Electrochemical Modified Based Sensors: A New Approach for Analytical Chemistry

We cordially invite you to read the thematic issue titled "Electrochemical Modified Based Sensors: A New Approach for Analytical Chemistry" by Prof. Hassan Karimi-Maleh.

This special issue focused on the introduction of new electrochemical modified sensors, as an analytical approach for the determination of biological, pharmaceutical, environmental and food samples. The investigation of new and modified electrochemical sensors with good ability and high sensitivity for the determination of biological, pharmaceutical, environmental, and food samples is the main goal of this special issue. In this thematic issue, there are seven review papers and two research papers.

In the first review paper, Mousazadeh et al. focused on modified electrodes and their applications in analytical chemistry. This review emphasizes on the major classes of modified electrodes with mediators that are being explored for improving analytical methodology.

In another review paper, Alizadeh et al. discussed N,N’-dialkyl imidazolium-ion liquids as one of the important ionic liquids with a wide range of applications in electrochemistry. This review paper focused on the introduction of recent advantages of N,N’-dialkyl imidazolium ion liquid in electrochemistry.

Mohammad Beigi et al. discussed electrochemiluminescence sensors based on lanthanide nanomaterials as modifiers in a review paper. They introduced the main types of lanthanides nanomaterials and their physical, chemical, and biological properties, along with applications in different ECL sensors with respect to the corresponding functions they serve.

In another contribution, Salehi Baghbaderani et al. discussed the novel approaches based on nanomaterial-modified systems in point of care diagnostics.

Additionally, Kaya et al. discussed carbon nanomaterial-based drug sensing platforms using state-of-the-art electroanalytical techniques. They clearly showed the role of nanomaterials in electrochemistry and the advantages of Carbon Nanomaterial for drug monitoring.

In another contribution, Buledi et al. described the current perspective and developments in electrochemical sensors modified with nanomaterials for environmental and pharmaceutical analysis.

In the final review paper, Liu et al. discussed the application of solid-state electrochemical analysis in ancient ceramic identification and characterization. A new method for the protection of fine ancient ceramics by the suitable carrier and the fixation on the surface of the electrode was discussed by the authors.

In the first research paper, Shahraki et al. reported that a highly sensitive electrochemical sensor was designed and fabricated as an analytical tool for the determination of epinine. A modified sensor was successfully used for the determination of epinine in water and dextrose saline with an acceptable recovery range of 98.7%-102.72%.

In the second research paper, Montazarolmahdi et al. fabricated a new electrochemical sensor based on the modification of carbon paste electrode with CuO-SWCNTs and 1-hexyl-3-methylimidazolium chloride for monitoring of salicylic acid. The MPE/CuO-SWCNTs/HMICl was successfully used as a new and high-performance working electrode for the determination of salicylic acid at a nanomolar level and in real samples.

In this special issue volume, I collected several kinds of research and review papers studied by different researchers to present analytical research. Therefore, this thematic issue will be beneficial for the researchers that want to have a broad knowledge. We would like to thank all of the authors one more time for their excellent contributions, the Editors of “Current Analytical Chemistry” for this kind invitation as guest editors for this thematic issue and especially the valuable assistance by Editorial Manager, Syed Faizan Akhtar, in the processing and finalization of this special theme issue.

REFERENCES


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