Special Issue

Advances in Optically Functional Nanomaterials

Message from the Guest Editors

With a growing emphasis, we find ourselves surrounded by the multifaceted contributions of nanomaterial research, showcasing innovations in diverse forms such as plasmonic nanoparticles, quantum dots, and metamaterials. From enhancing solar cell efficiency to enabling high-resolution biomedical imaging, the pivotal role of light–matter interaction in nanomaterials harnesses unique optical properties at the nanoscale. Consequently, current research has unveiled new avenues for transformative applications of optically functional nanomaterials, serving as the cornerstone of progress and promising a bright future for biosensing, optical communication, cloaking, super-resolution imaging, and quantum optics. This Special Issue, entitled "Advances in Optically Functional Nanomaterials," aims to cover recent advances in the development and application of light–matter interactions at the nanoscale. Topics include, but are not limited to, methods and/or applications in the following areas:

- Quantum optics;
- Biosensing;
- Terahertz generation/detection;
- Super-resolution imaging;
- Plasmonics;
- Biomedical imaging;
- Quantum/optical communication;
- Metamaterials.

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Editor-in-Chief

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