

## عنوان مقاله:

Removal of heavy metals from synthetic wastewater using silica aerogel- activated carbon composite by adsorption method

## محل انتشار:

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## خلاصه مقاله:

In this study, removal of heavy metals from synthetic wastewater has been investigated using silica aerogel-activated carbon composite. The synthesized adsorbent was characterized by FE-SEM, FTIR and BET techniques. The effect of amine functional groups embedded on the surface of silica aerogel-activated carbon 0.5 wt. % composite, optimal initial pH of removal of ions, impact of initial concentration of the solution containing heavy metal ions, adsorbent amount and contact time on removal percentage of ions were investigated. The results showed the optimal pH of 8, optimal adsorbent amount of 0.3 g for the removal of cadmium ion and 0.06 g for the removal of lead ion and optimal contact time of 80 min for cadmium and 60 min for lead ions. Adsorption data were investigated using Langmuir and Freundlich isotherms and maximum adsorption capability for cadmium and lead was obtained at 38.16 and 175.44 .mg/g adsorbent, respectively

## کلمات کلیدی:

Heavy metals, Silica aerogel-activated carbon, Sol-gel, Adsorption, Amine functional group

## لینک ثابت مقاله در پایگاه سیویلیکا:

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