

Special Issue

Molecular Research Progress on Corrosion Mechanisms and Advanced Coatings for the Protection of Metals and Alloys

Message from the Guest Editors

Metal materials corrode under the influence of the atmospheric environment. Corrosion directly affects the durability and safety of used metal products, devices and structures. Corrosion, both in economic and social terms, is an extremely important problem for the economies of all countries. To reasonably estimate or predict the corrosion behavior of metal products, it is necessary to understand their corrosion mechanisms in the working environment. This knowledge is essential for designing and selecting the most optimal and effective methods for preventing corrosion. The Special Issue includes research on the corrosion behavior of new materials, which will allow for understanding the mechanisms of corrosion in various corrosive environments. The subject also includes issues of reducing the effects of corrosion, including the development of new protective coatings, corrosion inhibitors and electrochemical protection. The scope includes wear mechanisms and methods of protection against electrochemical, chemical and high-temperature corrosion, such as corrosion in liquid metals. We invite all researchers interested in corrosion to present their experimental and theoretical work.

Guest Editors

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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.

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