

عنوان مقاله:

Removal of Zn(II) and Pb(II) from aqueous solution on CaF₂ nanoparticles

محل انتشار:

ششمین کنگره بین المللی توسعه و ترویج علوم و فنون بنیادین در جامعه (سال: 1397)

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خلاصه مقاله:

This paper explores the adsorptive properties of CaF₂ nanoparticles for the removal of Pb(II) and Zn(II) from aqueous solutions and their selective recovery. CaF₂ nanoparticles were synthesized by a facile one-step reaction and characterized by N₂ physisorption at 77 K, XRD and TEM. Adsorption data show good fit with Elovich and Langmuir models for the Zn(II) and Pb(II) adsorption, respectively. Kinetic data are well described by the pseudo-second-order model. Our results show that Zn(II) and Pb(II) could be totally and selectively desorbed with HCl. CaF₂ could be a promising adsorbent for the removal of Pb(II) and Zn(II) from polluted aqueous media.

کلمات کلیدی:

removal; CaF₂; characterization; zinc; lead; wastewater

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