

Special Issue on
Polymer Nanocomposites for Environmental Applications

CALL FOR PAPERS

The use of nanotechnology in environment has shaped up the current environmental engineering and science and a new branch of technology; for example, environmental nanotechnology has evolved recently. Technology at nanoscale has inspired the progress and use of novel and cost-effective techniques for catalytic degradation and adsorptive removal and detection of contaminants in environment. Polymer nanocomposites (PNCs), which integrate benefits of both nanomaterials (NMs) and polymers, have led to the development of highly efficient materials for environmental applications which have attracted academia and industry across the globe.

PNCs possess promising mechanical properties, thermal stability, and unique physical and chemical properties caused by the unusually large surface area to volume ratios of the nanofiller with advantage of light weight of the common polymers. PNCs of various compositions and morphologies can provide powerful tools for the environmental applications. Moreover, freedom to functionalize the NMs with various chemical groups can also increase their affinity toward target contaminants, which is very much desirable for selective extracting target analytes in complex environmental matrices.

The aim of this issue is to encapsulate the recent scientific and technological advances in the development of polymer nanocomposite for environmental applications. Challenges and future research directions will also be considered seriously. We thus invite researchers to contribute original research articles as well as review articles that will increase the basic subject knowledge on specifically environmental direction which may lead to the development of new technologies and innovations for efficient and economic utilization of PNCs. We are particularly interested in articles describing theoretical and experimental works related to polymer nanocomposite for environmental applications. Review articles on recent developments in terms of fabrication and applications of these materials are also welcome.

Potential topics include but are not limited to the following:

- ▶ Environmental nanotechnology and polymer sciences
- ▶ Polymer nanocomposite, a new direction toward environmental remediation
- ▶ Carbon nanomaterials (CNMs) based polymer nanocomposites for environmental applications
- ▶ Inorganic PNCs for environmental remediation
- ▶ Inorganic -Organic hybrid PNCs for environmental remediation
- ▶ Polymer nanocomposites (PNCs) based membranes for purification
- ▶ Polymer nanocomposites (PNCs) sensors for environment
- ▶ Polymer nanocomposite synthesis varieties
- ▶ Models and theoretical aspects of PNCs

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jchem/materials.chemistry/pnea/>.

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