

EPR of graphene oxide and reduced graphene oxide under adsorption conditions

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We report the observation of Electron Paramagnetic Resonance (EPR) in graphene oxide and reduced graphene oxide. Both materials were subjected to the procedure of purification under vacuum conditions and subsequent immersion in various media i.e. air, helium and water. Strong changes in EPR spectra appeared as a result of host-guest interaction between the adsorbed molecules and the surface of graphene sheets. The role of defects and oxygen functionalities in the spin localization phenomena within the graphene-based materials will be discussed.

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