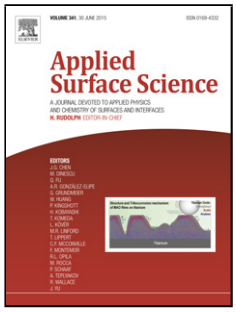

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One-step synthesis of high conductivity silver nanoparticle-reduced graphene oxide composite films by electron beam irradiation

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Graphical Abstract

Highlights

- Both graphene oxide and silver ion were reduced simultaneously by electron beam-based method.
- The size of AgNPs can be controlled by changing the irradiation dose of electron beam.
- The AgNPs/rGO nanocomposite exhibits much lower sheet resistivity (0.06 Ω•m).

Abstract

A rapid, eco-friendly, one-step electron beam (EB)-based method for both the reduction of graphene oxide and loading of Ag nanoparticles（AgNPs） were achieved.