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Rb-Modified Few-Layered Graphene for Gas Sensing Application

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Abstract : In the present investigation, we demonstrated the fabrication of few-layers of graphene sheets with alkali metal i.e. Rb-G using chemical route method. The obtained materials were characterized by means of chemical, structural and electrical techniques, using the ultraviolet-visible spectroscopy (UV-Vis), Fourier transform infrared spectroscopy (FTIR), X-ray powder diffraction (XRD), scanning electron microscopy (SEM) and 4 points probe, respectively. The XRD studies were carried out to understand the phase of the samples where we found a sharp peak of Rb-G at 26.470. UV-Spectroscopy of Graphene and Rb-modified graphene samples shows the absorption peaks at ~248 nm and ~318 nm respectively. These analyses show that this modified material can be useful for gas sensing applications and to be used in diverse areas.

Keywords : chemical route, graphene, gas sensing, UV-spectroscopy
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