21: 213-20.

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Fongsatitkul P, Elefsiniotis P, Boonyanitchakul, B. Treatment of a textile dye wastewater by an electrochemical process. *J Environl Sci and Health, Part A: Toxic/ Hazardous Substance & Environmental Engineering* 2006; 41: 1183-95.

Khuhasawan N, **Fongsatitkul P**, Shumnumsirivath S, Teankaprasith K, Warodomrungsimun C. Feasibility of wastewater treatment system A2/O (anaerobic-anoxic-oxic) for biological organics and nutrient (nitrogen and phosphorus) removals from slaughterhouse wastewater. *J Public Health* 2007; 37:168-77.

Sriwiriyarat T, Ungkurarate W, **Fongsatitkul P**, et.al. Effects of dissolved oxygen on biological nitrogen removal in integrated fixed film activated sludge (IFAS) wastewater treatment process. *J Environ Sci and Health, Part A: Toxic/ Hazardous Substance & Environmental Engineering* 2008 ; 43 : 518-27.

Fongsatitkul P, Wareham DG, Elefsiniotis P. The influence of organic loading and anoxic/oxic times on the removal of carbon, nitrogen, and 9 phosphorus from a wastewater treated in a sequencing batch reactor. *J Environ Sci Health, Part A: Tox Hazard Subst& Environ Eng* 2008 ; 43 : 725-30.

Sriwiriyarat T, Pittayakool K, **Fongsatitkul P**. Stability and capacity enhancements of activated sludge process by integrated fixed film activated sludge (IFAS) technology. *J Environ Sci and Health, Part A: Toxic/ Hazardous Substance & Environmental Engineering* 2008; 43: 1318-24.

Fongsatitkul P, Wareham DG, Elefsiniotis P. Treatment of four industrial wastewaters by sequencing batch reactors: Evaluation of COD, TKN, and TP removal. *Environ Technol* 2008; 29:1257-64.

Chinwetkitvanich S, **Fongsatitkul P**, et al. Application of coal ash for polyvinyl alcohol (PVA) immobilization of nitrifying bacteria for effective ammonia-nitrogen removal. Presented at 1st IWA Asia-Pacific Young Water Professionals Conference: Meeting on Water Challengers in Asia-Pacific Region, Gwangju Institute of Science and Technology (GIST), Gwangju, Korea December, 7-15, 2008.

Fongsatitkul P, Elefsiniotis P, Khuhasawan, N, Jindal, R. Use of power plant ash to remove and solidify heavy metals from a metal-finishing wastewater” *Journal of Water Air Soil Pollution*.2009; 203:147–54.

Fongsatitkul P, Wareham DG, Elefsiniotis P. The effect of organic load and anoxic/oxic fraction on carbon, nitrogen and phosphorus removal in an SBR treating a carbon-limited wastewater. The 11th International conference on environmental science and technology, Chania, Crete, Greece, September, 3-5, 2009.

Warodomrungsimun, C, **Fongsatitkul P**. Kinetic rates and mass balance of COD, TKN, and TP using SBR treating domestic and industrial wastewater. *J. Med Assoc Thai* 2009;92 (Suppl 7): S134-41.

Nisit Jongsupavisankit, Jindawan Wibuloutai, **Prayoon Fongsatitkul**. 2009. Efficiency of Domestic Wastewater Treatment by *Vetiveria Zizanioids* NASH in Comparison of Cycle Treatment. *Journal of Environmental Health*, 12 (1): 38-49.

Fongsatitkul P, Wareham DG, Elefsiniotis P. Effect of mixture ratio, solids concentration and hydraulic retention time on the anaerobic digestion of the organic fraction of municipal solid waste. *Waste Management and Research* 2010; 28: 811-817.

Fongsatitkul P, Elefsiniotis P, Kitkaew, D, Rungsipanodorn, C. Use of rice husk ash as an admixture to remove chromium from a tannery waste. *Water, Air, and Soil Pollution*. 2011; 220 (1-4), pp. 81-88.

Sinnaraprasat, S, **Fongsatitkul P**. Optimal condition of Fenton’s reagent to enhance the alcohol production from palm oil mill effluent. *EnvironmentAsia* 2011; 4 (2), pp.9-16.

Fongsatitkul P, Wareham DG, Elefsiniotis P, Charoensuk. Treatment of a slaughterhouse wastewater: effect of internal recycle rate on COD, TKN, and TP removal. *Environmental Technology*, 2011; 33 (15-16), pp.1755-1759.

Fongsatitkul P, Wareham DG, Elefsiniotis P. Two-phase anaerobic digestion of the organic fraction of municipal solid waste: Estimation of methane gas production. *Waste Management and Research* 2012; 30 (7), pp 720-726.

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Feungpean M, Panyapinyopol B, Elefsiniotis P, **Fongsatitkul P**. Development of statistical models for trihalomethane (THM) occurrence in a water distribution network in Central Thailand. *Urban Water Journal* (Received 25 January 2013; accepted for publication 20 November 2013) vol. 12, No. 4, 275-282, 2015.

E.Sparchez, P.Elefsiniotis, D.G.Wareham, **P. Fongsatitkul**. Co-treatment of Domestic and dairy wastewater in an activated sludge system. *Environmental Technology*, vol. 36, No. 6, 715-721, 2015.

Buayoungyuen S, Warodomrunsimun C, Feungpean M, **Fongsatitkul P**. AnA2/O2 SBR under a Short Cycle Time and SRTs in Treating Slaughterhouse Wastewater. Accepted for publishing in *Asia Pacific Journal of Public Health*, vol. 7 No.1, 2016.

Fongsatitkul P, Chulamard B, and Elefsiniotis P. Using palm oil ash as an adsorbent for chromium removal and stabilization/solidification of ash-sludge. Accepted for publishing in the *Journal of Environmental Engineering and Science*, 2016.