Special Issue

Advanced Composites: From Materials Characterization to Structural Application

Message from the Guest Editor

The structural application prospective of innovative materials requires the development of a new concept for structural design related to the development of materials with mechanical properties properly tailored for construction purposes. In fact, this approach is opposite to the existing practice where design solutions are related to the utilization of existing materials, which generally have imperfect physical properties. The current trends in material engineering are enable to incorporate different topics into the scope of this activity. For instance, nanoparticles can be used to modify the structure of materials, fibrous reinforcement is suitable to improve the mechanical properties of structural composites, manufacturing technology may incorporate 3D printing, and so on. This Special Issue is focused on the identification of fundamental relationships between the structure of advanced composites and the corresponding physical properties. The aim of this Issue is to combine the innovative achievements of the experts in the fields of materials and structural engineering to raise the scientific and practical value of the gathered results of interdisciplinary research.

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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