Special Issue

Nanocomposites for Functional Applications

Message from the Guest Editors

Recent decades have seen research, development, and applications of nanomaterials offering novel and outstanding properties based on their nano-size. In this context, nanocomposites consisting of nanocomponents possess outstanding properties and are particularly interesting for a multitude of different functional applications. These include optical properties based on eg plasmonic absorption of nanoparticles, and the use of nanocomposites in gas, vapor or biomolecular sensors utilizing their sensitive electronic properties. Additionally, the inclusion of plasmonic and/or catalytically active nanoparticles has greatly enhanced the performance of photocatalytic materials. A rather new field is the application of nanocomposites in neuromorphic computing where the changes in electrical properties allow to emulate brain-like functions. Lastly, the unique combination of functional properties also makes nanocomposites interesting for medical applications. In this Special Issue, we would like to cover nanocomposites from their preparation and the characterization of their unique properties, up to the many different possible applications.

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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