Special Issue

Directional Solidification of Alloys and Advanced Wear-Resistant Materials

Message from the Guest Editor

Directional solidification is a crucial process to acquire tailored microstructure and desired properties of alloys. Moreover, the heat treatment of directionally solidified alloys may result in particular precipitates. The directional alloys or coatings overlaid on directional solidification alloys can also generate properties or micro-interfaces, which may improve corrosion, oxidation, wear and lubrication performances. Advanced directionally solidified alloys should demonstrate diversified functions during wear and corrosion conditions. Structurally achieved functions depend on directional solidification parameters and features. Functions in performance may cover strength, stiffness, thermal shock, etc. Both microstructures and properties of directionally solidified alloys as well as their relationships should be understood and revealed in detail. This Special Issue aims at the microstructural characters and properties of directional solidification alloys and their wear resistance, including the worn surface and interfaces. The simulation works are also included in this field.

Guest Editor

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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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