Special Issue

Intermetallic Alloys and Intermetallic Matrix Composite Coatings

Message from the Guest Editors

Transition metal aluminides based on Ti, Fe, Ni, Co and Nb are seen as promising for their potential use as coatings in agressive environments. They possess sufficiently high concentrations of aluminum to form a continuous, fully adherent alumina layer on the surface when exposed to corrosive, oxidizing, carburizing and sulfidizing conditions. The common coating technologies (thermal spray technologies and laser cladding) may imply some oxidation of the raw material along the deposition process, which may actually introduce reinforcement phases that can contribute to change of thermophysical properties, increase hardness and wear resistance but are detrimental to oxidation and corrosion since they leave aluminum-depleted areas. In order to actually improve the wear performance, ceramic hard phases can be introduced also as feedstock. The use of carbides or borides for example is being used as an strategy not only investigated for coatings but also for bulks with the aim to be competitive to well-stablished WC-Co in high demanding wear resistant applications where tools need to withstand high temperatures.

Guest Editors

Prof. Dr. Cezary Senderowski

Departament of Materials and Machinery Technology, University of Warmia and Mazury, Oczapowskiego 11 St., 10-719 Olsztyn, Poland

Dr. Núria Cinca

Departament de Ciència i Enginyeria de Materials (CEM), Universitat Politècnica de Catalunya, Barcelona, Spain;
Hyperion Materials & Technologies, P.I.Roca, Carrer de la Verneda, 12, 24, 08107 Martorelles, Spain

Deadline for manuscript submissions

closed (20 February 2024)

Coatings

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.4

mdpi.com/si/48209

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

mdpi.com/journal/coatings

Coatings

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.4

mdpi.com/journal/coatings

About the Journal

Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.
Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

Editors-in-Chief

Prof. Dr. Wei Pan
State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science & Engineering, Tsinghua University, Beijing 100084, China

Dr. Emerson Coy
NanoBioMedical Centre, Adam Mickiewicz University in Poznań, ul. Wszechnicy Piastowskiej 3, 61-614 Poznań, Poland

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), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q2 (Surfaces, Coatings and Films)

MDPI