

Special Issue

Preparation, Properties and Applications of Emerging Polymer Composite Materials

Message from the Guest Editors

Currently, there is an increasing need for materials that can meet market demands primarily in terms of mechanical properties. Although the production of polymer composites dates back to the distant 1950s, this material has gained increasing importance more recently, following the insertion of reinforcement into the polymer matrix, such as classic fibers and particles, not to mention the contemporary nanoconfinement interaction-driven nanocomposites and polymer–inorganic and polymer–polymer hybrid materials with tailored properties. Metal, ceramic and polymer composites in various forms and formulations meet some (or most) of the needs of today's products in industries such as mechanical engineering, medicine, civil/military engineering and transport, e.g., shipbuilding, automotive or aerospace, as well as being used in green energy conversion devices (batteries, fuel cells and electrolyzers), in terms of improving properties that one component alone cannot have. In this Special Issue, we would like to pay attention to advanced composites and their diverse preparations, processing, property testing and material and engineering applications.

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Message from the Editorial Board

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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