

## عنوان مقاله:

Preparation and characterization of chitosan nanocomposite based on nanoscale silver and nanomontmorillonite

## محل انتشار:

فصلنامه روش های تجزیه در شیمی محیط زیست, دوره 2, شماره 2 (سال: 1398)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

The chitosan nanocomposites were rapidly prepared by simple solution method. This biopolymer matrix was modified by prepared nanoscale silver (Ag) using in situ synthesis from precursor and nanomontmorillonite (NMMT). Moreover, the samples were characterized by fourier transform infrared (FTIR) spectroscopy, thermogravimetric analysis (TGA), field emission scanning electron microscopy (FESEM), and energy dispersive x-ray spectroscopy (EDX). Moreover, the water vapor properties (WVP) of nanocomposites were investigated using gravimetric standard. In addition, the antibacterial activity of nanocomposite was measured by the well diffusion method on Muller-Hinton Agar against Escherichia coli (E. coli) by zone inhibition. Finally, based on the obtained results, the nanocomposite can have a good candidate for different applications and food packaging industry.

## کلمات کلیدی:

,Nanocomposite,Chitosan,Nanoscale silver,Nanomontmorillonite,Packaging

## لینک ثابت مقاله در پایگاه سیویلیکا:

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