

Special Issue

Polymer Nanocomposites for Smart Applications

Message from the Guest Editor

Polymer nanocomposites represent a cutting-edge class of materials that combine polymers with nanoscale fillers to enhance and tailor their properties for a wide range of smart applications. These advanced composites leverage the unique characteristics of nanoparticles, such as a high surface area and extraordinary mechanical, thermal, and electrical properties, to significantly improve the performance of the base polymer. This Special Issue, entitled “Polymer Nanocomposites for Smart Applications”, invites the submission of high-quality works that highlight recent advances in the field of polymer nanocomposites for smart applications. Topics of interest for this Special Issue include, but are not limited to, the following:

- Sustainable polymer nanocomposites, derived from bio-based or renewable resource materials;
- Recycled polymer nanocomposites;
- Carbon materials-based polymer nanocomposites;
- Design of multifunctional polymer nanocomposites for advanced applications, such as EMI shielding, energy storage, sensors, actuators, self-healing, and biomedical;
- Lifecycle assessment of polymer nanocomposites.

Guest Editor

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