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Education

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Field of interest : Environmental Biotechnology, Waste Utilization, Wastewater Treatment

Current researches :

1. Industrial and agricultural waste utilization
2. Improvement of wastewater treatment system
3. Biogas production
4. Microbial fuel cell

Publication:

ปิยะรัตน์ บุญแสวง. 2552. ปัจจัยที่มีผลต่อการผลิตพอลิไฮดรอกซีอัลคาโนเอตจากจุลินทรีย์. ว.วิทย. มข. 37(3): 256-267.

วิภารัตน์ ชัยเพชร, ปิยะรัตน์ บุญแสวง และ สุเมธ ไชยประพัทธ์. 2551. ผลของการเตรียมตะกอนสลัดจ์สำหรับระบบบำบัดไร้อากาศแบบสองขั้นตอนของน้ำเสียอุตสาหกรรมอาหารทะเลกระป๋อง. วารสารวิศวกรรมสิ่งแวดล้อมไทย. 22 (3): 109-119.

Boonsawang, P., Subkaree, Y. and Srinorakutara, T. 2012. Ethanol production from palm pressed fiber by prehydrolysis prior to simultaneous saccharification and fermentation (SSF). Biomass Bioener. 40:127-132.

Chaiprapat S., Preechalertmit P., **Boonsawang P.,** Karnchanawong S. 2011. Sulfidogenesis in Pretreatment of High-Sulfate Acidic Wastewater Using Anaerobic Sequencing Batch Reactor and Upflow Anaerobic Sludge Blanket Reactor. Environmental Engineering Science. 28(8): 597-604.

Meyer, P., Pankaew, S., **Boonsawang, P.** and Tongurai, C. 2011. Anaerobic fermentation of crude glycerol to produce value-added products. Applied Engineering in Agriculture. 27 (4): 655-662.

Rattanapan, C., **Boonsawang, P.** and Kantachote, D. 2011. Hydrogen sulfide removal from biogas using pure and mixed cultures of sulfide-oxidizing bacteria biofiltration Inter. J. Green Energy 8 (7):705-714.

Sukkasem, C., Laehlah, S., Hniman, A., O'thong, S., **Boonsawang, P.**, Rarnngnarong, A., Nisoa, M., Kirdtongmee, P. 2011. Upflow bio-filter circuit (UBFC): Biocatalyst microbial fuel cell (MFC) configuration and application to biodiesel wastewater treatment. Bioresource Technol. 102 (22): 10363-10370.

Boonsawang, P. and Wongsuvan, T. 2010. Nutrient optimization of polyhydroxyalkanoate production from palm oil fiber by *Ralstonia eutropha* TISTR 1095 using response surface. Songklanakarin J. Sci. Technol. 32 (1): 9-16.

Rattanapan, C., Kantachote, D., Yan, R. and **Boonsawang, P.** 2010. Hydrogen sulfide removal using granular activated carbon biofiltration inoculated with *Alcaligenes faecalis* T307 isolated from concentrated latex wastewater. Inter.Biodeter.Biodegrad. 64: 383-387.

Rattanapan, C. and **Boonsawang, P.** 2010. Effect of H₂S and air flow rates on pure and consortium culture of sulfide oxidizing bacteria biofiltration for H₂S removal. J. Health Res. 24:1-6.

Rattanapan, C., **Boonsawang, P.** and Kantachote, D. 2009. Removal of H₂S in down-flow GAC biofiltration using sulfide oxidizing bacteria from concentrated latex wastewater. Bioresource Technol. 100: 125-130.

Boonsawang, P., Wongsuvan, T. and Cheirsilp, B. 2008. Production of polyhydroxyalkanoates; PHAs using carboxylic acid obtained from palm oil fiber fermentation. Thai J. Biotechnol. 8: 91-98.

Boonsawang, P., Laeh, S. and Intrasungkha, N. 2008. Enhancement of sludge granulation in anaerobic treatment of concentrated latex wastewater. Songklanakarin J. Sci. Technol. 30 (Suppl.1): 111-119.

Sukkasem, C., Xu, S., Park, S., **Boonsawang, P.** and Liu, H. 2008. Effect of nitrate on the performance of single chamber air cathode microbial fuel cells. Water Res. 42: 4743-4750.

Chaisri, R., **Boonsawang, P.**, Prasertsan, P. and Chairapat, S. 2007. Effect of organic loading rate on methane and volatile fatty acids productions from anaerobic treatment of palm oil mill effluent in UASB and UFAF reactors. Songklanakarin J. Sci. Technol. 29 (Suppl.2:Grad.Res.): 311-324.

Presentation:

Boonsawang, P., Rattanapan, C. and Kantachote, D. 2008. Biodegradation of hydrogen sulfide using biofiltration system. The proceedings of 7th National Environmental Conference, 12-14 March 2008, Chalabhorn Research Institute, Bangkok.

Boonsawang, P., Laeh, S. and Intrasungkha, N. 2007. Effect of aluminium chloride on granule formation in anaerobic wastewater treatment. The proceedings of 6th National Environmental Conference, 7-9 March 2007, Amarin Lagoon Hotel, Phitsanulok.

Boonsawang, P., Wongsuvan, T. and Cheirsilp, B. 2007. Production of polyhydroxyalkanoate using carboxylic acid produced from palm oil fiber fermentation. The proceedings of 2nd International Conference on Fermentation Technology for Value Added Agricultural Products, 23-25 May 2007, Kosa Hotel, Khon Kaen.

Boonsawang, P. and Chaisri, R. 2007. Anaerobic digestion of palm oil mill effluent in a two-stage UASB/UFAF system. The 11th World Congress on Anaerobic Digestion (AD11), 23-27 September 2007, Brisbane Convention Center, Brisbane, Australia.

Boonsawang P. and Harnnarong R. 2006. Production of Carboxylic Acids from Palm Pressed Fiber. The proceedings of Sustainable Energy and Environment 2006: Technology and Policy Innovations, 21-23 November 2006, Swissôtel Nai Lert Park, Bangkok.

Boonsawang P., Intamano S., Pongsiraprapha P. 2006. Effect of sulfate precipitation pretreatment on hydrogen sulfide reduction in biogas production from wastewater of concentrated latex

industry. The proceeding of 5th National Environmental Conference, 8-10 March 2006, Siam City Hotel, Bangkok.