

Announcement

FESE's Best Papers of 2012

Frontiers of Environmental Science & Engineering (FESE) is pleased to announce the best paper award of 2012. *FESE* had a rapid development in the last year, not only having the first impact factor, but also the improvement of paper quality and the increase in manuscript submission. In order to acknowledge the past contribution and encourage more submission from environmental scholars, *FESE* editorial board chose three distinguished papers from all published papers of 2012 based on their outstanding achievement in the environment management and practical technology as following.

Rodrigo VILLARROEL WALKER, Michael Bruce BECK, Jim W. HALL. Water-and nutrient and energy-systems in urbanizing watersheds. *Front. Environ. Sci. Eng.* 2012, 6(5): 596–611. DOI: 10.1007/s11783-012-0445-4

It is a challenge and of significant to deal with future water-energy-food concerns under the potential impact of climate change. This paper proposed a multi-sectoral systems perspective on addressing water-nutrient-energy systems in city-watershed settings, and summarized its benefits and challenges with two case studies: Atlanta, USA and London, UK. It's useful for transforming from viewing the carbon, nitrogen, and phosphorus species in urban wastewater as pollutants to seeing them as resources to be gainfully recovered. In such rapidly urbanizing and industrializing period, this paper would contribute to making people think about and promote the environmental management for sustainable development.

Xiaoyan SHI, Kebin HE, Weiwei SONG, Xingtong WANG, Jihua TAN. Effects of a diesel oxidation catalyst on gaseous pollutants and fine particles from an engine operating on diesel. *Front. Environ. Sci. Eng.* 2012, 6(4): 463–469. DOI: 10.1007/s11783-011-0317-3

PM_{2.5} has received extensive concerns recently. Especially in China, regional air pollution related to PM_{2.5} is considered as a major environmental threat. In this paper, the effects of a diesel oxidation catalytic (DOC) converter on diesel engine emissions were studied on a diesel bench at various loads. The results indicate that DOC can decrease the carbon emissions, which is favour of reducing PM_{2.5} production. Although biodiesel has the potential to reduce society's dependence on petroleum diesel fuel, their impact on the air quality is worthy of further study, which is particularly important for future large-scale usage of biodiesel.

Ling-Ling WANG, Shan CHEN, Hai-Ting ZHENG, Guo-Qing SHENG, Zhi-Jun WANG, Wen-Wei LI, Han-Qing YU. A new polystyrene-latex-based and EPS-containing synthetic sludge. *Front. Environ. Sci. Eng.* 2012, 6(1): 131–139. DOI: 10.1007/s11783-011-0390-7

To characterize the physicochemical properties of activated sludge is critical for the optimization of biological wastewater treatment processes but is a challenge due to the complexity and variability of real activated sludge. This paper proposes a novel and effective method to evaluate the properties of the activated sludge by preparing a synthetic sludge – manipulated polystyrene latex particles with similar structure and properties to real activated sludge. Such an approach is useful to conduct controlled experiments for better understanding the physicochemical behaviors of sludge.

We hope these papers representing the highest level of *FESE* can bring more attention and promote the innovation in the environmental research field.

Yi Qian
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