Special Issue

AI-Driven Biosensing

Message from the Guest Editor

AI-driven biosensors represent a rapidly advancing frontier in the integration of artificial intelligence with biosensing technologies, offering unprecedented capabilities for intelligent signal interpretation, real-time anomaly detection, and predictive diagnostics. By incorporating advanced machine learning algorithms and data analytics, these systems enable the analysis of multidimensional biosensor data, improving the accuracy, robustness, and scalability of biosignal interpretation. The application of both supervised and unsupervised learning techniques facilitates the high-performance detection of complex biological targets, such as nucleic acids, proteins, and metabolites, driving biosensing technology toward smarter, adaptive, and autonomous systems. Through the combination of AI algorithms, machine learning models, and biosensor data analytics, the future of biosensing technologies is moving towards more intelligent, responsive, and autonomous systems with significant implications for clinical diagnostics and therapeutic interventions.

Guest Editor

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Message from the Editor-in-Chief

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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