

Special Issue

Recent Advances in Multifunctional Hydrogel and Its Application

Message from the Guest Editors

Hydrogel is a three-dimensional network polymer formed by chemical and/or physical crosslinking in aqueous solution. Modified hydrogels have many other functions. As a result, multifunctional hydrogel shows a significant and rapidly expanding role in many research areas. Hydrogels can be used as functional coatings, envelope structures, energy storage media, soil conservation, adsorption of harmful ions, and other applications in architecture, energy, and environment. Moreover, in the field of biomedicine and pharmacy, hydrogels can serve as drug carriers, wound healing dressing, tissue engineering scaffold, and other applications. Therefore, the design of novel hydrogels and their multifunctional applications present broad research prospects and need to be studied urgently. This Special Issue fits into this framework and aims to gather research papers and review articles exploring novel multifunctional hydrogels and their application areas. The collected research topics include but are not limited to preparation and design of hydrogel, characterization, multifunctional evaluation, applications, numerical simulation, etc.

Guest Editors

Dr. Yushi Liu

School of Civil Engineering, Harbin Institute of Technology, Harbin 150030, China

Dr. Shuang Pan

The First Affiliated Hospital of Harbin Medical University, School of Stomatology, Harbin Medical University, Harbin, China

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

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Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

Editors-in-Chief

Prof. Dr. Wei Pan

State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science & Engineering, Tsinghua University, Beijing 100084, China

Dr. Emerson Coy

NanoBioMedical Centre, Adam Mickiewicz University in Poznań, ul. Wszechnicy Piastowskiej 3, 61-614 Poznań, Poland

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