Special Issue

Dynamic Mechanical Analysis of Energetic Materials

Message from the Guest Editors

Recent studies have proved that materials' properties have a significant effect on their deformation mechanism, which directly impacts their application in engineering. In the civilian field and beyond, a variety of materials are widely used as kinetic energy projectiles and shaped charge liners. These materials include conventional metal materials, such as copper and tungsten, as well as non-metallic materials, such as ceramics, PTFE and glass. Moreover, the explosive effect of reactive materials has been proved to significantly improve their damage efficiency. The strength, plasticity and chemical properties of materials used for projectiles and jets affect their penetration performance. In addition, the ductility and cohesiveness of the jet, which also affect its penetration ability, have been proved to be related to the mechanical properties of the shaped charge liner material under impact. For this Special Issue, we are inviting articles focused on the explosion effect and deformation mechanisms of materials, including experimental and theoretical studies of mechanical properties of materials at high temperatures, pressures and strain rates.

Guest Editors

Prof. Dr. Jian Kong

Prof. Dr. Wen Zhai

Dr. Xudong Zu

Deadline for manuscript submissions

closed (20 February 2024)



an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/122397

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials





an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 6.4 Indexed in PubMed





About the Journal

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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

 Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
 Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)