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Wide-Band-Gap Semiconductors for Energy and Electronics

Guest Editors:

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Message from the Guest Editors

Recently, there has been renewed interest in wide and ultra-wide semiconductors as materials for energy and electronics. Batteries, fuel cells or solar cells, among other energy production and storage devices, can be improved by the introduction of WBG (WBG can add new aspects in ultra-efficient anodes, nanocomposites, or as extraction layers for electrons and holes, among many other applications).

For power electronics, WBG allows power electronic components to be smaller, faster, more reliable, and more efficient. Some frontier semiconductors are now perhaps among the most promising material systems to extend the WBG beyond 5eV in the emerging field of ultra-wide bandgap semiconductors. In addition, some WBG materials can be engineered to be transparent, flexible, or biocompatible, which will certainly pave the way for new electronic and energy avenues. Another vibrant related field is deep UV optoelectronics, where wide and ultra-wide bandgap materials promise to extend the current range of deep UV photodiodes, detectors, and also LEDs well below the visible range.

This Special Issue welcomes both reviews and new findings in this broad research area.

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Message from the Editor-in-Chief

Welcome to *Condensed Matter* (ISSN 2410-3896)! It gives me great pleasure to invite you to publish in the journal. We are looking to build a collection of high quality research articles, supported by a community from across the field of condensed matter physics. In this task, I will be assisted by a highly qualified editorial board. We accept papers on basic research as well as applications, and experimental or theoretical work. Currently the journal is indexed by ESCI (Web of Science) and hope you can consider *Condensed Matter* as an exceptional home for your manuscript.

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