Special Issue

The Brittle Failure of Different Materials

Message from the Guest Editor

Brittle materials include a wide range of material classes: From polymers to metals, through classic glass, ceramics, and composites. They all share a supposed linear elastic behavior, but are often found to display non-linear stress–strain relationships, as well as high temperature dilation (or other properties). In this Special Issue, contributions describing and explaining this intriguing behavior, whether due to microcracking, interaction among constituent phases, or micro-structural features, are welcome. Advanced characterization techniques, challenging numerical and analytical models, as well unconventional experiments should be reported and spark the debate about the origin of the behavior of brittle materials under mechanical extremes. The grand goal is to provide an overview, through different aspects, of unconventional or unexpected reaction of brittle materials to external (mechanical, thermal, chemical, etc.) loads, at all temperatures of interest, including cryogenic.

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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