



## The Research Related to Nanomaterial Cold Cathode II

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Deadline for manuscript  
submissions:

**closed (20 April 2024)**

### Message from the Guest Editor

Dear Colleagues,

Nanomaterial cold cathodes have potential applications in various vacuum microelectronic devices, including in microwave tubes, X-ray sources, detectors, and energy conversion devices. This Special Issue aims to encourage researchers to submit reviews or original articles related to research into field emissions from 1D or 2D nanomaterials and their applications as cold cathode in devices. The scope of this Special Issue includes: 1) the preparation of 1D and 2D nanomaterials for field emission cold cathode application; 2) the field electron emission properties of nanomaterials; 3) the theory of field electron emissions from nanomaterials; 4) the application of nanomaterials as cold cathodes in vacuum nanoelectronic or optoelectronic devices.

### Keywords:

- cold cathode
- field emission
- one-dimensional nanomaterials
- nanowires
- carbon nanotubes
- 2D materials
- graphene
- vacuum nanoelectronic devices



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Prof. Dr. Jun Chen  
*Guest Editor*

# Special Issue



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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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