

Special Issue

Electrochemical Biosensors: Principle, Design and Applications

Message from the Guest Editor

We are pleased to invite authors to contribute to this Special Issue, dedicated to exploring the latest innovations in electrochemical biosensors and emphasizing the role of nanomaterials and advanced characterization techniques in shaping the next generation of analytical devices. Graphene, carbon nanotubes, metallic nanoparticles, and metal oxides have emerged as key materials offering large surface areas, enhanced conductivity, and catalytic activity. Moreover, hybrid and core-shell nanostructures are unlocking new possibilities for controlled electron transfer and interfacial stability in bioelectrochemical systems. Complementing these developments, state-of-the-art techniques such as TEM, XPS, AFM, and EIS provide deep insights into nanoscale morphology, composition, and charge-transfer processes. This Special Issue welcomes original research, reviews, and perspectives addressing materials design, device integration, novel applications, and interdisciplinary approaches combining nanotechnology, microfluidics, and data analytics for smart and personalized health monitoring.

Guest Editor

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Message from the Editor-in-Chief

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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