Special Issue

Advanced and Bio-Based Materials

Message from the Guest Editors

Advances in materials and manufacturing techniques are enabling the development of a new generation of high-performance textile-based products for a range of industries, from apparel to aerospace. Key enabling technologies are additive manufacturing and the use of robotics in weaving, fibre placement, and knitting, which allow free-form and bespoke multi-material structures to be fabricated, unhindered by the limitations of traditional approaches. This may potentially allow the fabrication of complex multi-functional textile-based structures in a single product, transforming design and manufacturing processes. Furthermore, this also opens up new application areas in smart, responsive, and adaptive textiles that can communicate with users and transform using a specific stimulus.

This Special Issue aims to highlight and collect the most recent developments and trends in the field of advanced 3D textiles. This includes novel manufacturing processes (e.g., 3D printing, robotics, and weaving), advanced materials (e.g., nanocomposites, multi-functional, bioactive, electroactive, sustainable, adaptive and responsive), and new application areas.

Guest Editors

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Deadline for manuscript submissions

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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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