

Special Issue on
**Fabrication and Biomedical Applications of
Biopolymer-Based Nanostructured Materials**

CALL FOR PAPERS

Even though there are enormous challenges for the successful transformation of basic research to clinical applications, polymeric nanostructured materials have been found to be very useful to modernize the diagnosis and treatment of different diseases. Recently, biopolymer-based composites (nanoparticulate and microparticulate, dendrite, hydrogel, micelle, gel, etc.) are gaining increasing importance in drug/gene delivery as well as biomedical applications (tissue engineering/theranostics/imaging). Most of the biopolymers are effective materials for biomedical applications because of their biocompatibility, biodegradability and nontoxicity, and low immunogenicity, which clearly points to an immense potential for future development. Biopolymers have colossal structural possibilities for chemical and mechanical modifications to generate novel properties, functions, and applications especially in biomedical area. Biopolymers can be easily processed into gels, sponges, membranes, beads, 3D fibrous porous structure, and scaffolds forms for future tissue engineering and regenerative medicine.

This special issue is concerned with the current efforts and key research in the development of nanostructured materials derived from bio-based polymers and their potential biomedical applications. Contributions are invited which involve the fabrication of bio-based-polymer composites, processing methods, and potential use in biomedical applications. Both original researches and review articles are welcome.

Potential topics include but are not limited to the following:

- ▶ Biopolymeric composites for medical implants: degradability and bioactivity
- ▶ Fabrication of biopolymer-based nanostructures (gels, nanoparticles, nanocomposites, nanofibers, etc.)
- ▶ Porous biocomposites for dental applications
- ▶ Biopolymeric composites in drug delivery systems
- ▶ Biopolymeric composites for wound healing and tissue engineering
- ▶ Self-healing biocomposites for metabolic disorders
- ▶ RNAi biocomposites in cancer therapy
- ▶ Hybrid materials derived from natural and synthetic biodegradable polymers

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ijps/bafb/>.

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Manuscript Due

Friday, 3 February 2017

First Round of Reviews

Friday, 28 April 2017

Publication Date

Friday, 23 June 2017