سیویلیکا - ناشر تخصصی مقالات کنفرانس ها و ژورنال ها
گواهی ثبت مقاله در سیویلیکا
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عنوان مقاله:

Label- free bacterial detection by reflectometric interference Fourier transform spectroscopy

محل انتشار:

اولین همایش بین المللی علوم و فناوری نانو (سال: 1399)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

The rapid detection of bacteria is the most important steps before any treatment processes. Therefore in this work we introduce a porous silicon (PSi) based nanobiosensor for rapid and label free detection of E. coli. The surface of nanobiosensor is modified with the Concanavalin A (ConA), a lectin from Jack bean, as biorecognition element that binds to mannose residues of glycoporoteins or glycolipids of target cells. The evaluation of proposed nanobiosensor operation was performed by Reflectometric interference Fourier transform spectroscopy (RIFTS) and the fast Fourier transform (FFT) spectra obtained. The experiment results showed that upon exposure of nanobiosensor surface to bacteria suspension, a significant decrease in intensity of the FFT spectra was observed and E. coli biosensing was .performed effectively

کلمات کلیدی:

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