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Molecular Beam Epitaxy Growth of Quantum Wires and Quantum Dots

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Deadline for manuscript submissions:
closed (15 January 2023)

Message from the Guest Editors

Molecular beam epitaxy technology has a good advantage in semiconductor technology due to its strong controllability, especially for the preparation of materials such as quantum wires and quantum dots. In this Special Issue, we are interested in the articles that share the latest developments and achievements in the application of quantum dots and quantum wires in combination with molecular beam epitaxy and lasers, and the applications of quantum dots and quantum wires in ultrafast optics, micro–nano optoelectronic devices, etc. Some potential topics include, but are not limited to:

- Advances in molecular beam epitaxy growth technology
- Advances in molecular beam epitaxy growth of quantum dots and quantum wires
- Application of quantum dots and quantum wires in ultrafast lasers
- Application of quantum dots and quantum wires in energy
- Application of quantum dots and quantum wires in micro–nano optoelectronic devices
- Application of quantum dots and quantum wires in semiconductors
- Integrations of molecular beam epitaxy growth and new technologies such as lasers
- Application of related materials (such as low-dimensional materials, transitional metal dichalcogenides)

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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