Special Issue

Research Advances in Natural Polymer-Based Hydrogels

Message from the Guest Editor

We welcome any submissions related to the three-dimensional (3D) structure of hydrogels prepared using physical or chemical cross-linking reactions, from natural polymers (such as polysaccharides and polypeptides) or composite hydrogels in different forms (microgels, nanogels, films, membranes, beads, etc.). Recent progress on the design and synthesis of hydrogels and their properties, revealed by different complementary techniques, which offer insight into the structure–property relationships, as well as the challenges that need to be overcome in order to achieve applications in pharmaceutical and medical fields are also welcome. The smart behavior of natural polymer-based hydrogels that is displayed in response to external stimuli, such as pH, temperature, ionic strength, and so on, can also be discussed. All of the features associated with engineering aspects related to the manufacture of natural-polymer-based hydrogels, such as the drug delivery systems, wound dressing, tissue engineering scaffolds, self-healing materials, or biosensors, are of particular interest to this Special Issue.

Guest Editor

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Deadline for manuscript submissions

closed (20 April 2022)

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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