

Recent Advances in Multifunctional Hydrogel and Its Application

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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.



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Message from the Editorial Board

Now more than ever, research is called for to produce technologies and improve knowledge 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 at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. *Coatings* is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. *Coatings* publishes original research articles that report cutting-edge results and review papers on the hottest topics.

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