

عنوان مقاله:

Investigating the effect of  $AgNO_3$  on production rate of nanoparticles by response surface design method

محل انتشار:

اولین کنفرانس ملی شیمی، نانو مواد پلیمر-چالش ها و کاربردها (سال: 1402)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Algae due to its biological characteristics, has been proved as an appealing option in biosynthesis of silver nanoparticles. In this study the effect of  $AgNO_3$  concentration on biosynthesis of silver nanoparticles, is investigated in ۲۰ experiments which have been prepared using Nannochloropsis, Chlorella and Scenedesmus algae. Scanning electron microscope analysis confirmed that the synthesized nanoparticles were spherical, while the Fourier Transmittance Infrared Spectrum verified the presence of algae ingredients responsible for reducing silver ions and creating the nanoparticles. The production rate results showed that the effect of  $AgNO_3$  is more significant than the effect of algal species. The salt concentration also affects the stirring time. In this way, increasing the stirring time only increases the production of nanoparticles at high salt concentrations.

کلمات کلیدی:

silver nanoparticles, algae, biosynthesis, experimental design

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