Special Issue

Structural Materials for Nuclear Applications

Message from the Guest Editors

Nuclear energy has many advantages, including abundant reserves, high energy density, and good adaptability to harsh environments, which is an important part of the future low-carbon energy. The development of advanced nuclear energy systems with high safety and good economy is an important driving force for the long-term stable development of the global low-carbon economy. The development of structural materials suitable for high-temperature, high-radiation, and harsh corrosion environments is one of the keys to the successful implementation of advanced nuclear energy systems. In recent years, new zirconium alloys, FeCrAl, ODS alloys, advanced ceramics, and stainless steels have been rapidly developed. This Special Issue focuses on the composition, microstructure, properties, and preparation methods of such advanced structural materials for future nuclear systems.

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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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