

**Special issue on the 9th International Conference on
Challenges in Environmental Science and Engineering (CESE-2016)
6–10 November 2016, Kaohsiung, Taiwan**

Editorial

This special issue carries selected peer-reviewed manuscripts based on presentations made at CESE-2016, the 9th Annual International Conference on “Challenges in Environmental Science & Engineering” – CESE Conference Series, which was held from the 6th to the 10th of November 2016 at Kaohsiung, Taiwan.

This special issue has been dedicated to the following themes: *Membrane Technology*, *Adsorption*, *Chemical treatment*, *Biological Treatment*, *Oxidation Processes* and a general theme covering other relevant topics. The *Membrane Technology* theme covers research on fouling mitigation during enhanced coagulation membrane filtration via zero valent iron, membranes incorporating ZnO/rGO composites, membrane filtration recirculating-aquaponic system, effect of trans-membrane pressure in spiral wound forward osmosis module, wastewater recycling in petrochemical industry using submerged microfiltration and reverse osmosis, and influence of the magnetizing pretreatment on the mitigation of membrane scaling during nanofiltration.

The *Adsorption* theme includes adsorption characteristics of antibiotics trimethoprim by activated carbon, adsorption of sunset yellow by luffa sponge and triazophos adsorption behavior on the multi-walled carbon nanotubes and adsorption performance for fluoride by mesoporous silica loaded rare earth lanthanum (Ms-La).

The *Chemical Treatment* theme consists of bamboo charcoal derived high-performance activated carbon via microwave irradiation and chemical KOH activation.

The *Biological Treatment* theme mainly involves effect of biochar on the migration and biodegradation of nitrogen during river-based groundwater recharge with reclaimed water and isolation of a hydrolyzed polyacrylamide degrading bacterium for a UASB reactor for the treatment of oilfield wastewater.

The *Oxidation Processes* theme covers degradation of tetracycline by advanced oxidation processes (sono-Fenton and ozonation processes), visible-light photocatalytic degradation of methylene blue by $\text{H}_2\text{O}_2/\text{NiFe}_2\text{O}_4$, the preparation and photocatalytic activity of phosphotungstic acid-reduced graphene oxide composites, and enhanced photocatalytic mechanism of hydroxyl radical formation in the composite reaction of TiO_2 /oxidant for azo dye degradation.

The Guest Editors are thankful to the editor-in-chief of *Desalination and Water Treatment*, Professor Miriam Balaban for providing an opportunity to publish this special issue. They are also thankful to Ms. Suzanne Trauffer and her staff members at the *Desalination and Water Treatment* editorial office for their dedication in providing great assistance from the beginning to the end of review and publication processes. Our sincere appreciation to all the reviewers for their rigorous review of manuscripts submitted for the special issue. We look forward to another special issue in *Desalination and Water Treatment* for CESE-2017 held from the 11th to 15th November 2017 in Kunming, China.

Guest Editors

Ho Kyong Shon

Center for Technology in Water and Wastewater, School of Civil and Environmental Engineering, University of Technology, Sydney, Australia

Long Duc Nghiem

School of Civil, Mining and Environmental, Engineering, University of Wollongong, Wollongong, Australia

Suhan Kim

Department of Civil Engineering, Pukyong National University, Busan, Korea

Chart Chiemchaisri

Department of Environmental Engineering, Kasetsart University, Bangkok, Thailand

Leonard Tijing

Center for Technology in Water and Wastewater, School of Civil and Environmental Engineering, University of Technology, Sydney, Australia

Li Shu

School of Engineering, RMIT, Melbourne, Australia

Veeriah Jegatheesan

School of Engineering, RMIT, Melbourne, Australia