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عنوان مقاله:

Preparation and Antibacterial Activity of Chlorophyllin Functionalized Graphene Oxide Nanostructure

محل انتشار:

پنجمین کنگره بین المللی نانو و فناوری نانو (ICNN2014) (سال: 1393)

تعداد صفحات اصل مقاله: 4

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خلاصه مقاله:

To enhance the antimicrobial effect of graphene oxide against Escherichia coli, water soluble chlorophyllinwas used to prepare functionalized GO nanomaterials, namely graphene oxide-chlorophyllin. Synthesized materials werecharacterized using energy dispersive X-ray spectroscopy, ultra violet-visible spectroscopy, and field emission scanningelectron microscopy. Under similar concentration and incubation conditions, graphene oxide-chlorophyllindispersion hadthe highest antibacterial activity than graphene oxide. Changes in the bacterial cell membrane were also investigated byfield emission scanning electron microscopy. The incubation of bacteria with functionalized graphene oxidenanomaterials caused the loss of cellular integrity and consequently, cell death.

کلمات کلیدی:

Antibacterial agent ; Chlorophyllin ; Functionalization ; Graphene oxide ; Nanostructure

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