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# Step-by-step synthesis of iron-oxide nanoparticles attached to graphene oxide: a study on the composite properties and architecture.

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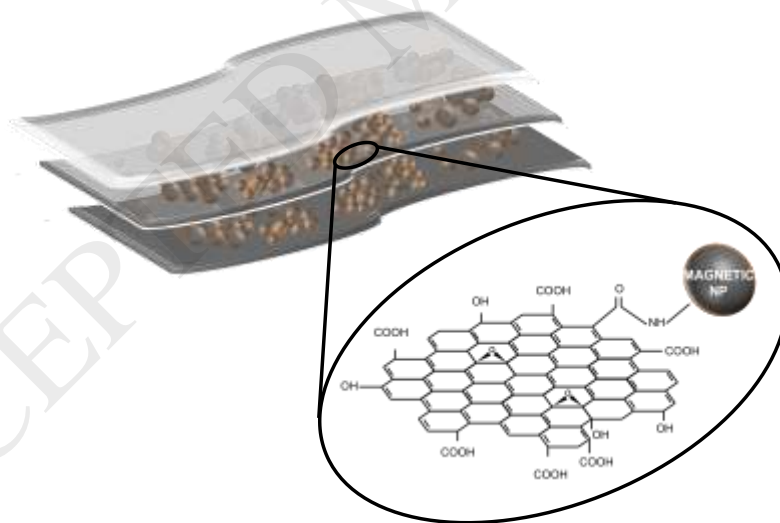
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## Graphical abstract



## Highlights

- Iron oxide NPs and graphene oxide nanocomposites were successfully prepared
- Reduced graphene oxide nanocomposites are obtained after treating with hydrazine
- NPs tend to agglomerate and form bundle-like structures when concentration increases
- Magnetic properties are affected by the NPs concentration and the reduction process

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