

## عنوان مقاله:

Synthesizing the Graphene Oxide Sheet and Functionalization of Them in Order to Remove the Heavy Metal Lead (pb) from the Aqueous Solutions

## محل انتشار:

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تعداد صفحات اصل مقاله: 7

## نویسنده:

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## خلاصه مقاله:

In this study, the graphene nano sheets were synthesized by the Hummer's method. In the next stage, functionalization process of graphene nano sheets was done by Cyanuric chloride and ۱, ۳, ۴ thiadiazol ۲,۵ dithiol. In order to determine the composed functional groups and sample purification the FTIR and XRD analysis were used, also, in order to analyzing the morphology and the functionalized nanoparticles structure as well as determining the size of the particles the FESEM and EDX analysis were used. The intended graphene was functionalized successfully and then was examined in the solution which contain the lead in order to determine the optimum pH, temperature, amount of adsorbent and retention time. Finally, it was observed that the optimum adsorbent condition is in  $\text{pH} = ۵.۳$ , the retention time = ۲۰ minutes and the amount of adsorbent = ۰.۰۶۵. Also, the adsorbent capacity was obtained ۲۳۵

## کلمات کلیدی:

Lead Ions, Graphene Nano Sheets, Cyanuric Chloride, ۱, ۳, ۴ thiadiazol ۲, ۵ dithiol, Adsorption Isotherms, Kinetics

## لینک ثابت مقاله در پایگاه سیویلیکا:

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