



an Open Access Journal by MDPI

# **Advances in Transition Metal Compounds and Their Applications**

Guest Editor:

## Message from the Guest Editor

Dr. Marta Prześniak-Welenc

Institute of Nanotechnology and Materials Engineering, Gdansk University of Technology, Narutowicza 11/12, 80-233 Gdansk, Poland

Deadline for manuscript submissions: closed (20 March 2023) Dear Colleagues,

Recent studies demonstrate that transition metal compounds exhibit promising visible-light photocatalytic reactivity in the decomposition of pollutants and water splitting. On the other hand, these materials have high specific capacity and good electrochemical and safety characteristics, which makes them promising for energy storage applications. Moreover, nanostructured transition metal compounds with high surface-to-volume ratios are of particular scientific interest in this field.

The topics of this Special Issue include but are not limited to the advanced application of transition metal compounds, (photo)catalysis, photocatalytic water splitting, photovoltaics, photoelectrochemistry, electrochemical energy storage, electrode materials, and supercapacitors.

Dr. Marta Prześniak-Welenc

Guest Editor

## **Keywords:**

- photocatalysts
- water and air pollutant degradation
- water splitting
- photoelectrochemistry
- cathode materials
- rechargeable batteries









an Open Access Journal by MDPI

## **Editor-in-Chief**

#### Prof. Dr. Maryam Tabrizian

 Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

### Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The iournal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites. advanced materials characterization, porous materials, manufacturing processes and svstems. advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials. materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. Materials provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

## **Author Benefits**

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q2 (*Metallurgy & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

## **Contact Us**

*Materials* Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/materials materials@mdpi.com X@Materials\_Mdpi