



## Two-Dimensional Materials for Versatile Biosensing

As modern medicine becomes more personalized and less centralized, the need for scalable and tunable platforms for next-generation point-of-care biosensors remains an ongoing research objective. One promising technology for point-of-care analysis is electrochemical sensors, which are portable, ultrasensitive, and inexpensive. Electrochemical sensors are compatible with integrated circuit technology, enabling integration of sensors with the necessary electronic circuitry for data acquisition, processing, and transfer.

Two-dimensional (2D) materials, such as graphene, transition-metal dichalcogenides (TMDs), and their heterostructures, are viable candidates for next-generation point-of-care biosensing. Transition-metal 2D materials

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