

Special Issue

Tailored Textile-Reinforced Composite Materials

Message from the Guest Editor

Textile-reinforced composites offer great advantages for lightweight structures, since their properties can be tailored on different length scales. The variety of design options with regard to their constituents, multi-axial fiber arrangements, and near-net-shape semifinished product configurations is an essential feature of high-performance textiles. Despite being investigated for decades, textile composites are still an extremely interesting research area, spanning from manufacturing technologies via multiscale modeling and experimental testing to multifunctional applications. This Special Issue will focus on recent progress in the field of tailoring composite properties. Topics can include but are not limited to:

- Advanced textile manufacturing technologies;
- Damage-tolerant textile composites;
- Tailored properties using scale-bridging approaches;
- Virtual design and digital twins;
- Multifunctional composite application.

Keywords

- textile composites
- tailored properties
- virtual material design
- advanced manufacturing

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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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