



Innovative Coating Processes to Protect Metals and Alloys from Deterioration

Guest Editors:

Prof. Dr. Han-Seung Lee

Department of Architectural
Engineering, Hanyang University,
Ansan 15588, Republic of Korea

Dr. Jitendra Kumar Singh

Center for Creative Convergence
Education, Innovative Durable
Building and Infrastructure
Research Center, Hanyang
University, Ansan 15588, Republic
of Korea

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Message from the Guest Editors

Nowadays, the deterioration of metals, alloys and materials is a vital issue that can be mitigated by the use of innovative coating processes for long-term exposure in aggressive environments. The selection of the proper materials for use in the chemical industries, oil and gas, construction, bridges, dams, aerospace, automobile, etc. is also an area of study. The selection of materials depends on the application. Therefore, innovative processes are needed for implementation in recent technologies, which requires new insights in the materials development sector. The main focus of this Special Issue is to provide and publish recent developments in the area of materials technology to protect metals and alloys from corrosion in harsh environments. The topics include, but are not limited to:

- Materials technology;
- Thermal spray techniques;
- Galvanization;
- Sol-gel coating;
- Electroless and electroplating;
- Chemical industries;
- Oil and gas sector;
- Processes to develop innovative coating processes;
- Development of smart materials that can protect the metals and alloys;
- Nanotechnology development in the coating sector;
- Protective methods to mitigate the corrosion of materials.





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 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.

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Contact Us

Coatings Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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