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# Nanomaterial-Based Biosensors for Biomedical Applications

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Deadline for manuscript submissions: closed (20 October 2022)

#### **Message from the Guest Editors**

Recent advances in the development of functional nanomaterials with unique physical and chemical properties have paved the way for the design of new biosensors for biomedical applications. A variety of emerging inorganic (e.g., quantum dots, carbon nanotubes. liquid metal alloys, and rare-earth nanoparticles) and organic (e.g., polymeric nanoparticles) nanomaterials, as well as hybrid nanomaterials, have become the basis for high-performance biosensors with an enhanced sensitivity, selectivity, and robustness. Using these advanced nanomaterials as the core sensing elements, many nanosensors have been developed, including, but not limited, to silicon-based nanowire fieldeffect sensors for pH sensing, protein/DNA detection, and detection: single viruses carbon dots-based photoluminescence sensors, electrochemiluminescence sensors, chemiluminescence sensors, and enzyme sensors; liposome-based nano biosensors for pesticide detection; and surface-enhanced Raman scattering nano-biosensors with different nanomaterials.









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### Message from the Editor-in-Chief

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