عنوان مقاله:

Nitrate adsorption from drinking water and wastewaters by adsorption process: A critical review

محل انتشار:

پنجمین کنفرانس بین المللی پژوهش کاربردی در شیمی و مهندسی شیمی با تاکید بر فناوری های بومی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 17

نویسندگان:

Peyman Peyman - *Chemical Engineering Group, Faculty of Energy, Kermanshah University of Technology, Kermanshah, I. R. Iran*

Maryam Karami-Poor - *Chemical Engineering Group, Faculty of Energy, Kermanshah University of Technology, Kermanshah, I. R. Iran*

خلاصه مقاله:

Excessive water demand, population growth and water resources pollution are obvious threats for future of life. Nitrate (NO_3^-) is one of the most important pollutants that threats the groundwater sources. Several processes are developed for nitrate separation/removal from wastewater. Between them, adsorption is one of the most valuable processes with many operational and environmental advantages. Therefore, wide range of studies about nitrate adsorbents to achieve the efficient adsorbent. Latest achievements in adsorbent preparation and modification studies show that adding nanomaterials can improve the adsorption about 4 times comparing to adsorption without nanomaterials. On the other hand, some studies showed that different adsorbent composites can be efficient compared to each part of composite. However, different studies were done in batch adsorption by initial concentration of 50-200 mg NO_3^-/L, contact time of 0.5-24 h, and pH value of 2-11. Majority of adsorbents showed high adsorption capacity at pH value of 5-7.

کلمات کلیدی:

Nitrate adsorption, water treatment, and wastewater.

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/837221