Special Issue

Research on Dynamic Properties and Impact Resistance of Advanced Materials

Message from the Guest Editors

As industries like aerospace, automotive manufacturing, and protective systems continue to push the boundaries of performance, the characterization of dynamic properties and impact resistance of advanced materials has become increasingly crucial, encompassing various aspects such as strain rate sensitivity, energy dissipation mechanisms, and failure thresholds, etc. This Special Issue aims to address the critical need to understand high-strain-rate behavior and impact tolerance in next-generation advanced materials. We invite original research advancing experimental, computational, and theoretical frameworks for advanced materials under dynamic loading conditions. Contributions should explore innovative material systems such as fiber-reinforced composites, architectured metamaterials, high-entropy alloys, and functionally graded structures. Key topics include the following: dynamic characterization, failure mechanisms, high-fidelity modeling, constitutive models, and design innovation. Review articles contextualizing recent advancements are also welcome.

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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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