



Journal of Nanomaterials

Special Issue on
**Biocompatibility and Toxicity of Nanobiomaterials
2014**

CALL FOR PAPERS

Over the past decades, nanobiomaterials have played significant roles in the field of biomedical engineering and pharmaceuticals. The wide variety of nanobiomaterials has encouraged their use in applications, including drug delivery systems, imaging systems for diagnosis, tissue engineering, and dental/bone implant. For successful clinical applications, the investigations into biocompatibility and toxicity of nanobiomaterials are research interests of great significances.

To date, many trials have been performed to estimate *in vitro* and *in vivo* biocompatibility and toxicity of nanobiomaterials. Based on such preclinical evaluation of biocompatibility and toxicity, current research trends are focused on whether the nanobiomaterials induce toxic effects in human body. For example, some nanomaterials may be uptaken by phagocytic cells of the RES (reticuloendothelial system) to induce the production of reactive oxygen species and cause oxidative stress or preinflammatory cytotoxic activity in the lungs, liver, heart, brain, and so forth.

We invite investigators to submit original research articles and review articles that inspire continuous efforts to understand the biocompatibility and toxicity of nanobiomaterials. We are particularly interested in articles describing novel nanobiomaterials design, nanobiomaterials/cell interaction, and biocompatibility/toxicity testing protocol, as well as nanobiomaterials degradation.

Potential topics include, but are not limited to:

- ▶ Biocompatibility of nanobiomaterials
- ▶ Toxicity of nanobiomaterials
- ▶ Interaction between nanobiomaterials and cell/tissue
- ▶ Effect of size, shape, and surface of nanobiomaterials on their biocompatibility and toxicity
- ▶ Immunogenicity of nanobiomaterials
- ▶ Challenges to overcome the toxicity of nanobiomaterials
- ▶ Design of novel biocompatible and biodegradable nanobiomaterials
- ▶ Instrumentation and technology to analyze toxicity of nanobiomaterials

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jnm/btn14/>.

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First Round of Reviews

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