Advances in Condensed Matter Physics

Hindawi

Special Issue on

# Interfacial Properties of Nanostructure-Based Sensors and Photovoltaic Devices

CALL FOR PAPERS

With the highly competitive development of physical and high-tech industries, understanding the intrinsic electronic and optical properties of condensed matter materials at nanoscale is becoming increasingly necessary. Emerging high-tech industries and advanced research centers are of great interest in the design and synthesis of nanostructured materials with a specific concern about using tailored procedures and instruments, which can promote the development of electronic and optical devices in machinery, construction, energy instrumentation, aerospace, information, and telecommunication industries.

In recent years, many emerging sensors and photovoltaic nanostructure-based devices with improved performance have been proposed due to the high requirements for environmental monitoring and energy storage and conversion which are common challenges to human globally. However, some basic scientific issues such as the electron motion and transfer, as well as the involved reactions along the interface of nanomaterials, which commonly influence the performance of sensing and photovoltaic devices, are still unclear. This special issue aims at creating a multidisciplinary forum of discussion on recent advances of sensing and photovoltaic devices based on nanostructures with focuses on the fundamental electron attributions and interfacial properties.

With this need in mind, we invite authors to contribute original research articles as well as review articles that will illustrate and stimulate the continuing effort to explore the electronic and interfacial performances of condensed matter materials in sensing and photovoltaic applications.

Potential topics include, but are not limited to:

- Discoveries of novel nanostructured sensing and photovoltaic materials
- Multidisciplinaryapplications of nanostructure-based sensors and photovoltaics
- Experimental findings and simulations about electronic motion, transfer, and reactions along interfaces of nanomaterials
- Preparation method and characterization of sensing and photovoltaic nanostructures
- Study of novel electronic and optical properties of nanomaterials

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/acmp/mnhp/.

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