

عنوان مقاله:

Green biosynthesis of silver nanoparticles using local herbal plant and antibacterial activities

محل انتشار:

چهارمین کنفرانس بین المللی پژوهشهای کاربردی در علوم شیمی و زیست شناسی (سال: 1396)

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نویسندگان:

Fatemeh moradi - *Department of Chemistry, Shahr Ghods Branch, Islamic Azad University, Tehran, Iran*

Sajjad sedaghat - *Department of Chemistry, Shahr Ghods Branch, Islamic Azad University, Tehran, Iran*

خلاصه مقاله:

The present study reports the green synthesis of silver nanoparticles by using ocimum basilicum L extract. The plant extract acts both as reducing agent and capping agent. Various techniques used to characterization synthesized nanoparticles such as UV-Visible spectroscopy, Transmission electron microscopy (TEM), Field emission scanning electron microscopy (FE-SEM), X-ray diffraction (XRD) and Fourier transform infrared (FT- IR) spectroscopy. The SEM and TEM images showed that the silver nanoparticle was spherical shape, without any agglomeration and also showed that the size of nanoparticles were around 19- 24 (nm). The XRD showed that nanoparticles are crystalline with a cubic structure. The functional groups present in plant extract were investigating by FT- IR spectroscopy. The typical surface plasmon resonance of the Ag NPs were observed at around 451(nm). Finally, the present research has been explored to exhibit the synthesized samples showed potent antibacterial activity against Gram positive and Gramnegative bacteria and were also proved to exhibit excellent cytotoxic effect on lung cancer cell lines

کلمات کلیدی:

Green synthesis, Silver nanoparticles, Antibacterial

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