Tentative Outline

Special Thematic Issue for Current Nanoscience

Electromagnetic Response and Energy Conversion of Nanomaterials

Guest Editors: Dr. Hongjing Wu

Aims & Scope:

The development of electromagnetic (EM) functional materials and devices has become one of new science focuses. The critical scientific issue is understanding the mechanism of EM response and the principle of energy conversion. The analysis of EM response mechanism and principle of energy conversion as well as the creation of advanced EM functional materials and devices are of great importance in recent years. EM functional nanoscale materials bring infinite vitality to future development of various fields, such as EM wave absorbing and shielding, photodetectors, and dielectric epoxy based nanocomposites.

This Special Collection aims to cover recent progress and advances in novel EM wave absorbing and shielding materials. Crystal structure, EM response, energy conversion and their relationship will be revealed. Additionally, the operational mechanisms of materials including impedance matching, dielectric loss and magnetic loss should be important subjects for this Special Collection.

Subtopics:

The subtopics to be covered within this issue are listed below:

- Co-based electrode materials for supercapacitor: morphology and composition determine performance
- A review of the preparation, dielectric property and thermal conductivity of epoxy based nanocomposite
- Analysis of microwave absorption in core-shell structures
- Recent progresses of enhanced microwave-absorbing materials
- Traditional and novel materials in microwave absorption: review and perspective
- Advances in structural electromagnetic wave absorption of three-dimensional graphene Composites: a review
- Beta-Ga_2O_3 for solar blind photodetectors
- Synthesis of C doped $Bi_2O_2CO_3/TiO_2$ photocatalyst with improved photocatalytic degradation of MO dye

Schedule:

- Manuscript submission deadline: December 2019
- Peer Review Due: March 2020
- Revision Due: May 2020
- Final manuscripts due: June 2020

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