Special Issue

High Performance Ceramics

Message from the Guest Editors

High performance ceramics are usually developed because of their excellent behavior under high temperature of manufacturing and use. (i) the thermo-structural ceramics must exhibit resistance to oxidation and corrosion phenomenon, and/or thermo-mechanical performances at a high temperature; (ii) the protective/functional ceramics designed for special applications requiring electric, magnetic, or optical properties; (iii) functionally-graded ceramics showing a well-controlled architecture (i.e., a gradient composition and microstructural gradient). Several families of ceramics can then be targeted, namely: oxides, non-oxides, monoliths, composites, lamellar ceramics showing an anisotropic microstructure (e.g., MAX, MXENEs, and eutectic ceramic phases), and carbon-based materials. Keywords

- ceramics
- performance
- high temperature
- corrosion
- oxidation
- functional
- property gradient
- simulation
- modelling

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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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