

عنوان مقاله:

Comparison of Pb²⁺ Removal Efficiency by Zero Valent Iron Nanoparticles and Ni/Fe Bimetallic Nanoparticles

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خلاصه مقاله:

In this study, synthesized bimetallic Ni/Fe nanoparticles and zero-valent iron nanoparticles (nZVI) were investigated for remediation of Pb²⁺ against the effect of various parameters such as pH, volume to mass (V/m) ratio, contact time, initial concentration of Pb²⁺ on removal efficiency. Results of the present projects suggest both Ni/Fe bimetallic nanoparticles and nZVI adsorbents have shown maximum removal of Pb²⁺ at pH5 with an increasing trend with increasing pH. The V/m ratio optimization study reveals that the same volume of the lead solution requires more Ni/Fe bimetallic nanoparticles than nZVI. The time to achieve equilibrium is same in both the cases. Similarly, decrease in the removal efficiency with increase in initial concentration of Pb²⁺ is observed in both the cases

کلمات کلیدی:

+Zero valent iron nanoparticles; Ni/Fe bimetallic nanoparticles; Remediation; Pb²⁺

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