Special Issue

Nanosensors and Nanodevices for Disease Detection

Message from the Guest Editor

New disease diagnostic technologies that can provide high accuracy and efficiency while being cost-effective are strongly required for the early prediction and prevention of cancer and infectious diseases and for maintaining a safe and healthy society. Nanobiosensors and nanodevices are strong candidates for developing tools that meet these requirements. Recent studies have focused on the development of various sensors for the diagnosis of diseases, including nanopore- and surface plasmon-based sensors, as well as sensors that exploit nitrogen-vacancy centers of diamond. However, each of them has different measurement probes for electricity, light, and magnetism, making it difficult to correlate the research findings and determine the development status of nanobiosensors and nanodevices used in disease diagnosis. Thus, this issue aims to summarize the existing findings on these nanotools and also present the current research state. In addition to nanobiosensors and nanodevices, this issue also focuses on machine learning, which is essential for the analysis of big data obtained using such sensors.

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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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