Special Issue

High Temperature-Resistant Ceramics and Composites

Message from the Guest Editors

This Special Issue will address the preparation, characterization, and applications of advanced ceramics, composites, adhesives and coatings when utilized in extreme heats (in the range of ⩾1000°C. This Special Issue also welcomes manuscripts that focus on in situ toughening, especially the analysis of in situ growth and strengthening mechanisms. The scope of this Special Issue includes, but is not limited to, the following topics:

Ceramics and composites for extreme environmental applications;
Porosity ceramics/composites;
Fiber-reinforced ceramic-based composites;
High-temperature-resistant adhesives;
Thermal radiation-resistant coating;
Flame retardant coating, foam glasses;
Nano/micro phases in situ growth for reinforcement;
The connection between ceramics and superalloys.

Guest Editors

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Dr. Heng Chen

Dr. Xiqing Xu

Deadline for manuscript submissions

20 August 2025

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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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