Special Issue

Advances in High-Temperature Ceramic Matrix Composites and Coatings

Message from the Guest Editors

The development of materials for high-temperature environments has been an ongoing effort for the past several decades. Ceramic matrix composites (CMCs) have a long history of development for high-temperature applications, enabled by combining a thermochemically robust ceramic matrix with a toughening reinforcement phase to provide damage tolerance. The recent literature has focused, in part, on optimizing existing CMC systems based on SiC or oxide ceramics. These efforts are intended to address the high-temperature material demands of next-generation technologies. This Special Issue of Materials seeks to capture recent progress in the processing, characterization, and testing of high-temperature CMCs. Specific attention is given to novel or unconventional fabrication approaches, as well as representative testing that evaluates material performance at elevated temperatures or under application-adjacent conditions. Materials of interest include SiC-, oxide-, and UHTC-based composites with continuous or discontinuous reinforcements.

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Message from the Editor-in-Chief

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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