Special Issue

Fracture Mechanics and Phase Field Approaches in Engineering Materials

Message from the Guest Editor

The present Special Issue aims to present a collection of new and recent methods for the description of fracture and damage phenomena at different scales and in different materials. With the aim of presenting the recent developments in this matter, it is a pleasure to invite contributions to the Special Issue entitled "Fracture Mechanics and Phase-Field Approaches in Engineering Materials" of the open access MDPI journal *Materials*. Contributions in the form of research investigations and reviews of the state-of-the-art addressing major advancements and failings are within the scope of this Special Issue and will be greatly appreciated. Specific topics of interest include:

- Regularizations and approximations of crack discontinuities
- Phase-field approaches to brittle, cohesive, and ductile fracture
- Variational and multiscale models for fracture and damage
- Non-local damage models in solids and structures
- Fatigue failure
- Fracture and damage in a multiphysics framework (e.g., coupling with plasticity, thermal and chemical effects, etc.)

Scientific contributions concerning theoretical, numerical, and experimental aspects are also welcome.

Guest Editor

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Deadline for manuscript submissions

closed (20 September 2023)

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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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