

عنوان مقاله:

Preparation of Functionalized Graphene Oxide Loaded with Silver Nanoparticles and Investigation of its Antibacterial Activities

محل انتشار:

بیست و ششمین سمینار شیمی آلی ایران (سال: 1397)

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خلاصه مقاله:

Metal nanoparticles are a particular class of nanomaterials that have garnered huge interest in the field of scientific research, and in many other technical disciplines, due to their chemical and physical properties and the numerous effective applications [1]. Silver nanoparticles have been proved to be the most effective antimicrobial agent. Ag NPs has antibacterial activity against gram negative and gram positive bacteria. Some of the most problematic multi drug resistant (MDR) microorganisms that are encountered currently include *Pseudomonas aeruginosa* and *Staphylococcus aureus* [2]. In this article, the antibacterial activity of nanocatalyst was evaluated by agar well diffusion method against two bacteria, *Staphylococcus aureus* (ATCC29737) as Gram-positive and also *Escherichia coli* (ATCC25922) as Gram-negative bacteria. Firstly, GO and SOCl_2 were added to generate GO-Cl and then melamine was added to GO-Cl under nitrogen atmosphere. The obtained product was treated with methyl methacrylate and ethylenediamine, then AgNO_3 was added into the catalyst and nanocatalyst was prepared by plant extract. The result has been shown that these nanocomposites have good effect on both gram negative and gram positive bacteria. The (nanocatalysts have been shown more antibacterial activity against *Staphylococcus aureus* bacteria (Fig. 1

کلمات کلیدی:

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