Special Issue

Materials Technologies: Additive Manufacturing and Functional Coatings

Message from the Guest Editors

Additive manufacturing and functional coatings are actively developing technologies driving fundamental and applied science and the engineering associated with them. The increasing power of laser sources, novel materials, and new automation and control systems are pushing the limits of the precision and possible geometries of products. In order to better understand the physics behind these technologies, one needs to consider the interaction of matter with high-intensity energy flows, the hydrodynamics of the melt in welding baths, the phased transition from liquid to solid state, the formation of microstructure and properties at extreme speeds of heating and cooling, and much more.

This Special Issue will present a selection of the 10 best papers presented by young researchers at the International Conference on Beam Technologies and Laser Applications held on 20–22 September 2021 in Saint-Petersburg, Russia (https://btla.smtu.ru/en/). It will comprise articles which report new and progressive research results in the field of additive manufacturing and functional coatings, both from experimental and theoretical points of view.

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About the Journal

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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