

Accepted Manuscript

Title: Preparation, characterization, and nonlinear optical properties of hybridized graphene @ gold nanorods nanocomposites

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PII: S0169-4332(17)32965-3
DOI: <https://doi.org/10.1016/j.apsusc.2017.10.042>
Reference: APSUSC 37385

To appear in: *APSUSC*

Received date: 23-5-2017
Revised date: 6-9-2017
Accepted date: 6-10-2017

Please cite this article as: Jia Guo, Tingyin Ning, Yanshun Han, Yingqiang Sheng, Chonghui Li, Xiaofei Zhao, Zhengyi Lu, Baoyuan Man, Yang Jiao, Shouzhen Jiang, Preparation, characterization, and nonlinear optical properties of hybridized graphene @ gold nanorods nanocomposites, *Applied Surface Science* <https://doi.org/10.1016/j.apsusc.2017.10.042>

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Preparation, characterization, and nonlinear optical properties of hybridized graphene @ gold nanorods nanocomposites

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Highlights

- The methods of chemical vapor deposition (CVD) was used to obtain graphene. Compared with mechanical stripping, liquid phase stripping and epitaxial growth, graphene with high quality, large area and controllable number of layers can be prepared by CVD method. This makes it possible for us to obtain graphene with excellent nonlinear properties.
- We use a simple and inexpensive method to obtain the composite of graphene @ gold nanorods (G@GNRs). In addition, we used a simple method to measure the nonlinear optical properties of this material. This method provided the possibility for many budding teams to measure the nonlinear optical response of materials and to promote the development

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