

## عنوان مقاله:

Preparation and Characterizing of Silver-Silica Nanocomposite Using Sonochemical Method

## محل انتشار:

دوازدهمین کنگره ملی مهندسی شیمی ایران (سال: 1387)

تعداد صفحات اصل مقاله: 6

## نویسندگان:

R Halladj - *Chemical Engineering Department, Amirkabir University of Technology*

S Askari - *Chemical Engineering Department, Amirkabir University of Technology*

## خلاصه مقاله:

Nanoparticles possess distinct properties from those of bulk phase or individual molecules. Metal form of these particles show chemical and physical properties that can be used in fields such as optics, optoelectronics and catalysts. In this work silver nanoparticles were deposited on silica submicrospheres with aid of ultrasound power. A mixture of silver nitrate solution with silica submicrospheres are irradiated by ultrasound waves under an atmosphere of Argon for eliminating Oxygen. Duration of irradiation is from 90 to 180 min at frequency of 24 kHz. The resulting silver-silica nanoparticles is characterized with FTIR, HR-TEM, scanning electron microscopy and energy dispersive X-ray analysis. The results show a suitable silver-silica nanocomposite.

## کلمات کلیدی:

Energy dispersive X-ray analysis; FTIR; HR-TEM; Scanning Electron Microscopy; Silver nano-composite; Sonochemistry; Ultrasound

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/58396>

