Special Issue

Microstructural Evolution in Crystalline Materials Subjected to Extreme Environments

Message from the Guest Editor

It has been revealed that these processes induce phase transitions in bulk phases and interfaces such as grain boundaries and surfaces. Regrettably, the physics behind the phenomenon needs to be further explored. This is why we have decided to dedicate this Special Issue to the general understanding of the correlation between extreme environments and the phase transitions occurring in crystalline materials subjected to such environments. In this Special Issue, we invite original research articles and review papers on the following topics:

- Electron-beam sintering for nanocrystalline materials;
- Electron-beam damage at transmission electron microscopes (TEMs);
- Microstructural evolution in crystalline materials under irradiation of electrons, neutrons, and ions;
- Microstructural evolution in crystalline materials under severe plastic deformation (SPD);
- Microstructural evolution in nuclear materials under irradiation of neutrons and ions;
- Phase transition in bulk phases and interfaces induced by irradiation of electrons, neutrons, and ions;
- Phase transition in bulk phases and interfaces induced by severe plastic deformation (SPD).

Guest Editor

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Deadline for manuscript submissions

closed (15 January 2022)

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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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