



Molecules

an Open Access Journal by MDPI

CiteScore: 8.6

Indexed in PubMed

Impact Factor: 4.6

Special Issue Reprint

Electroanalysis of Biochemistry and Material Chemistry

Edited by: Guangjin Wang

Building on the first Special Issue reprint “Electroanalysis of Biochemistry and Materials Chemistry”, which focused on the controllable synthesis and electrochemical performance analysis of advanced materials using electrochemical technologies, we are pleased to present the second reprint of this Special Issue. In this collection, electrochemical technologies are primarily employed to investigate the corrosion resistance of various advanced material substrates, such as ultrahigh strength steel, magnetic materials, bearing steel and alloy bipolar plates. This is a core research topic in the field of advanced material protection. The main current strategies to improve the corrosion resistance of advanced material substrates include additive introduction, heterogeneous element doping and post-processing modification. Notably, the distribution and utilization of additives within the material matrix have a significant impact on the final corrosion resistance performance. Moreover, benefiting from their large specific surface area, high porosity, well-defined crystal structure and excellent biological compatibility, metal–organic frameworks have been widely applied to construct electrodes for high-performance supercapacitors, as well as recognition elements for electrochemical biosensors targeting food contaminant detection. Accordingly, this reprint compiles recent research advances in the above-mentioned fields. It provides valuable references for the application of electrochemical technology in biochemistry and materials chemistry and promotes the development of related fields.



<https://www.mdpi.com/books/reprint/12870>