## **Special Issue**

# Recent Achievements in Oxide Transistors

## Message from the Guest Editors

Oxide-based transistors are a dynamic and rapidly advancing field in modern electronics that advances semiconductor technologies. However, the trade-off between mobility and stability in oxide transistor locks in its application limits. How can interfacial defects and charge trapping be minimized to achieve ultimate device reliability? What new functionalities arise from heterostructure engineering, or light-matter interactions in oxide channels? And, the integration of oxide transistors with emerging technologies, such as flexible electronics, neuromorphic computing, or novel memories. This Special Issue, titled "Recent Achievements in Oxide Transistors", seeks to highlight cutting-edge research and comprehensive reviews on oxide transistors, spanning fundamental materials science, device physics, and innovative applications. Contributions addressing novel fabrication methods. mechanism insights into carrier transport, advances in reliability, or disruptive applications are particularly encouraged. We invite you to submit your latest findings, perspectives, or review articles to this Special Issue.

## **Guest Editors**

## Dr. Penghui He

Changsha Semiconductor Technology and Application Research Institute & Engineering Research Center of Advanced Semiconductor Technology, College of Semiconductor (College of Integrated Circuit), Hunan University, Changsha 410082, China

## Dr. Dmitri Donetski

Department of Electrical and Computer Engineering, Stony Brook University, Stony Brook, NY 11794, USA

## Deadline for manuscript submissions

closed (31 October 2025)



an Open Access Journal by MDPI

Impact Factor 2.4 CiteScore 5.0



mdpi.com/si/234886

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

mdpi.com/journal/ crystals





an Open Access Journal by MDPI

Impact Factor 2.4 CiteScore 5.0



## **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.

## Editor-in-Chief

Prof. Dr. Alessandra Toncelli
Department of Physics, University of Pisa, 56126 Pisa, Pl, Italy

### **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, Ei Compendex, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Crystallography) / CiteScore - Q2 (Condensed Matter Physics)

