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Metal Chalcogenide and Metal Halide Perovskite Crystals for Sensing and Detection

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Deadline for manuscript submissions:
closed (28 March 2021)

Message from the Guest Editors

Metal chalcogenide and metal halide perovskite crystals have leads to breakthrough in many device applications and they are popular in the fields of photovoltaics, photoconductivity, optoelectronics, transistors, and thermoelectric. For the past two decades, the interests even continue towards thin films, nanowires, monolayers, and quantum dots as they may have better optical, electrical, and magnetic properties compared to the bulk ones. However, the sensing and detection using those two crystals are recently becoming trends as they can become strong platforms for photodetectors, resonance biosensors, and even high-energy radiation detectors.

This project focuses on the most recent advances in the field of sensing and detection applications using metal chalcogenide and metal halide perovskite crystals from theory, simulation to experimental demonstration. Topics will include but are not limited to development of advanced sensors and detectors ranging from microwave, infrared, visible, and even high-energy radiation, such as X- and gamma-ray. Potential novelsensing and detection applications in biomedical engineering, imaging, security, and telecommunication are also welcome.

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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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