

Special Issue

Preparation of Semiconductor Materials and Their Application in Photoelectronic Devices

Message from the Guest Editor

Semiconductor materials with satisfying photoelectric properties can convert light energy to electrical energy. To assemble optoelectronic devices with high performance, not only the morphology and microstructure of the semiconductor material but also the adoption of reasonable device structures and suitable electrode configurations are vital because of their impacts on the behaviors of charge carriers. Topics include, but are not limited to:

- Synthesis of semiconductor materials with novel morphology and microstructure;
- Effects of preparation conditions on the morphology and microstructure of the semiconductor material;
- Semiconductor materials utilized in solar cells, LEDs, and phototransistors;
- Semiconductor materials applied in UV, visible, and infrared-light photodetectors;
- Semiconductor materials used in lasers and display devices;
- Semiconductor materials utilized in X-ray and Terahertz detection;
- Optimized photoelectric performance achieved by modified preparation process of semiconductor materials;
- Effects of material preparation and device assembly on the charge carrier behaviors in photoelectronic devices.

Guest Editor

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