Special Issue

Polymer Nanocomposites: Preparation, Characterisation and Applications

Message from the Guest Editor

Polymer nanocomposites are an interesting and rapidly growing class of novel materials with enhanced properties, even at low nanofiller loads. They are considered to be promising materials in a wide variety of applications, including automotive, aerospace, mechanics, electronics and biomedical system applications.

This Special Issue of Nanomaterials will attempt to cover the most recent advances in polymer nanocomposites, including their preparation, compatibilization and processing, along with the properties and methods of their characterization. It will also report on nano-effects like entanglements, confinement and other phenomena connected to the incorporation of nano-size particles to polymer matrix and their influence on the behavior of macromolecules. Papers on applications of polymer nanocomposites in different sectors, ranging from mechanical engineering, automotive and buildings to electronics and biomedicine are welcome. I hope this Special Issue will contribute to a better understanding of polymer-based nanocomposite structure and properties, thus opening further application perspectives.

Guest Editor

Prof. Dr. Kinga Pielichowska
Department of Glass Technology and Amorphous Coatings, Faculty of Materials Science and Ceramics, AGH University of Krakow, Al. Mickiewicza 30, 30-059 Krakow, Poland

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

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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