

Special Issue

Research Progress in Fusion Coatings and Additive Manufacturing

Message from the Guest Editors

The scope of this Special Issue will serve as a platform for contributions addressing the following themes:

- Advances in fusion coating technologies, especially when integrated with additive manufacturing platforms.
- Design, fabrication, and characterization of novel coating materials tailored for additive manufacturing processes.
- Recent advances in laser processing related to surface engineering, laser processing technologies to improve the performance of material surfaces and connections between materials.
- Research on coating-substrate interdiffusion, bonding mechanisms, residual stress management, and microstructure control in additively manufactured protective layers.
- Evaluation of coating performance under demanding conditions.
- Development of in-situ monitoring, process optimization, and intelligent control strategies for hybrid manufacturing of coated components.
- Modeling and simulation of thermal history, phase evolution, defect formation, and mechanical behavior in fusion-coated additively manufactured structures.
- Novel applications of fusion coating and additive manufacturing in repairing, remanufacturing, and enhancing surface properties of critical engineering components.

Guest Editors

Dr. Jin Peng

Henan International Joint Laboratory of High-Efficiency Special Green Welding, School of Materials Science and Engineering, North China University of Water Resources and Electric Power, Zhengzhou 450045, China

Dr. Zhipeng Yuan

School of Materials Science and Engineering, North China University of Water Resources and Electric Power, Zhengzhou 450045, China

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

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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

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