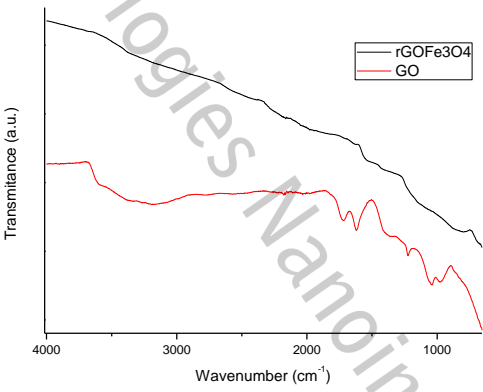


Reduced Graphene Oxide@Magnetite (rGO@Fe₃O₄): Characterization sheet

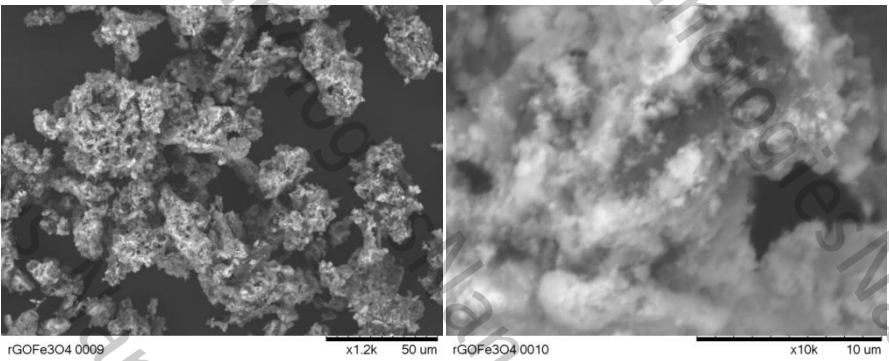
Reported data: FTIR Spectroscopy, Scanning Electron Microscopy, X-ray diffraction (XRD) and Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES).

- FTIR Spectroscopy: Attenuated Total Reflectance (ATR)

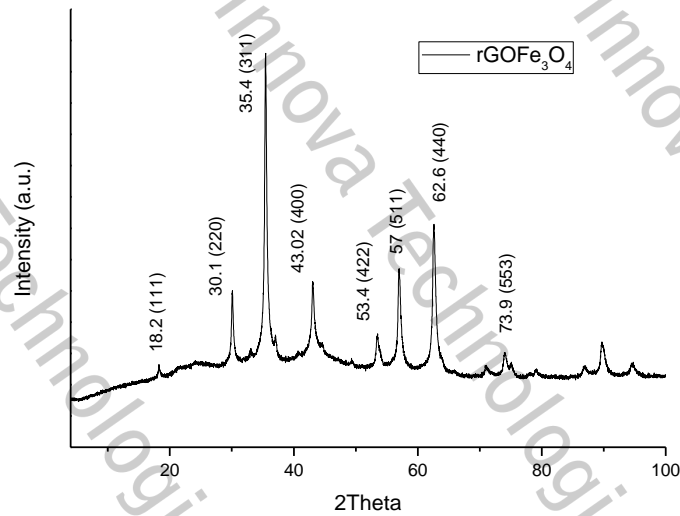


Assignment (cm⁻¹): for graphene oxide 1725 C=O (carbonyl/carboxy); 1620 C=C (aromatics); 1375 C-O (carboxy); 1224 C-O (epoxy); 1040 C-O (alkoxy). In comparison peaks due to oxygen functional groups are almost entirely removed in rGO@Fe₃O₄.

- Scanning Electron Microscopy



- XRD



XRD pattern of rGO@Fe₃O₄. Characteristics peaks of magnetite are observed at 2θ 18.2° (111), 30.1° (220), 35.4° (311), 43.02° (400), 53.4° (422), 57 ° (511), 62.6 ° (440) and 73.9 ° (553). Particle size estimated from the peak width of the (311) Bragg reflection using the Scherrer formula is 40 nm.

- Iron weight percent from ICP-OES is 39.6% that corresponds to 55% of Fe₃O₄.