Special Issue

Advanced Functional, Structural, High-Entropy Ceramics, Refractories and MAX Phases: Preparation and Performance Research

Message from the Guest Editor

Contemporary comprehensive approaches to the development of novel functional and structural ceramics, composites, refractories and ultra-high-temperature materials (max phases), and high-entropy ceramics allow us to reach new frontiers in the competitive production and reliable operation of such materials, even in extreme environments. Various functional ceramics and composites are of interest, e.g., different types and values of electrical conductivity (from dielectrics to superconductors), ferroelectrics, optically transparent and luminescent materials, and radiation-shielding composites. This fully applies to nanostructured ceramics, nanocomposites of complex compositions. Especially important is the development of methods for manufacturing bulk products from these materials with individual shapes and complex geometry. For new technologies, it is necessary to use methods to model both 3D structures with complex chemical compositions and to model the processes of their consolidation from nano-, micro-scaled powders or their mixtures, with experimental verification of such models. We kindly invite you to submit your work to this Special Issue.

Guest Editor

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Deadline for manuscript submissions

closed (20 July 2022)

Materials

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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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