

## عنوان مقاله:

Novel p-n heterojunction of Ag/HAp/g-C3N4 photocatalyst: study the efficient photocatalytic performance for phenol degradation

## محل انتشار:

بیستمین سمینار شیمی معدنی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

3D heterojunction nano-structure of p-Ag/HAp/n-g-C3N4 photocatalyst was successfully synthesized by hydrothermally addition of n-type g-C3N4 on p-type HAp and in following addition of Ag<sup>+</sup> under visible light illumination procedure, which showed highest photocatalytic activity comparing with Ag/HAp and g-C3N4 components for visible-light degradation of phenol. The heterojunctions with facilitating the charge transfer along with increasing the lifetime of charge carriers, enhance the photocatalytic efficiency [1]. Phenol and its derivatives are known as hazardous environmental pollutants that are found in many industrial wastewater [2]. The structure and morphology of the synthesized p-Ag/HAp/n-g- C3N4 as a novel nano-heterojunction compound were studied by X-ray diffraction (XRD), fourier infrared spectroscopy (FTIR), elemental analysis of energy dispersion spectroscopy (EDS), scanning electron microscopy (SEM), and transmission electron microscopy (TEM). The photocatalytic mechanism influenced by O<sub>2</sub>• and OH• species that schematically has been shown in below. The obtained experimental results indicate the high photocatalytic performance of this new p-Ag/HAp/n-g-C3N4 nanocomposite for the removal of phenol contamination.

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/876303>

