

عنوان مقاله:

(Modification of zeolite 3A for adsorption of Ni(II

محل انتشار:

شانزدهمین کنگره ملی مهندسی شیمی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 5

نویسندگان:

Mahsa Motamedi - *Department of Chemical Engineering, Tarbiat Modares University, Tehran, Iran*

Hasan Pahlavanzade - *Department of Chemical Engineering, Tarbiat Modares University, Tehran, Iran*

خلاصه مقاله:

To deal with environmental issues of contaminated water, many separation processes were applied in industry. To remove Ni ions from aqueous solutions, the synthesis zeolite 3A was modified by magnesium hydroxide (Mg(OH)₂). The effect of operation parameters, including mass ratio of modifier to adsorbent, pH and time were investigated. The result showed that 95% of Ni ions were removed successfully. The optimal condition for the Ni removal process was determined as: $2.0 \text{ (gr)} / 3.0 \text{ (gr)} = 1.7$ and 240 minutes at 25°C and pH=7, In 200 ppm solution. While the adsorbent dosage was .6 grams in 50 ml solution. Kinetic adsorption data were fitted with both pseudo-first order and pseudo-second order models. The data was fitted well with pseudo-second order shows that chemical adsorption of Ni ions on modified adsorbent is one of the rate controlling process.

کلمات کلیدی:

Adsorption, Modified Zeolite, Magnesium Hydroxide, Synthesis zeolite 3A, Heavy Metal

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/860023>

