Special Issue

Advances in Wear and Corrosion Resistance of Composite Materials

Message from the Guest Editors

Wear- and corrosion-resistant composites and coatings based on these materials are widely used in aerospace engineering, power generation, biotechnology, and medicine. Composite materials on a metal or polymer base hardened with second phases of different nature and synthesized using special processing technologies allow the formation of final products with unique properties. The continuously growing market stimulates material scientists, process engineers, and software developers to create new composites with further improved chemical formulae, phase balance, and properties. This requires new knowledge on the fundamental aspects of chemical design and the optimization of processing parameters. Research on advanced composites with unique properties, specific microstructure and phase composition, as well as the study of structure–property–performance relationships is a rapidly growing field. These studies frequently require a substantial experimental database. However, recent achievements in computer modeling significantly speed up the design process, reducing the time between the idea creation and the product manufacturing and sales.

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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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