عنوان مقاله:

Comparison studies of Adsorption Properties on Methyl Orange Removal by Wheat straw Adsorbents

محل انتشار:

کنفرانس بین المللی پژوهش در علوم و مهندسی (سال: 1395)

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نویسندگان:

Hooshyar Moghim Aliabadi, - *MESc, Fouman Faculty of Engineering, College of Engineering, University of Tehran*,

Elham Saberikhah, - *MSc, Fouman Faculty of Engineering, College of Engineering, University of Tehran*,

Azadeh Ebrahimian Pirbazari - *Assistant Professor, Fouman Faculty of Engineering, College of Engineering, University of Tehran*,

Reza Khakpour - *MESc student, Caspian Faculty of Engineering, College of Engineering, University of Tehran*

خلاصه مقاله:

The use of aminopropyltriethoxysilane (APTES) modified wheat straw (WS) and NaOH-modified wheat straw (NMWS) for the removal of methyl orange (MO) from aqueous solutions was studied in details. The equilibrium data were analyzed by Langmuir, Freundlich, Temkin, Sips and Redlich-Peterson isotherm models and pseudo-first order and pseudo-second order kinetic models. The experimental results demonstrated that MO can be effectively removed from aqueous solution by both the adsorbent and the adsorption capacity of the APTES-NMWS was found to be higher than the APTES-WS. Various thermodynamic parameters, such asG°,H°,S° and Ea, have been calculated. The findings of this investigation suggested that physical sorption plays a role in controlling the sorption rate

کلمات کلیدی:

Wheat straw, Methyl orange, aminopropyltriethoxysilane, Isotherms, Kinetics