Special Issue

Flexible Optical and Electrical Biosensors

Message from the Guest Editors

There's an increasing demand for deformable optical and electrical devices in the healthcare industry. Flexible light-emitting diodes and photodetectors can be widely used in infrastructure, manufacturing, and athletic healthcare. From the standpoint of materials, carbon-based nanomaterials, such as carbon nanotubes (CNTs) and graphene, are widely used materials in flexible pressure sensors. Semiconductors are also a large portion of flexible and stretchable sensors. Organic semiconductors and solution-processed halide perovskites bring new possibilities to deformable optoelectronics. Perovskites have attracted numerous studies due to their exceptional optical and electrical properties since 2009. Flexible and stretchable light-emitting diodes and photodetectors based on perovskites and polymer composites have also been reported since 2015. There are other types of materials that can be used in deformable optical and electrical devices, such as metal–organic frameworks (MOFs). It is believed that there will be more and more reports of novel materials that can be used in deformable devices that benefit human health and development.

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Biosensors is a leading journal, devoted to fast publication of the latest achievements, technological developments and scientific research in the exciting multidisciplinary area of biosensors. Both experimental and theoretical papers are published, including all aspects of biosensor design, technology, proof of concept and application. Special issues are devoted to specific technologies and applications, and a selection of the most outstanding papers each year is recognized. Pushing the boundaries of the discipline, we invite original papers, as well as timely reviews on cutting edge fields within the subject area.

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