

Special Issue on
Polymer-Inorganic Hybrid Biomaterials for Biomedical Applications

CALL FOR PAPERS

The design of polymer-inorganic hybrid materials has been an intensely pursued research topic over recent decades. Polymer-inorganic hybrid materials include a broad variety of systems. Indeed, nature has been fabricating hybrid materials such as bone, nacre, and coral since the origin of life. This is a clear indication of the interaction of the biogenic molecules with inorganic components and the sophisticated outcome difficult to be replicated by humans. Polymer/inorganic hybrid nanoparticles find their application in very diverse areas, including coatings, catalysis, optics, optoelectronics, and biomedical applications. In the biomedical context such hybrids have been of special interest in both the field of tissue engineering and drug delivery applications. The major challenge in the field of tissue engineering is the integration of the biomaterials at the site of injury. One of the approaches to overcome this challenge could be the development of such hybrid structures.

In a broader sense, the polymer component has structural functions and contributes towards the mechanical features and processability of the final hybrid materials, whereas the inorganic components introduce specific functionalities and/or reinforce the mechanical and thermal properties of the polymer. The final properties of the hybrid materials are often not a direct addition of the properties of the individual components but produce synergistic effects. Thus, a concise view on this will help a lot of readers gather and generate new ideas to overcome some of the existing challenges in the biomedical field.

Therefore, the editors are pleased to launch this special issue and invite researchers to contribute their original papers and reviews in the field of polymer-inorganic hybrid materials for biomedical applications.

Potential topics include but are not limited to the following:

- ▶ Polymer matrices used as hybrid biomaterials with inorganic materials
- ▶ Polymer-inorganic hybrid biomaterials for tissue engineering applications
- ▶ Polymer-inorganic hybrid biomaterials as drug delivery/diagnostic matrices
- ▶ Interaction of polymer-inorganic hybrid biomaterials with biological entities
- ▶ Strategies for the preparation of polymer-inorganic hybrid biomaterials
- ▶ Characterization techniques used for polymer-inorganic hybrid biomaterials

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ijbm/pihb/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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