

## عنوان مقاله:

Adsorptive Performance of Iminodiacetic Acid Functionalized Nanoporous Carbon for Removal of Pb(II), Cu(II) and Cd(II) Ions in Aqueous System

## محل انتشار:

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## خلاصه مقاله:

In recent years, the exploration of nontoxic and inexpensive methods for the removal of heavy metals from wastewaters has been needed with respect to the impact of these toxic metal ions in the environment. Efficient and common adsorption techniques have been widely used for the removal of heavy metals from wastewater due to the economically feasible properties. In this study, Nanoporous carbon (CMK-3) has been prepared and modified with Iminodiacetic Acid (IDA) and used as adsorbent for removal of Pb (II), Cu (II) and Cd (II) from aqueous solution. Prepared samples were characterized by X-ray diffraction (XRD), nitrogen adsorption-desorption isotherms, Fourier transform infrared spectroscopy (FT-IR) and scanning electron microscopy (SEM). The essential factors such as pH of solution and concentration of the eluent solution have been evaluated. The optimum conditions were pH 4 and 0.5M HNO<sub>3</sub>. The adsorption isotherms (Langmuir and Freundlich), were investigated. The adsorption capacities were 147.4, 145.1 and 142.3 for Pb(II), Cu(II) and Cd(II) respectively which is higher than of previously reported

## کلمات کلیدی:

CMK-3, IDA, Pb (II), Cu (II), Cd (II), Adsorption

## لینک ثابت مقاله در پایگاه سیویلیکا:

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