



crystals



an Open Access Journal by MDPI

Laser-Induced Damage Properties of Optical Materials

Guest Editors:

Dr. Laixi Sun

Laser Fusion Research Center,
China Academy of Engineering
Physics, Mianyang 621900, China

Dr. Yafei Lian

Shanghai Institute of Optics and
Fine Mechanics Chinese
Academy of Sciences, Shanghai
201800, China

Dr. Jin Huang

Laser Fusion Research Center,
China Academy of Engineering
Physics, Mianyang 621900, China

Deadline for manuscript
submissions:

closed (31 July 2023)

Message from the Guest Editors

Optical materials (such as fused silica, single crystal silicon, and KDP crystal) of laser systems can be damaged by laser radiation of sufficiently high power or energy. Damage behavior generally arises from the localized coupling of laser energy into material, leading to sufficiently rapid heating to induce a permanent material breakdown. Over the past dozen years, the laser-induced damage properties of optical materials have been extensively studied. With fused silica, for example, numerous efforts have been made to increase the surface damage threshold of the optics operating at UV wavelengths. Continual improvement of damage resistance and deep understanding of damage mechanisms of optical materials are still required for better applications. The purpose of the Special Issue is to exchange recent progress in laser-induced damage properties of optical materials for high-power or high-energy lasers, including laser-induced damage mechanisms, materials and film preparation, durability, properties modeling, testing, and component fabrication.



mdpi.com/si/124740

Special Issue



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Helmut Cölfen

Physical Chemistry, Universität
Konstanz, 78457 Konstanz,
Germany

Message from the Editor-in-Chief

Crystals are a very important class of structured material, both from a scientific and technological viewpoint. In 2011, the Nobel Prize in Chemistry was awarded to Dan Schechtman for his work on quasicrystals. Our journal already expresses in its name *Crystals* that its focus centers around all aspects of this class of materials, which has fascinated humankind from its beginning. Despite decades of research on crystals, it remains a hot and fascinating research topic.

Crystals is a good platform for dissemination of knowledge in this area.

Author Benefits

Open Access:— free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

High Visibility: indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [Inspec](#), [CAPus / SciFinder](#), and [other databases](#).

Journal Rank: [JCR - Q2 \(Crystallography\)](#) / [CiteScore - Q2 \(Condensed Matter Physics\)](#)

Contact Us

Crystals
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/crystals
crystals@mdpi.com
[@Crystals_MDPI](https://twitter.com/Crystals_MDPI)