Special Issue

Advanced Materials and Coatings for Photocatalytic Applications

Message from the Guest Editor

Photocatalysis is a technique that uses light energy to successfully initiate chemical reactions in order to breakdown harmful contaminants or produce fuels. Nonetheless, there are issues, such as the poor stability of nanocatalysts, the low efficiency of photogenerated carrier transport and separation, and unclear mechanisms of charge separation and transfer. Nanostructured photocatalysts are difficult to separate or recycle, and some metal ions from semiconductor photocatalysts are dissolved out by photocorrosion, which results in secondary pollution. Therefore, nano-sized semiconductor or polymer coatings have been grown on nanostructured photocatalysts, and these can accelerate carrier transport and separation or enhance the stability of catalysts. This Special Issue attempts to evaluate the latest basic and advanced developments in advanced materials and coatings used in photocatalytic applications, including organic pollutant removal, wastewater treatment, VOCs and NOx elimination, H2 production, CO2 or N2 conversion, and so forth.

Guest Editor

Dr. Zuoli He

Shandong Key Laboratory of Water Pollution Control and Resource Reuse, Shandong Key Laboratory of Environmental Processes and Health, School of Environmental Science and Engineering, Shandong University, Qingdao 266237, China

Deadline for manuscript submissions

closed (31 January 2025)

Coatings

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.4

mdpi.com/si/205874

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

Journal Rank:

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

MDPI