Special Issue

New Trends in Electrode for Electrochemical Analysis

Message from the Guest Editors

Electrochemical analysis has emerged as a vital technique in a wide range of scientific fields, from environmental monitoring to biomedical diagnostics. At the core of these analyses are electrodes, which are essential for ensuring the sensitivity, selectivity, and overall performance of electrochemical sensors and devices. This Special Issue focuses on the latest advancements in electrode materials and fabrication methods, which are driving innovation in electrochemical analysis. New electrode materials are significantly enhancing electrochemical performance, stability, and versatility, enabling breakthroughs in areas. Moreover, innovations in electroanalysis techniques, such as the machine learning-guided design of electroanalytical pulse waveforms and the development of ultramicroelectrodes and nanoelectrodes, are advancing the precision and sensitivity of electrochemical measurements. **Keywords:** electrochemical analysis; electrode materials; electrochemical sensors; nanostructured electrodes; composite electrodes; electroanalysis techniques; machine learning-guided design; electroanalytical pulse waveforms; ultramicroelectrodes; nanoelectrodes.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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