Special Issue

Advanced Processing Methods for Metals and Their Alloys

Message from the Guest Editor

Metallic alloys are key materials for many branches of current industry. Steel is still the most widely used metallic material, but non-ferrous metals, especially light metals and their alloys, are becoming more and more important for modern industry. This branch of forming had been enriched by a group of severe plastic deformation techniques, which enable us to obtain bulk nanostructured materials easily. Powder metallurgy, which was initially developed in order to process metals with high melting points and cermets, is continuously developed using a wide group of methods, which enable us to obtain fine-grained semi-products with properties exceeding those of known alloys, as well as net-shaped products. This group of methods also covers additive manufacturing processes, including selective laser melting, direct energy deposition, and others. The metals processed by all the above methods still require appropriate heat treatment. This Special Issue covers new ground-breaking trends in casting, forming, powder metallurgy, additive manufacturing, and heat-treatment processes for metals and their alloys.

Guest Editor

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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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