



Electrochemical and Corrosion Behaviour of Mg Alloys

Guest Editor:

Dr. Leoš Doskočil

Brno University of Technology,
Brno, Czech Republic

doskocil@fch.vut.cz

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Message from the Guest Editor

Magnesium and its alloys have excellent physical and chemical properties such as low density, high strength, thermal conductivity, good damping performance, biocompatibility, recyclability, etc. They are considered to have great application potential especially in the fields of transportation (including aerospace) and biomedical applications. Unfortunately, poor corrosion resistance is the most important property that limits the industrial application of magnesium-based materials. In recent years, efforts have been made to develop new compositions, surface modifications, or deformation processes to improve the corrosion resistance of magnesium and its alloys. Despite the large scientific progress, there is still potential for the development of new solutions and overcoming the knowledge gap.

The scope of this Special Issue should provide comprehensive insight on corrosion processes in different environments and under different conditions, anti-corrosion coatings of different origins including current trends and advanced strategies such as superhydrophobic treatments, smart materials, etc., and corrosion inhibitors. Review papers are also welcome.





Editors-in-Chief

Dr. Alessandro Lavacchi

Istituto di Chimica dei Composti
OrganoMetallici (ICCOM-CNR),
Via Madonna del Piano 10, 50019
Sesto Fiorentino, Firenze, Italy

Prof. Dr. Wei Pan

State Key Laboratory of New
Ceramics and Fine Processing,
School of Materials Science &
Engineering, Tsinghua University,
Beijing 100084, China

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.

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