

Special Issue

Design and Synthesis of Molecular Systems to Prepare Conductive Materials

Message from the Guest Editors

The design and synthesis of molecular systems to prepare conductive materials represent a rapidly evolving frontier in materials science, bridging molecular-level precision and macroscopic functionality. The critical challenges focus on manipulating the quantum effects in tailored molecular architectures for single-molecule conductive materials and enhancing the conductivity and stability in hierarchically assembled condensed materials. This Special Issue aims to highlight cutting-edge research and comprehensive reviews on innovative strategies for molecular design, synthesis, characterization, performance optimization, and scalable manufacturing of conductive materials. Besides the contributions addressing theoretical insights and experimental breakthroughs, we particularly welcome contributions demonstrating how fundamental discoveries in molecular architectures and hierarchical materials can be translated into industrial adoption, with explicit discussion on overcoming challenges on large-scale assembly, ensuring production reproducibility, and addressing performance requirements for commercial applications in next-generation electronics and energy systems.

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 30th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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