

Special Issue

Synthesis of Biocompatible Hydrogels and Applications in Drug Delivery Tissue Engineering

Message from the Guest Editors

The development of medical technology has advanced the clinical use of stem cells for disease treatment. However, challenges like low cell viability, poor retention, and differentiation limitations hinder their therapeutic effectiveness. Tissue engineering research has focused on composite hydrogels incorporating stem cells/extracellular vesicles. The development of renewable, eco-friendly bio-based natural polymer hydrogels loaded with stem cells/extracellular vesicles holds significant importance in tissue engineering applications. This Special Issue highlights major discoveries in compatibility-based hydrogels loaded with stem cells/extracellular vesicles/drugs for bioactive composites in tissue engineering and regeneration. Topics include: preparation and properties of novel composite hydrogels for tissue engineering and drug delivery; synthesis techniques and applications of hydrogels and stem cells/extracellular vesicles in tissue engineering; application of new composite hydrogels and 3D printed tissue engineering scaffolds; and application of hydrogels in tissue engineering and drug delivery.

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Message from the Editorial Board

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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