materials

IMPACT FACTOR 3.1

Indexed in: PubMed

CITESCORE 5.8

an Open Access Journal by MDPI

Mechanical Properties and Oxidation Behavior of Protective Coatings

Guest Editors:

Prof. Dr. Yung-I Chen
Department of Optoelectronics and Materials Technology, National Taiwan Ocean University, Keelung, Taiwan

Prof. Dr. Chau-Chang Chou
Department of Mechanical & Mechatronic Engineering, National Taiwan Ocean University, Keelung, Taiwan

Deadline for manuscript submissions:
closed (20 March 2023)

Message from the Guest Editors

Dear Colleagues,

Surface modifications with protective coatings are applied to achieve advanced material characteristics, such as superior mechanical properties, chemical stability, oxidation resistance, and corrosion resistance. Distinct structures, such as multilayered, nanocomposite, and amorphous structures, are utilized in versatile protective coatings. Nitride, carbide, oxide, and boride films are the most familiar materials used as protective coatings. Moreover, protective coatings with multicomponent alloys, such as high-entropy alloys and thin-film metallic glasses are attracting the interest of researchers worldwide. Strengthening mechanisms, including solid-solution strengthening, grain refining, the Hall–Petch effect, and residual stress effect are widely discussed. Oxidation behavior is associated with the lack of grain boundaries and the formation of an inert surface oxide layer. This Special Issue, entitled “Mechanical Properties and Oxidation Behavior of Protective Coatings”, welcomes all original research and critical review articles on the relevant topics.

Prof. Yung-I Chen
Prof. Dr. Chau-Chang Chou
Guest Editors

materials

IMPACT FACTOR 3.1 | Indexed in: PubMed | CITESCORE 5.8

an Open Access Journal by MDPI

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

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.

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 - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
𝕏@Materials_Mdpi