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Nanoparticle-Hydrogel Composites for Biomedical Applications

Guest Editors:

Prof. Dr. Rolando Barbucci
Centro Interuniversitario Sistemi Medici Avanzati (CRISMA), 53034 Colle di Val d'Elsa, Siena, Italy

Dr. Andrea Atrei
Dipartimento di Biotecnologie, Chimica e Farmacia, Università di Siena, Via A. Moro 2, 53100 Siena, Italy

Dr. Marianna Uva
Interuniversity Research Centre for Advanced Medical Systems (CRISMA), Viale Matteotti 15, 53034 Colle di Val d'Elsa, Siena, Italy

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closed (30 November 2015)

Message from the Guest Editors

Dear Colleagues,

Embedding inorganic, organic or biological nanoparticles in hydrogels allows one to prepare hybrid materials capable of responding to a variety of stimuli from the surrounding environment. Nanoparticles can be simply entrapped in hydrogels, prepared inside the hydrogels or functionalized to work as a crosslinker of polymer chains. Incorporation of nanoparticles into hydrogels modifies the swelling degree and the physicochemical and mechanical properties of the polymer network. In the case of magnetic nanoparticles, the application of static/alternating magnetic fields offers the possibility of addressing and remotely modulating drug release from hydrogels.

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Editor-in-Chief

Prof. Dr. Esmaiel Jabbari
Biomimetic Materials and Tissue Engineering Laboratory, Department of Chemical Engineering, University of South Carolina, Columbia, SC 29208, USA

Message from the Editor-in-Chief

Gels (ISSN 2310-2861) is recently established international, open access journal on physical and chemical gel-based materials. The journal aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. General topics include but not limited to synthesis, characterization and applications of new organogels, hydrogels and ionic gels made either from low molecular weight compounds or polymers, composite and hybrid materials where a metal is by some means incorporated into the gel network, and computational studies of these materials in order to provide a better understanding of gelation mechanism. We cordially invite you to consider publishing with us and contribute with your own grain of sand to the advance in this fascinating field.

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Contact Us

Gels Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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