Special Issue

Carbon Nanoparticles for Strain Sensing and Damage Monitoring

Message from the Guest Editors

In the last few decades, the development of structural health monitoring systems has attracted the interest of industry. Strain sensors based on carbon nanoparticles, such as carbon nanotubes, are increasingly being thought of as a realistic alternative to conventional sensors based on metallic and semiconducting materials, largely due to their superior electrical properties. The addition of carbon fillers to polymer matrices allows the formation of an electrical network that gives the material a high piezoresistivity.

This Special Issue of *Nanomaterials* will attempt to cover the recent advances in carbon nanoparticles for strain and damage sensor applications, including the analysis of electrical conductivity and piezoresistivity of carbon nanoparticles/polymer nanocomposites, the relationship between them, the tunneling effect, sensitivity to different load modes, theoretical and numerical studies, etc.

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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.

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