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Advances in Polaritons

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Message from the Guest Editors

Polaritons are light–matter hybrid quasiparticles. They can be: surface plasmon polaritons, phonon polaritons, exciton polaritons, Cooper-pair polaritons, and magnon polaritons.

They offer a practical approach toward nanoscale light trapping and manipulation. Beyond nano-optical technologies, images of polaritonic standing and traveling waves contain rich insights into quantum phenomena occurring in the host material supporting polaritons, and they provide an approach toward optics-based materials research. Alongside future advances in the understanding of the physics and interactions of polaritons, solutions to application challenges may be anticipated in areas such as loss compensation, nanoscale lasing, quantum optics, and nanomanipulation.

The aim of the current Special Issue is to cover promising, recent, and novel research trends in polaritons. Areas to be covered in this Special Issue may include, but are not limited to: theory; simulation; characterization; application.



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Special Issue



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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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