

## Advances in Two-Dimensional Materials: From Synthesis to Applications

Guest Editor:

**Dr. Liang Xu**

Associate Professor, School of  
Energy and Mechanical  
Engineering, Jiangxi University of  
Science and Technology,  
Nanchang 330013, China

Deadline for manuscript  
submissions:

**28 November 2024**

### Message from the Guest Editor

Two-dimensional (2D) materials have gained tremendous attention due to their unique properties and potential applications in various fields. This Special Issue is to highlight recent breakthroughs in the field of 2D materials, spanning the entire spectrum from synthesis to applications. We aim to provide a comprehensive overview of the cutting-edge research, with a focus on the latest advances and emerging trends.

In particular, the topic of interest includes but is not limited to:

- The synthesis and characterization of 2D materials;
- The physical and chemical properties of 2D materials;
- Structure–property relationships in 2D materials;
- Modification of 2D materials via heterojunctions;
- Modification of 2D materials via doping;
- Transport phenomena and electronic properties of 2D materials;
- Defect engineering, strain engineering, and surface functionalization;
- The applications in energy storage and conversion, electronics, sensing, and biomedical fields.

We look forward to receiving your contributions.



[mdpi.com/si/177847](https://mdpi.com/si/177847)

# Special Issue

## 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

## Message from the Editorial Board

Now more than ever, research is called for to produce technologies and improve knowledge 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 at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. *Coatings* is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. *Coatings* publishes original research articles that report cutting-edge results and review papers on the hottest topics.

## 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, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (*Materials Science, Coatings & Films*) / CiteScore - Q2 (*Surfaces and Interfaces*)

## Contact Us

---

*Coatings* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

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

mdpi.com/journal/coatings  
coatings@mdpi.com  
X@Coatings\_MDPI