

Special Issue

Advanced Materials, Sensors and Smart Components for Modern, Intelligent, and Sustainable Vehicles

Message from the Guest Editors

The progress of modern, intelligent and sustainable vehicles needs an interdisciplinary approach, involving many research areas such as materials science, tribology, etc. and new technologies (preventive maintenance, additive manufacturing, surface coating techniques, etc.). Besides, new and micro-nano materials, sensors and smart components are fundamental drivers for the development of the new generation vehicles. The aim of this Special Issue is to cover the main aspects of fundamental and applied research in the development of modern, intelligent and sustainable vehicles, such as (but not limited to) the following:

- Nanostructured materials for fluid power systems and automotive
- New materials development and characterizations
- New methods for the modeling and analysis of fluid power and automotive systems and components
- Smart components and innovative sensors
- Sensors networks for IoT applications
- Condition monitoring, predictive maintenance and functional safety of vehicles
- Innovative control strategies and Digital Twins enabled by new sensors
- Eco friendly and Smart fluids

It is our pleasure to invite you to submit a manuscript for this Special Issue.

Guest Editors

Dr. Ambra Fioravanti

Institute of Sciences and Technologies for Sustainable Energy and Mobility—CNR-STEMS, Via Canal Bianco 28, 44124 Ferrara, Italy

Dr. Pietro Marani

Institute of Sciences and Technologies for Sustainable Energy and Mobility (STEMS), National Research Council (CNR), 44124 Ferrara, Italy

Deadline for manuscript submissions

closed (20 May 2023)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/88075

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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





Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

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.

Editor-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

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)