



Multi-Functional Polymer-Based Nanocomposites

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Deadline for manuscript
submissions:

closed (31 May 2022)

Message from the Guest Editors

Multifunctional nanocomposite materials can be fabricated by combining a range of nanoscale reinforcement materials with a polymer matrix. Carbon nanostructures such as fullerenes, carbon nanotubes, carbon nanofibers, and graphene derivatives have attracted a great deal of attention in the last three decades. Their outstanding mechanical, electrical, thermal, and optical properties, as well as their large aspect ratios and higher specific surface area make them very attractive as ideal nanofillers, which can contribute to the development of composites with improved mechanical and special properties (e.g., electrical conductivity, thermal conductivity, magnetic permeability, barrier properties). The synergistic effect of nanofiller hybrids including graphene nanoplatelets and carbon nanotubes, metal or metal-oxide nanoparticles anchored on a graphene surface in a hybrid can be also applied to obtain functional polymer nanocomposites.

This Special Issue aims to attract high-quality research and/or review articles that will help us to further understand the properties of polymer-based multifunctional nanocomposites containing carbon nanostructures or their hybrids.





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