Special Issue

Advanced Metallurgy Technologies: Physical and Numerical Modelling

Message from the Guest Editors

Metals continue to be a source of innovative engineering materials applicable to almost all industries. Iron, aluminum, copper, zinc, nickel, cobalt, titanium, etc. will continue to be essential components of key metallic alloys for a long time to come. Therefore, the development of metallurgical technologies creates space for the production of metallic alloys with new unique properties. In the production cycle of metal products, all technological stages require a strategic approach. Starting from pyro- or hydrometallurgical reduction processes, through smelting, refining, casting, plastic working, and chemical or heat treatment, the metals initially concentrated in the ore obtain unique features in the final product. Of course, in the era of the circular economy, the processes of recovering metals from secondary sources are of great importance. Currently, the results obtained from experiments on physical models or numerical simulations determine the scientific progress in the field of metallurgical technologies. Both research techniques complement each other and reliably reflect the industrial conditions.

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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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