

Tentative Outline (Preliminary Proposal of Thematic Issue)

Special/Thematic Issue for the journal Current Nanoscience

Title of the Thematic Issue: Metal oxide nanomaterials: current and emerging applications

Section Editor's Name: Anca Mazare

• Scope of the Thematic Issue:

The use of metal oxide nanomaterials has made exceptional progress over the last 20 years and its further expansion is directed by applications targeting emerging areas of research, as well as a well-established research direction. The present thematic issues aim to bring together scientists working on various metal oxide nanomaterials with respect to their synthesis and applications, starting from (photo)electrochemical, photocatalytic, biomedical applications, and so on, as well as emerging applications based on (bio)sensors, wearable devices, etc. Authors are invited to contribute with comprehensive review articles evaluating the synthesis of such metal oxide nanomaterials (nanoparticles, nanorods, nanotubes, nanobelts, etc.) and their characterization in view of the targeted/desired application, or also with research articles.

Keywords: Nanomaterials, Metal oxide, Photoelectrochemistry, Photocatalysis, Biomedical applications, Nanomaterials characterization

Sub-topics:

- Metal oxide nanomaterials, such as TiO₂, Fe₂O₃, Cu₂O, SnO₂, WO₃, ZnO nanomaterials – synthesis, properties, and characterization
- Current state-of-the-art in applications (photoelectrochemistry, photocatalysis, DSSCs, biomedical devices, etc.) based on metal oxide nanomaterials
- Progress and challenges in metal oxide nanomaterials characterization (include and are not limited to SEM, TEM, XPS, FTIR, UV-Vis; XANES, EXAFS, Electrochemistry (IPCE, CV, IMPS, IMVS))
- Emerging applications based on metal oxide nanomaterials – approach and challenges.

Schedule:

- ✧ Complete Thematic issue submission deadline: October 31, 2023.

Details of Guest Editor:

Guest Editor Name: Anca Mazare

Affiliation: Department of Materials Science, WW4-LKO, Friedrich-Alexander University, Erlangen, Germany / Advanced Institute for Materials Research (AIMR), National University Corporation Tohoku University (TU), Sendai, Japan

Email: anca.mazare@fau.de