
2008 Peer-reviewed Publications by ESE Faculty

(This listing is arranged in alphabetical order by Author and ESE faculty are highlighted in bold.)

Amrita P, Pehkonen S O, **Yu L E** and Ray M B, 2008, "Photocatalytic Inactivation of Airborne Bacteria in a Continuous-Flow Reactor", *Industrial and Engineering Chemistry Research*, **47**: 7580-7585.

Balasubramanian R and See S-W, 2008, "Chemical Characteristics of Fine Particles Emitted from Different Gas Cooking Methods", *Atmospheric Environment*, In Press.

Balasubramanian R, Sundararajan V P and Kuppusamy V, 2008, "Equilibrium Isotherm Studies For the Multi Component Adsorption of Lead, Zinc, and Cadmium onto Indonesian Peat", *Industrial and Engineering Chemistry Research*, In Press.

Basheer C, Alnedhary A A, Rao B S M, **Balasubramanian R** and Lee H K, 2008, "Ionic-Liquid Supported Three-Phase Liquid-Liquid-Liquid Microextraction as a Sample Preparation Technique for Aliphatic and Aromatic Hydrocarbons Prior to Gas Chromatography-Mass Spectrometry", *Journal of Chromatography A*, **1210**(1): 19-24.

Choi J H and **Ng H Y**, 2008, "Effect of membrane type and material on performance of a submerged membrane bioreactor", *Chemosphere*, **71**: 853-859.

Choi Jae-Hoon, Park S K and **Ng H Y**, 2008, "Membrane fouling in a submerged membrane bioreactor using track-etched and phase-inversed porous membranes", *Separation and Purification Technology*, In Press.

Dang T C, Karuppiyah S and **Obbard J P**, 2008, "Distribution of Heavy Metals in the Dissolved and Suspended Phase of the Sea-Surface Microlayer, Seawater Column and in Sediments of Singapore's Coastal Environment", *Environmental Monitoring and Assessment*, **136**(1-3): 255-272.

Fang W, **Hu J Y** and **Ong S L**, 2008, "Influence of Phosphorus on Biofilm Formation in Model Drinking Water Distribution Systems", *Journal Of Applied Microbiology*, In Press.

Gao Y, **Yu L E** and Chen S B, 2008, "Effects of organics on efflorescence relative humidity of ammonium sulfate and sodium chloride particles", *Atmospheric Environment*, **42**: 4433-4445.

Han H and **Bai R B**, 2008, "Buoyant photocatalysts with greatly enhanced visible-light activity prepared through a low temperature hydrothermal method", *Industrial & Engineering Chemistry Research*, In Press.

He J and **Balasubramanian R**, 2008, "Rain-Aerosol Coupling In the Tropical Atmosphere of Southeast Asia: Concentrations and Scavenging Ratios of Major Ionic Species", *Journal of Atmospheric Chemistry*, In Press.

He J, **Balasubramanian R**, Karthikeyan S and Umid M J, 2008, "Determination of Semi-Volatile Organochlorine Compounds In The Atmosphere of Singapore Using Accelerated Solvent Extraction", *Chemosphere*, In Press.

He J and **Balasubramanian R**, 2008, "Rain-Aerosol Coupling In the Tropical Atmosphere of Southeast Asia: Concentrations and Scavenging Ratios of Major Ionic Species", *Journal Of Atmospheric Chemistry*, In Press.

See S-W and **Balasubramanian R**, 2008, "Chemical Characteristics of Fine Particles Emitted from Different Gas Cooking Methods", *Atmospheric Environment*, In Press.

Hu J Y, Quek P H, Chu X and Tan X, 2008, "Low-pressure UV disinfection of MS-2 and QB coliphage: effect of turbidity and coliforms", *Advances in Asian Environmental Engineering*, **7**(1): 1-6.

Hu J Y, Yu J, Tanaka S, Fujii S and Nguyen L, 2008, "Occurrence of Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA) in Water and Wastewater of Singapore", *Advances in Asian Environmental Engineering*, **7**(1): 47-52.

Hu J Y, Sharma VK, Tint ML, **Ong S L** and Zhang ZB, 2008, "Oxidation of Hormone Estrogens in Water Using Potassium Ferrate (VI)", *Advances in Asian Environmental Engineering*, **7**(1): 89-94.

Hu J Y and Shan J, 2008, "Control of RO/NF organic fouling by monitoring and modification of organic polarity of feed water", *IWA Journal Water Science and Technology: Water Supply*, **8**(4): 467-472.

Hu J Y, Fang W and Yu B, 2008, "Biofilm control using chlorine-based disinfectants", *IWA Journal Water Science and Technology: Water Supply*, **8**(5): 489-497.

Hu J Y, Shan J and **Ong S L**, 2008, "Improving rejection of organic fractions in reclaimed water based on intermolecular interaction effect", *Water Science and Technology*, **58**(6): 1299-1304.

Hu J Y and Quek P H, 2008, "Effects of UV Radiation on Photolyase and Implications with Regards to Photoreactivation following Low- and Medium- Pressure UV Disinfection", *Applied and Environmental Microbiology*, **74**(1): 327-328.

Hu J Y and J Shan, 2008, "Control of RO/NF organic fouling by monitoring and modification of organic polarity of feed water", *IWA Journal Water Science and Technology: Water Supply*, **8**(4): 467-472.

Hu J Y, W Fang and B Yu, 2008, "Biofilm control using chlorine-based disinfectants", *IWA Journal Water Science and Technology: Water Supply*, **8**(5): 489-497.

Hu J Y, J Shan and Ong S L, 2008, "Improving rejection of organic fractions in reclaimed water based on intermolecular interaction effect", *Water Science and Technology*, **58**(6): 1299-1304.

Huang Z, Ong S L and Ng H Y, 2008, "Feasibility of submerged anaerobic membrane bioreactor (SAMBR) for treatment of low-strength wastewater", *Water Science and Technology*, **58**(10): 1925-1931.

Kuppusamy V, Teo T T, Balasubramanian R and Joshi U M, 2008, "Application of Sargassum biomass to remove heavy metal ions from synthetic multi-metal solutions and urban storm water runoff", *Journal of Hazardous Materials*, In Press.

Kuppusamy V, Arun M, Umid M J and Balasubramanian R, 2008, "Biosorption of As(V) onto the shells of the crab (*Portunus sanguinolentus*): Equilibrium and kinetic studies", *Industrial & Engineering Chemistry Research*, In Press.

Lee L Y, Hu J Y, Ong S L, Ng H Y, Wong S W, Feng Y Y and Tan X, 2008, "Alternative immunofluorescent labeling of *Cryptosporidium parvum* in water samples using semiconductor quantum dots", *Water Environment Research*, **80**(8): 725-731.

Lee L Y, Ong S L, Ng H Y, Hu J Y and Koh Y N, 2008, "Simultaneous Ammonium-Nitrogen and Copper Removal and Copper Recovery Using Nitrifying Biofilm from the Ultra-Compact Biofilm Reactor", *Bioresource Technology*, **99**(14): 6614-6620.

Lefebvre O, A MD, Ooi W K, Tang Z, Chua D H C and Ng H Y, 2008, "An insight into cathode options for microbial fuel cells", *Water Science and Technology*, **57**(12): 2031-2037.

Lefebvre O, A MD, and Ng H Y, 2008, "A microbial fuel cell equipped with a biocathode for organic removal and denitrification", *Water Science and Technology*, **58**(4): 881-885.

Li TG, Liu JX and Bai R B, 2008, "Membrane Aerated Biofilm Reactors: A Brief Current Review", *Recent Patents on Biotechnology*, **2**(3): 88-93.

Li TG and Bai R B, 2008, "Membrane-aerated biofilm reactor for the treatment of acetonitrile wastewater", *Environmental Science and Technology*, **42**(6): 2099-2104.

Li TG, Bai R B and Liu JX, 2008, "Distribution and composition of extracellular polymeric substances in membrane-aerated biofilm", *Journal of Biotechnology*, **135**(1): 52-57.

Li TG, Bai R B and Liu JX, 2008, "Biodegradation of acetonitrile by adapted biofilm in a membrane-aerated biofilm reactor", *Biodegradation*, In Press.

Li G, **Bai R B** and Zhao X S, 2008, "Coating of TiO₂ thin films on the surface of SiO₂ microspheres: towards industrial photocatalysis", *Industrial and Engineering Chemistry Research*, **47**(21): 8228-8232.

Liang D-W, Zhang T, Fang H H P, and **He J**, 2008, "Phthalates biodegradation in the environment", *Applied Microbiology and Biotechnology*, **80**: 183-198.

Lim J, **Yu L E**, Kostetski Y, Lim C, Ryu J and Kim J, 2008, "Effects of Driving Conditions on Diesel Exhaust Particulates", *Journal of The Air and Waste Management Association*, **58**(8): 1077-1085.

Lim S F, Zheng Y, Zou S and **Chen J P**, 2008, "Characterization of copper adsorption onto an alginate encapsulated magnetic sorbent by a combined FT-IR, XPS, and mathematical modeling study", *Environmental Science and Technology*, **42**(7): 2551-2556.

Lin Y and Valentine R L, 2008, "The release of lead from the reduction of lead oxide (PbO₂) by natural organic matter", *Environmental Science and Technology*, **42**(3): 760-765.

Lin Y and Valentine R L, 2008, "Reduction of lead oxide (PbO₂) by iodide and formation of iodoform in the PbO₂/ I-/NOM system", *Environmental Science and Technology*, **42**(8): 2919-2924.

Lin Y and Valentine R L, 2008, "Release of Pb(II) from Monochloramine Mediated Reduction of Lead Oxide (PbO₂)", *Environmental Science and Technology*, **42**(24): 9137-9143.

Liu, CK and **Bai R B**, 2008, "Selective removal of copper and lead ions on diethylenetriamine-functionalized polymeric adsorbent: behaviors and mechanisms", *Water Research*, **42**: 1511-1522.

Mano, K S S P, **Balasubramanian R**, Cheong K W and Tham K W, 2008, "Particulate-Bound Polycyclic Aromatic Hydrocarbons in Naturally-Ventilated Multi-storey Residential Buildings of Singapore: Vertical Distribution and Health Risks", *Building and Environment*, In Press.

Mano, K S S P, **Balasubramanian R**, Cheong K W and Tham K W, 2008, "Traffic-Generated Airborne Particles in Naturally-Ventilated Multi-Storey Residential Buildings of Singapore: Vertical Distribution and Potential Health Risks", *Building and Environment*, In Press.

MO, H, Tay K G and **Ng H Y**, 2008, "Fouling of Reverse Osmosis Membrane by Protein (BSA): Effect of pH, Calcium, Magnesium, Ionic Strength and Temperature", *Journal of Membrane Science*, **315**: 28-35.

Mun, C H, Ng W J and **He J**, 2008, "Acidogenic sequencing batch reactor start-up procedures for induction of 2, 4, 6-Trichlorophenol dechlorination", *Water Research*, **42**: 1675-1683.

Mun, C H, **He J** and Ng W J, 2008, "Pentachlorophenol dechlorination by an acidogenic sludge", *Water Research*, **42**(14): 3789-3798.

Mun, C H, Ng W J and **He J**, 2008, "Evaluation of the biodegradation potential of carbon tetrachloride and chlorophenols under acidogenic condition", *Journal of Environmental Engineering-ASCE*, **134**: 177-183.

Ng H Y, Tay K G, Chua S C and Seah H, 2008, "Innovative large-diameter RO system for water reclamation and seawater desalination", *IWA Journal Water Science and Technology: Water Supply*, **8**(1): 93-99.

Ng H Y, Lee L Y, **Ong S L**, Tao G, Viawanath B, Kekre K, Lay W and Seah H, 2008, "Treatment of RO brine - Towards sustainable water reclamation practice", *Water Science and Technology*, **58**(4): 931-936.

Nozoe, M, Fujii S, **Hu J Y** and Tanaka S, 2008, "Behaviour of Perfluorinated Organic Compounds in Several Wastewater Treatment Plants", *Advances in Asian Environmental Engineering*, **7**(1): 41-46.

Obbard J P, 2008, "Economics of Biodiesel Derived from Waste Cooking Oil in the Philippines", *Energy Sources*, In Press.

Obbard J P, 2008, "Exposure to Persistent Organic Pollutants in utero and Related Maternal Characteristics on Birth Outcomes: a Multivariate Data Analysis Approach", *Chemosphere*, In Press.

Quek, P H E and **Hu J Y**, 2008, "Indicators for photoreactivation and dark repair studies following UV", *Journal of Industrial Microbiology and Biotechnology*, **35**(6): 533-541.

Quek, P H E and **Hu J Y**, 2008, "Influence of photoreacting light intensity and incubation temperature on photoreactivation of *Escherichia coli* following LP and MP UV disinfection", *Journal of Applied Microbiology*, **105**(1): 124-133.

Quek, T Y A and **Balasubramanian R**, 2008, "Low-Energy and Chemical-Free Activation of Pyrolytic Tire Char And Its Adsorption Characteristics", *Journal Of The Air & Waste Management Association*, In Press.

Quek, T Y A and **Balasubramanian R**, 2008, "An Algorithm for the Kinetics of Tire Pyrolysis under Different Heating Rates", *Journal Of Hazardous Materials*, In Press.

Sathrugnan, K, He J, Sundarambal P, **Balasubramanian R** and Burger D, 2008, "Determination of Total Nitrogen In Atmospheric Wet and Dry Deposition samples", *Talanta*, In Press.

Syam K P, Kuppusamy V and **Balasubramanian R**, 2008, "Removal of Cr(VI) ions by spent tea and coffee dusts: reduction to Cr(III) and biosorption", *Industrial & Engineering Chemistry Research*, In Press.

Sundarambal P, Tkalich P and **Balasubramanian R**, 2008, "Modeling the effect of atmospheric nitrogen deposition on marine phytoplankton at the Singapore Strait", *Water Science and Technology*, In Press.

Sundarambal P, **Balasubramanian R** and Tkalich P, 2008, "Atmospheric fluxes of nutrients onto Singapore Strait", *Water Science and Technology*, In Press.

Tan, C H and **Ng H Y**, 2008, "Modeling of external and internal concentration polarization effect on flux behaviour of forward osmosis", *IWA Journal Water Science and Technology: Water Supply*, **8**(5): 533-539.

Tan, C H and **Ng H Y**, 2008, "Modified Models to Predict Flux Behavior in Forward Osmosis in Consideration of External and Internal Concentration Polarizations", *Journal of Membrane Science*, **324**: 209-219.

Tan, C J, Shalom W, **Bai R B** and Tong Y W, 2008, "Defining the Interactions between Proteins and Surfactants for Nanoparticle Surface Imprinting through Miniemulsion Polymerization", *Chemistry of Materials*, **20**(1): 118-127.

Tan J, Li Qing Qing, Loganath A, Chong Y S, Xiao M and **Obbard J P**, 2008, "Multivariate Data Analysis of Persistent Organic Pollutants", *Environmental Science and Technology*, **42**: 2681-2687.

Tan J, Loganath A, Chong Y S and **Obbard J P**, 2008, "Exposure to persistent organic pollutants in utero and related maternal characteristics on birth outcomes: A multivariate data analysis approach", *Chemosphere*, In Press.

Tan T W and **Ng H Y**, 2008, "Influence of mixed liquor recycle ratio and dissolved oxygen on performance of pre-denitrification submerged membrane bioreactors", *Water Research*, **42**: 1122-1132.

Tan T W, **Ng H Y** and **Ong S L**, 2008, "Effect of mean cell residence time on the performance and microbial diversity of pre-denitrification submerged membrane bioreactors", *Chemosphere*, **70**(3): 387-396.

Tang W and **Ng H Y**, 2008, "Concentration of brine by forward osmosis: Performance and influence of membrane structure", *Desalination*, **224**: 143-153.

Wang Z, **Bai R B** and Ting Y P, 2008, "Conversion of waste polystyrene into porous and functionalized adsorbent and its application in humic acid removal", *Industrial and Engineering Chemistry Research*, **47**(6): 1861-1867.

Wu C and **Ng H Y**, 2008, "Photodegradation of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans: Direct photolysis and photocatalysis processes", *Journal of Hazardous Materials*, **151**: 507-514.

Wu C and **Ng H Y**, 2008, "Degradation of C.I. Reactive Red 2 (RR2) using ozone-based systems: Comparisons of decolorization efficiency and power consumption", *Journal of Hazardous Materials*, **152**: 120-127.

Yang L, **Yu L E** and Ray M B, 2008, "Potential Photooxidation Pathways of Dicarboxylic Acids in Atmospheric Droplets", *American Journal of Environmental Sciences*, **4**: 462-466.

Yang L, Ray M B and **Yu L E**, 2008, "Photooxidation of Dicarboxylic Acids. Part I: Effects of Inorganic Ions on Degradation of Azelaic Acid", *Atmospheric Environment*, **42**: 856-867.

Yang L, Ray M B and **Yu L E**, 2008, "Photooxidation of Dicarboxylic Acids. Part II: Kinetics, Intermediates, and Field Observations", *Atmospheric Environment*, **42**: 868-880.

Yang L, **Yu L E** and Ray M B, 2008, "Degradation of Paracetamol in Aqueous Solutions by TiO₂ Photocatalysis", *Water Research*, **42**: 3480-3488.

Yang L and **Chen J P**, 2008, "Biosorption of hexavalent chromium onto raw and chemically modified *Sargassum sp*", *Bioresource Technology*, **99**(2): 297-307.

Yang L, **Yu L E** and Ray M B, 2008, "Photocatalytic Oxidation of Paracetamol: Dominant Reactants, Intermediates, and Reaction Mechanisms", *Environmental Science & Technology*, **43**(2): 460-465.

Yang L M, **Yu L E**, 2008, "Measurements of Oxalic Acid, Oxalates, Malonic Acid and Malonates in Atmospheric Particulates", *Environmental Science & Technology*, **42**: 9268-9275.

Yu L E, Yung L L Y, Ong C N, Tan Y L, Balasubramaniam K S, Hartono D, Shui G, Wenk M R and Ong W Y, 2008, "Translocation and effects of gold nanoparticles after inhalation exposure in rats", *Nanotoxicology*, **1**(3): 235-242.

Yu J and **Hu J Y**, 2008, "Occurrence of Pharmaceuticals in Treated Sewage of Local WRPs", *Advances in Asian Environmental Engineering*, **7**(1): 71-76.

Zhang Z B and **Hu J Y**, 2008, "Selective removal of estrogenic compounds by molecular imprinted polymer MIP)", *Water Research*, **42**(15): 4101-4108.

Zhao D Q, Ong Siew Min, Yue Z L, Jiang Z, Toh Y C, Tan C H, **Chen J P** and Yu H, 2008, "Dendrimer Hydrazides as Multivalent Transient Inter Cellular Linkers", *Biomaterials*, **29**(27): 3693-3702.

Zhao YP and **Hu J Y**, 2008, "Transformation of 17 β -estradiol and reduction of estrogenic activity of 17 β -estradiol by heterogeneous photo-fenton reaction", *Environmental Science and Technology*, **42**(14): 5277-5284, 8.