



2D Material for Sensors Application

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Message from the Guest Editor

Dear Colleagues,

This Special Issue is devoted to the reports on 2D-based sensors. Due to recent success in the synthesis and engineering of 2D materials, new functionalities became possible by defect engineering, creating heterostructures with various nanomaterials as well as chemical and molecular doping. The 2D material family contains a variety of electronic properties, spanning from metallic/semimetallic (e.g. graphene) to semiconducting (e.g. MoS₂, WS₂) to insulating (e.g. h-BN). Importantly, through functionalization or defect engineering of 2D materials one can modify the surface chemistry and thus tailor them to selectively respond to certain analytes with extremely high sensitivity. Furthermore, 2D material-based sensors can be fabricated with miniaturised dimensions and feature flexibility, transparency and mechanical strength. All these unique properties make 2D materials excellent candidates for sensing applications.





sensors



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Message from the Editor-in-Chief

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