

## Special Issue

# Crystals in Laser Systems

### Message from the Guest Editor

Starting from the first laser oscillator, where Theodore Maiman used ruby crystals in 1960, crystal active media have been widely utilized in different kinds of laser systems. The application of crystals in this area has allowed us to achieve the ultra-high-peak power of 10 s of PW as well as multikilowatt output average power and pulse duration as short as a few femtoseconds, reaching the incredible intensity of 1023W/cm<sup>2</sup>. Crystal applications for harmonic conversion of light and in the parametric oscillators and amplifiers has allowed us to cover the wavelength range from mid-infrared to ultraviolet. Crystals' coherent light sources are now broadly applied in the many branches of science and industry.

Thus, we anticipate a significant amount of interest in this issue among the engineering and scientific community and invite original contributions as well as reviews containing new results in the fields of laser crystal properties' investigation, growth technology, and laser system development on a crystal base, including optical parametrical oscillators and amplifiers and their applications.

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### Guest Editor

Dr. Vladimir Chvykov

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### Deadline for manuscript submissions

closed (31 May 2023)



## Crystals

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## About the Journal

### Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

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### Editor-in-Chief

Prof. Dr. Alessandra Toncelli  
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