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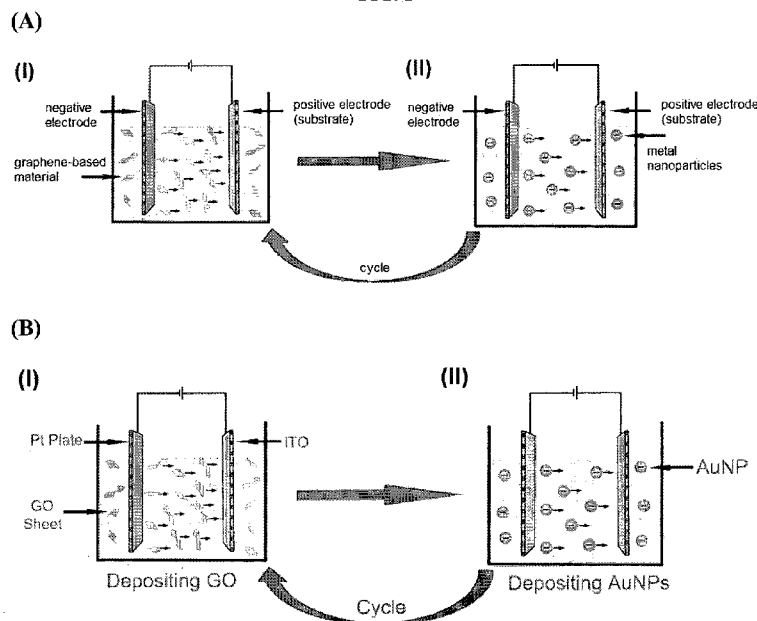
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(54) Title: MULTILAYER FILM COMPRISING METAL NANOPARTICLES AND A GRAPHENE-BASED MATERIAL AND METHOD OF PREPARATION THEREOF

FIG. 1



(57) Abstract: A method of preparing a multilayer film comprising metal nanoparticles and a graphene-based material on a substrate using electrophoretic deposition is provided. The method comprises a) electrophoretically depositing a layer of graphene-based material on the substrate; b) electrophoretically depositing a layer of metal nanoparticles on the layer of graphene-based material; optionally repeating steps a) and b) for one or more additional cycles; and electrophoretically depositing a layer of graphene-based material on the layer of metal nanoparticles. A multilayer film comprising metal nanoparticles and a graphene-based material is also provided.



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