

## Special Issue

# Performance and Degradation Mechanisms of Electrode Materials for Solid Oxide Cells Devices

### Message from the Guest Editors

The study of electrode materials for Solid Oxide Cell (SOC) devices is constantly bringing new progress to the field. Detailed studies of the mechanisms of the historical state-of-the-art materials have brought new architectures, morphologies, and advanced nanocomposites, while new materials compositions have also been tested. The aim of the Special Issue “Performance and Degradation Mechanisms of Electrode Materials for Solid Oxide Cell Devices” is to compile new results in the knowledge of the catalytic and degradation mechanisms of a wide range of electrode materials. Oxygen electrodes, fuel electrodes or symmetric electrodes produced by technologies from thin films to nanocasting new procedures through electrodes produced by additive manufacturing will be studied operating under fuel cell or electrolysis mode. In this way, the Special Issue will bring a broad overview on the main advantages for the electrodes generated by different innovative technologies.

### Guest Editors

Dr. Marc Torrell

Dept. Advanced Materials for Energy, Jardins de les Dones de Negre 1, 2<sup>a</sup> pl., 08930 Sant Adrià de Besòs, Barcelona, Spain

Dr. Miguel Ángel Laguna Bercero

Instituto de Ciencia de Materiales de Aragón, Zaragoza, Spain

### Deadline for manuscript submissions

closed (30 November 2021)



## Materials

an Open Access Journal  
by MDPI

Impact Factor 3.7  
CiteScore 7.0  
Indexed in PubMed



[mdpi.com/si/45084](https://mdpi.com/si/45084)

*Materials*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[materials@mdpi.com](mailto:materials@mdpi.com)

[mdpi.com/journal/  
materials](https://mdpi.com/journal/materials)





# Materials

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.7  
CiteScore 7.0  
Indexed in PubMed



[mdpi.com/journal/  
materials](https://mdpi.com/journal/materials)



## About the Journal

### Message from the Editorial Board

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, 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.

---

### Editors-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

---

### 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 and Metallurgical Engineering) /  
CiteScore - Q1 (Condensed Matter Physics)