Editorial

Functionalized Nanocomposites for Environmental Applications 2015

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During the last decades, using functionalized nanocomposites with nanoscale precision represents one of the most important bottom-up approaches for nanotechnology and has become a major issue in the field of environmental chemistry. The chemical functionalization and self-assemblies of nanocomposites and subsequent environmental applications of well-defined micro/nanostructures have multiple important impacts upon various areas. In this sense, the sophisticated nanocomposites with multiple components have deepened the insight of nanomaterials and enriched the content of environmental chemistry.

This special issue addresses the research studies on the functionalized process and environmental applications of nanocomposites. It contains five selected research articles. Z. Wang and L. Cheng prepared glass ceramics containing CaF_2 nanocrystal doped with CeO_2 through isothermal crystallization. Glass transition temperature and the crystallization temperature decrease firstly and then increase with the increase of CeO_2 content. H. Huang et al. synthesized MnO_2 /graphene nanocomposites through a simple route in a water-reflux condenser system. Because excessive MnO_2 enwrapping graphene would affect the overall conductivity, the composite prepared by lower temperature has better characteristics of supercapacitor. K. Zheng et al. utilized stainless steel anode covered with layer film of TiO_2 doped with manganese to decompose 4-nitroaniline in rectangular borosilicate glass reactor. The performance of degradation 4-nitroaniline was evaluated by analyzing cracking ratio of 4-nitroaniline ring, the chemical oxygen demand (COD), and

total organic carbon (TOC) in remaining solution. B. Yuan et al. prepared two scale-model tests separately conducted in standard Toyoura sand with relative density of 50% and 80%. The effect of sand relative density on pile-soil interaction was investigated through the response of a laterally loaded pile and the sand movement around the pile. Q. Li et al. reported the 3D model to simulate a single hole to predict the range and degree of thermal propagation with acceptable thermal coefficient and accurate loading curve, which was carried out by segmented analysis of blasting.

Altogether, the guest editors would like to express sincere appreciation to all the authors for their contribution. Moreover, thanks are extended to all reviewers for their time about enhancing the quality of these papers.

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