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Molecular Electronics: Challenges and Opportunities

Guest Editor:

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Deadline for manuscript submissions:
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Message from the Guest Editor

Molecular materials are attractive for a new generation of quantum nanodevices operating at room temperature due to their unique electronic, optical, vibrational, and chemical properties. Advances in experimental and theoretical techniques over the past decade have made it possible to study transport properties down to a few nanometre scales and to understand the quantum phenomena that determine their properties. This opens up enormous possibilities for the design of new nanoscale devices using molecular structures. However, there are still challenges to be overcome.

In this Special Edition, we would like to invite you to submit an original research paper or review article on the latest developments in the field of molecular electronics in your group and beyond. This is an opportunity to revisit the opportunities that molecular electronics bring and the challenges that need to be overcome.

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Editor-in-Chief

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call "nanomaterials". These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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