

## Special Issue

# Electrochemical Processes at Metallic Electrodes—Corrosion and Protection

### Message from the Guest Editor

Industrial and post-industrial societies are based on metals. Those that are most commonly applied react with the environment to a greater or lesser extent. Thus, corrosion is an important problem affecting human safety, the environment, and the economy. The global cost of corrosion was estimated by the National Association of Corrosion Engineers (NACE) as 3.4% of the global gross domestic product. Corrosion affects the global demand for metal, decreasing their reserves and increasing the environmental pollution caused by mining and metallurgy. Thus, efficient corrosion protection strategies are necessary, which are based on scientific corrosion studies. This Special Issue will present research articles describing the mechanisms for electrochemical corrosion of metals as well as means of corrosion protection. Nowadays, especially interesting issues related to these are, e.g., the replacement of toxic elements used in corrosion protection such as Cr(VI), development of self-healing anticorrosion coatings, a better understanding of passivity and the mechanisms of breakdown of the passive layer, in addition to green corrosion inhibitors.

### Guest Editor

Dr. Przemysław Kwolek

Department of Materials Science, Faculty of Mechanical Engineering and Aeronautics, Rzeszów University of Technology, Żwirki i Wigury 4, 35-036 Rzeszów, Poland

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## Metals

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*Metals*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[metals@mdpi.com](mailto:metals@mdpi.com)

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## About the Journal

### Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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