Special Issue

Functional Polymer Nanocomposites for Analytical Sensing and Detection

Message from the Guest Editor

The design and development of functional polymer nanocomposites have gained significant momentum in recent years due to their exceptional tunability, responsiveness, and integration potential in analytical sensing systems. These hybrid materials, formed by embedding nanostructured components into polymer matrices, offer enhanced physicochemical properties—such as electrical conductivity, surface reactivity, and selectivity—that are highly desirable for next-generation sensor platforms. This Special Issue aims to compile cutting-edge research on the synthesis, characterization, and application of polymer-based nanocomposites in analytical sensing and detection. Contributions spanning diverse areas such as electrochemical biosensors, optical sensing platforms, wearable diagnostics, environmental monitoring, and lab-on-a-chip technologies are especially welcome. By fostering interdisciplinary perspectives from chemistry, nanotechnology, materials science, and biomedical engineering, this issue seeks to provide a comprehensive overview of the latest advancements and challenges in the field.

Guest Editor

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Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.9.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Alexander Böker
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