Special Issue

Advanced High-Performance Metal Matrix Composites (MMCs)

Message from the Guest Editors

This Special Issue will be driven to investigate high-performance metal matrix composites (MMCs) with solutions borrowed from biological materials such as nacre of shell, tuning and retention of unique nanoparticle physical properties in composites, heterogeneous structuring of materials across multiple length scales, and smart powder processing to produce advance fed materials with the capability of concurrently improving the strength and ductility of advanced materials. (1) Fabricate and develop high-performance metal matrix composites, especially aluminum-based composites
(2) Study and develop a heterostructure strategy for toughening particulate-reinforced metal matrix composites through the powder assembly route of powder metallurgy to design the architecture of various particulate metal matrix composites with high strength and high ductility.
(3) Develop new engineered particulates with tailored properties using dry particle coating (as a smart powder processing) for use as advanced high strength-to-weight ratio metal matrix composite materials.
(4) Studying and focusing on the changing properties that occur throughout the processing and operation of metal matrix composites

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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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