Special Issue

Electrochemical Sensors and Biosensors Based on Graphene

Message from the Guest Editors

Graphene films have proven remarkably useful for biosensing applications, typically but not exclusively employing an electrochemical approach, where electrolyte displacement from the film during a binding event induces an easily measured change in its properties. However, while the literature on this topic is quite exhaustive, the commercial application of graphene film sensors has been slow. This Special Issue aims to explore the factors that hinder their development. We seek papers exploring the following:

- Film selection (exfoliated, epitaxial, or CVD);
- Functionalization (linker molecules or direct attachment);
- Methods of use (field-induced conductivity modulation, capacitance, optical spectroscopy, etc.);
- Performance (sensitivity, specificity, or specific responses);
- Stability (shelf life, working life, corrosion resistance, and methods of improvement).

Of additional interest is the comparison of these sensors to alternative or more traditional transducers, as well as business models for their commercialization.

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Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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