

## Special Issue

# Multiscaling in Polymer Composite Materials

### Message from the Guest Editors

Despite a long, successful history of industrial application, polymer composite materials still represent complicated systems, and understanding and describing their deformation behavior is a tremendous problem. An adequate solution may only be found within a multiscale approach.

Currently, a significant number of monographs have been published, that are devoted to i) technological aspects of fabricating polymer composites, ii) methods on the examination of their structure and mechanical testing, iii) establishing fracture criteria, including data of non-destructive testing, iv) modeling their behavior under various schemes and loading conditions.

Paying tribute to all the research carried out already, in this topic issue, you are invited to present the current state of research on polymer composite materials from the perspective of their multilevel consideration. This implies both i) analysis of the structure and deformation processes at various scale levels, ii) direct control of structure formation, iii) analysis of damaging and assessment of the mechanical state, iv) development of approaches to modeling fracture processes in the hierarchy of scales.

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### Guest Editors

Prof. Dr. Seeram Ramakrishna

Prof. Dr. Filippo Berto

Prof. Dr. Sergey Panin

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### Deadline for manuscript submissions

closed (31 December 2021)



## Materials

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### Message from the Editorial Board

*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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