

This special issue of the journal is based on the papers presented in the international conference on Challenges in Environmental Science and Engineering (CESE-2015) held during 28th September to 2nd October 2015 at Sydney, Australia. CESE-2015 was the eighth annual conference in the CESE series. The conference opened on the 29th of September with keynote speeches on the following topics:

- The Role of Water Reclamation and Reuse for Integrated Water Resource Planning in the 21st Century.
- Anaerobic Fluidized Membrane Bioreactor for the Treatment of
- Domestic Wastewater.
- Bioremediation of Explosives-Contaminated Soil.
- Wastewater, Advanced Oxidation Processes and Organic Matter.
- Integrated Renewable Energy-Driven and Energy-Efficient
- Innovative Desalination Technologies for Water Supply Sustainability.
- Development of Bio-fouling Index for Seawater Desalination.
- Brines from Desalination Plants; not Wastes, but Resources.

On the 29th September, a poster session and four parallel sessions for oral presentations were held. Over the following two days, delegates presented their work in parallel sessions. The conference concluded with two talks discussing about (i) Recent Developments in Sustainable Treatment of Brackish Ground Waters using Membrane Capacitive Deionization (mCDI), (ii) Use of Prussian Blue (PB) Adsorbents for Cesium (Cs) Removal from Drinking Water.

This special issue contains 24 peer reviewed manuscripts on which the following themes:

1. Membrane Bioreactors (five articles on the effect of (i) micro-bial consortia on the performance of MBR, (ii) hydraulic retention time and bio-flocculants on fouling, (iii) powdered activated carbon on the performance of MBR/nano-filtration system, (iv) hydraulic retention time and sludge recirculation on greenhouse gas emission as well as (v) the selection of fertilizer draw solution for

forward osmosis/anaerobic MBR system).

2. Biofuels and Microbial Fuel Cells (five articles on biodiesel production, bio-hydrogen production, production of electrically-conductive nano-scale filaments by sulfate-reducing bacteria in the microbial fuel cell and scaled-up dual anode/cathode microbial fuel cell stack for ethanolamine treatment).

3. Wastewater Treatment (14 articles covering a wide range of topics such as aerobic granular process, removal of nitrogen, micro-pollutants, trace organic compounds and dyes, anaerobic digestion of sludge containing trace organic pollutants, effects of sucrose amendment on ammonia assimilation during composting of sewage sludge, novel techniques to reduce the volume of sludge).

Guest Editors of this special issue are thankful to the Editor-in-Chief of Bioresource Technology, Professor Ashok Pandey and Publishing Editor Dr. Katherine Eve for providing an opportunity to publish selected peer reviewed papers that were presented at CESE-2015. Thanks are also due to Mr. Sankara Narayan, Journal Manager, Ms. Wendy Ye, Special Issue Manager and the entire production team of the journal for their valuable support in bringing out this issue. Last but not least, our sincere appreciation to all the reviewers for their invaluable and critical review comments on manuscripts that were submitted for this special issue.

Guest Editors

Jega V. Jegatheesan

School of Engineering, RMIT University, Australia E-mail address: jega.jegatheesan@rmit.edu.au

Chart Chiemchaisri

Department of Environmental Engineering, Faculty of Engineering, Kasetsart University, Thailand E-mail address: fengccc@ku.ac.th

Li Shu

School of Civil, Environmental and Chemical Engineering, RMIT University, Australia E-mail address: li.shu846@gmail.com

Wenshan Guo

School of Civil and Environmental Engineering, University of Technology, Sydney, Australia E-mail address: Wenshan.Guo-1@uts.edu.au