

عنوان مقاله:

New synthesized Graphene Oxide nanocomposites as a unique antibacterial tool

محل انتشار:

پنجمین کنفرانس بین المللی پژوهش های کاربردی در علوم و مهندسی (سال: 1399)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

Graphene Oxide (GO) has unique and useful features which prepare it of interest for use in biosensors. But, GO interacts highly with hydrophobic components of biomolecules, changing their conformation and ruins their biological potency. Water-soluble and uniform "graphene oxide/ phosphoramidate ligands" (GO/L) nanocomposites could be synthesized by a cursory approach without any need for additional reductants. In fact, they are potential to provide much better biological properties, like, enzyme immobilization, anti-bacterial and antifungal activity, in comparison to that of bare GO and bare phosphoramidate. In the provided study, an in-depth research of a graphene oxide (GO) based membrane, in which GO acts as the bed for the phosphoramidate ligands and acts against an environmental bacteria called *Gluconacetobacter xylinus* (G.xylinus), is presented. In conclusion, the results showed that the GO/ L films have more potency as biological tools compared to bare GO and phosphoramidate ligands, which is crucially important in industry, especially agricultural ones.

کلمات کلیدی:

Graphene Oxide, Phosphoramides, *Gluconacetobacter xylinus*, AFM analyze

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