

## Tentative Outline

### Special Thematic Issue for the journal *Current Nanoscience*

Title of Thematic Issue:

**Advanced Functional Materials: Synthesis, Properties and Applications**

Guest Editor: Ning Han, Lingbao Xing, Dezhi Han

- **Scope of the Thematic Issue:**

Advanced functional materials have risen to prominence in a number of high-tech fields. These materials are not categorized according to their nature, bonding form, or processing methods, but rather according to the functions they may perform. This is a major change from previous systems, which classified materials as organic and inorganic, or, metals, alloys, ceramics, polymers, glass materials. Moreover, in recent years, many new processing methods have emerged, such as femtosecond laser ablation, chemical vapor deposition, and so forth. It has become increasingly difficult to acquire knowledge from a single source due to the variety of materials and their functions. However, the structural design from micro-scale to nano-scale, and even to atomic level, led to the functionalization of the final material. Thus, the investigation on structure of materials should be paid on more attention in functional materials area. In this thematic issue, we welcome works related to structural design-led functionalization as advanced functional materials, including material synthesis, investigation on material properties, and the applications in various areas. Based on *Current Nanoscience*, this Special Issue welcome works in different types: (a) Authoritative/Mini Reviews, and (b) Original Research and Highlights covering the recent advances in functional materials.

**Keywords:** Core-Shell, MOFs, COFs, Functional Material, Energy Storage, Environmental Remediation, Electrochemistry, Catalysis,

#### Sub-topics:

The sub-topics to be covered within the issue should be provided:

1. Materials Synthesis, Characterization
2. Investigation on the Properties of Materials
3. Functional Materials in Environment Field (Environmental Remediation, Gas Separation, Water Treatment...)
4. Functional Materials in Energy Field (Battery, Fuel Cell, Water Splitting, Hydrogen Produced...)

#### Schedule:

Manuscript submission will open on July 1st, 2021

Manuscript submission deadline: Feb 28, 2022

Expected publication date: May/June, 2022

#### Contacts:

Guest Editor Name: Ning Han

Affiliation: KU Leuven

Email: [ning.han@kuleuven.be](mailto:ning.han@kuleuven.be)

*Guest Editor Name: Lingbao Xing*  
*Affiliation: Shandong University of Technology*

*Email: lbxing@sdut.edu.cn*

*Guest Editor Name: Dezhi Han*  
*Affiliation: Qingdao University of Science and Technology*  
*Email: handzh@qust.edu.cn*