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New Composite Hydrogels

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Message from the Guest Editor

In recent years, research on the creation, investigation, and application of composite hydrogels with different structures and compositions is actively developing due to the unique physicochemical (large specific surface area, porosity, etc.) and functional (optical, mechanical, deformation strength, a large degree of swelling in water and aqueous solutions, etc.) properties of these materials. These properties determine a wide range of applications, from technical fields (sorbents, gas separation, ion-exchange membranes, etc.) to the food industry (food structurizers) and medicine (carriers of medicines for targeted delivery). Many hydrogels are analogues of natural systems and may be considered as model systems for basic research in chemistry, medicine, biotechnology, and engineering. The so-called “smart” or intelligent composite hydrogels, which are able to respond to small changes in the external environment in a pre-programmed way, are of particular interest.

This Special Issue is intended to reveal the latest achievements in synthesis technology, modern investigation methods and techniques, and applications of composite hydrogels.



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Special Issue



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Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

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