

Effect of Annealing Temperature on Fe₂O₃/rGO Nanocomposite Photo Anode Properties

Presenting Author

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In this study, pure Fe₂O₃ and Graphene oxide (GO) nanocomposite thin films are synthesized using electrodeposition methods. Physical and photoelectrochemical properties of the thin films deposited are characterized. The optical density spectra, X-ray diffraction pattern and scanning electron microscopy images of the films reveal formation of GO nanosheets in the all nanocomposite films synthesized. Moreover, the optical bandgap energy of the thin films decreases with addition of GO. X-ray photoelectron spectroscopy indicates that the presence of reduced graphene oxide and the formation of Fe₂O₃ nanocomposite is stoichiometric.

References

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Figures

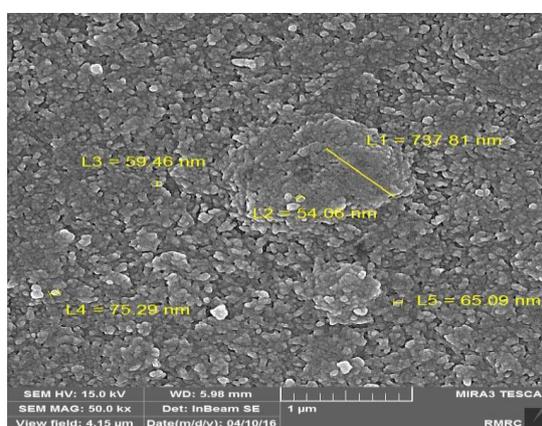


Figure 1: SEM image of rGO-Fe₂O₃ T=300 K⁰

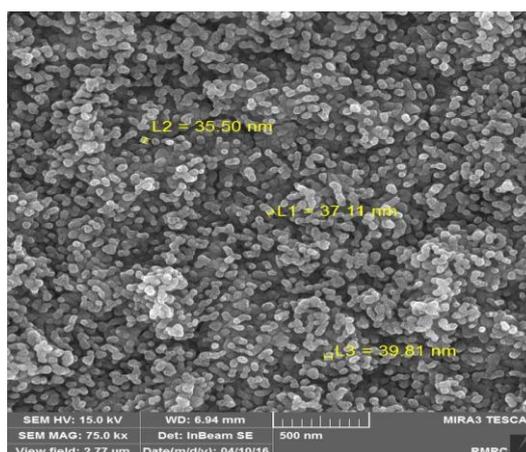


Figure 2: SEM image of rGO-Fe₂O₃ T=700 K⁰