



Highly Sensitive Transducers for Biosensing

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Message from the Guest Editor

A transducer is a device that converts energy from one form to another. In the case of biosensors, a transducer device converts biochemical interactions occurring at the transducer interface into a readable signal. A wide range of transducer principles has been developed and used for detection of biomolecular interactions in the last few decades, looking to achieve higher sensitivities that could satisfy the continuous demanding requirements to detect low concentrations and small molecules. The development of highly sensitive transducers and biosensors offers a powerful opportunity in early diagnosis and treatment of diseases, reducing the cost of patient care associated with advanced stages of diseases. This Special Issue is aimed to report recent developments and advances in design, simulation and fabrication of highly sensitive transducers for biosensing applications. It is envisaged that this will cover a wide range of areas, including electrochemical, nanomechanical, piezoelectric, piezoresistive or optical (photonic and plasmonic) transducers, combined with enzymes, antibodies, DNA, aptamers or molecularly imprinted polymers for the specific detection of desired analyte.





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