

Special Issue

Functional Hydrogel for Biomedical Applications: Progress, Challenges, and Opportunities

Message from the Guest Editor

As an important soft material, hydrogels consist of three-dimensional networks with a certain amount of water. Functional hydrogels are engineered materials with specific properties that are suitable for a range of applications. In recent years, significant progress has been made in the field of functional hydrogels. A large number of novel hydrogels have been developed with multiple functions, such as nano/microgels for cell growth and proliferation, hydrogel bioelectronics as biosensors and bio-actuators, thermal/photo/strain-sensitivity for smart drug release and self-healing and injectability for tissue repair and regeneration. This Special Issue focuses on the research progress, challenges and opportunities with respect to functional hydrogels from both fundamental and application aspects. The increasing interest in functional hydrogels may be due to their design and preparation, which often aims to obtain new functions or to improve the quality of existing functions. The raw materials of these hydrogels can be natural or synthetic polymers. To understand the functions of these hydrogels, a structure–property relationship can also be included.

Guest Editor

Dr. Lin Ye

School of Materials Science and Engineering, Beijing Institute of Technology, Beijing 100081, China

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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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.

Editors-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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