Special Issue

Functional Materials, Machine Learning, and Optimization

Message from the Guest Editors

In the last decade, optimization in the materials field has been accelerated because the enormous efficiency gain can be achieved through the optimization of topology at the conception stage. The ability to control the geometry, structures, cost, and properties of materials established for them can be solved by single and multi-objective optimization. This Special Issue will bring these emerging fields of science and technology to one platform to address the importance of functional materials for various applications, including the application of machine learning in modeling, data analysis of material properties, and the use of optimization techniques to obtain the established properties of these materials. The Special Issue covers a large number of topics, including the preparation of functional materials, their characterization, and the study of mechanical and tribological properties. Modeling of this data using available regression algorithms of supervised learning and optimization of properties of materials applying various soft computing algorithms and the design of experiments.

Guest Editors

Dr. Denis A. Vinnik

Chemistry Faculty, South Ural State University, 454080 Chelyabinsk, Russia

Dr. Asif Afzal

Department of Mechanical Engineering, P. A. College of Engineering (Affiliated to Visvesvaraya Technological University, Belagavi), Mangaluru 574153, India

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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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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