

Tentative Outline

Special Thematic Issue for Current Nanoscience

Bio-nanocomposite for Medical and Environmental Application

Guest Editors: Prof. Sher Bahadar Khan and Dr. Mazhar Ul-Islam

Aims & Scope:

Due to variety of synthetic techniques and multiple applications, nanocomposite have grasped great attention in last few years. The limitation associated with pure polymeric materials including biocompatibility, conducting features, thermal stability, low mechanical strength and many others, have been effectively coped through composite development. Biopolymers and bio-composites in this contest have gained further attention owing to ability of additives impregnation during synthetic process via in-situ composite synthesis. This also demands special care while dealing with bio-composite with toxic/bactericidal nanomaterials. Bio-nanocomposite have received applications in medical, food and textile industry, optoelectronic device development and specifically in environmental sectors. This special issue is aimed to cover the recent efforts made in nanocomposite development for medical and environmental application. The issue will be consisting of full research paper, review papers and mini reviews.

Subtopics:

The subtopics to be covered within this issue are listed below:

- Nose-to-brain delivery of nanoformulations for the treatment of multiple brain disorders---positive and negative aspects
- Properties and applications of chemically modified BC based nanocomposites
- Ex-situ synthesis of bacterial cellulose-copper oxide nanoparticles for effective physico-mechanical and biological properties
- A review on biomedical applications of biocompatible and biodegradable poly(lactide-co-glycolide) nanostructures
- Polydimethylsiloxane (PDMS) based materials for biomedical applications
- Preparation and applications of guar gum derivatives in biomedical pharmaceutical, food and cosmetic applications
- Encircling various methods used for synthesis of molecularly imprinted polymers: micro to nanoscale particles and beads
- Synthesis and applications of conducting bacterial cellulose nanocomposite
- Biopolymer microspheres supported metal nanoparticles for catalytic reduction of organic compounds
- Surface Modified Gd₂O₃ nanoparticles as a MRI contrast agents; A comprehensive review

Schedule:

- ✧ Manuscript submission deadline: January 2020
- ✧ Peer Review Due: March 2019
- ✧ Revision Due: June 2020
- ✧ Final manuscripts due: December 2020

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