Special Issue

Lightweight and High-Performance Composite Structures for Engineering Applications

Message from the Guest Editor

In recent years, global environmental pollution and energy shortages have intensified. Lightweight design based on various lightweight high-performance materials and structures has gradually gained widespread attention in various industries like aerospace, high-speed trains, automobiles, ships, etc. However, the increasing diversity and complexity of engineering requirements place higher demands on material and structural design, driving continuous innovation in this field. This Special Issue aims to explore the latest advancements in the field of lightweight and high-performance composite structures applied in various industries. Potential Topics include, but are not limited to, the following areas:

- Lightweight materials, composites reinforced by thermoplastic/thermosetting epoxy and high-performance fibers;
- Hybrid structures, such as sandwich panels, tubes, axles, and honeycomb/foam/lattice structures;
- Material/structural performance characterization approaches considering the damage, strain rate, energy absorption, hygrothermal aging, etc.;
- Recent advances in the application of lightweight materials/structures prepared by additive manufacturing process.

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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