

Tentative Outline

Title of the Thematic Issue: Functional materials for biomedical and analytical applications

Guest Editors: Chih-Ching Huang and Yang-Wei Lin

Aims & Scope:

Functional (nano)materials have opened up a great opportunity in solving some of the major issues in conventional medicine, therapy, sensor, and diagnosis. Functional (nano)materials highly improve the therapeutic efficacy of medicines through targeted drug delivery, sustained release of drugs, and combined therapeutic effect. Similarly, functional (nano)materials have been proved to be very effective in improving the sensitivity, selectivity, and simplifying the diagnosis and sensing procedures, and expediting sensing and disease diagnosis, in comparison with conventional techniques with sophisticated instruments. Functional (nano)materials can highly reduce the cost and time of biosensing to meet for on-site analysis. Therefore, the current research trend indicates novel functional (nano)materials could replace many traditional therapeutics and analytical components, and show a bright future. However, the practical application of the functional (nano)materials is still in the research level and requires long term and tremendous research work from their synthesis and modification to a real application. Therefore, we believe that a special issue on “Functional materials for biomedical and analytical applications” will be a hot topic and will get attention from a wide range of readers.

Keywords: Functional nanomaterials, drug delivery, combination therapy, nanomaterials or nanodrugs.

Subtopics:

This issue focuses on publishing the innovative research work or review articles on but not limited to the following topics:

- The design of functional materials such as nanowires, microboxes and 2D materials
- Surface modification of materials and investigation of their properties
- Functional nanomaterials as nanodrugs for antibacterial, antiviral and antifungal applications
- Functional materials for targeted drug delivery
- Functional materials for combination therapy
- Targeted inhibition of any biological activity related to the treatment of diseases
- *In vitro* and *in vivo* toxicity study of functional materials used in biomedical applications
- Pharmacokinetics of functional nanomaterials or nanodrugs

- Environmental impact of functional nanomaterials
- Functional materials for biosensing, environmental monitoring and assessment
- Detection of pathogens and biomarkers and tissue imaging using functional nanomaterials.

We welcome short communications and research articles as well as review articles for this special issue, and invite you to contribute and make it successful. We look forward to hearing from you.

Schedule:

Manuscript submission deadline: 1st October 2019

Peer Review Due: 15th November 2019

Revision Due: 15th December 2019

Announcement of acceptance by the Guest Editors: 15th January 2020

Final manuscript due: 29th February 2020

#