

## عنوان مقاله:

Arsenite Adsorption from Aqueous Solutions by Polyaniline/Polyvinyl Alcohol Composite

## محل انتشار:

هفتمین کنگره ملی مهندسی شیمی (سال: 1390)

تعداد صفحات اصل مقاله: 8

## نویسندگان:

Mohammad Yousef Roghani - *Department of Chemical and Petroleum Engineering, Sharif University of Technology, Azadi Ave., P.O. Box 11365-9*

Masoud Aghajani - *Department of Chemical and Petroleum Engineering, Sharif University of Technology, Azadi Ave., P.O. Box 11365-9*

Seyed Mehdi Borghei - *Department of Chemical and Petroleum Engineering, Sharif University of Technology, Azadi Ave., P.O. Box 11365-9*

## خلاصه مقاله:

Polyaniline/Polyvinyl Alcohol (PANi/PVA) composite was examined for Arsenite removal from aqueous solution. The results indicate that PVA as an additive has effective role in increasing adsorptive capacity of PANi by changing morphology and extending its active surface which is a good feature for the removal mechanism (Surface Adsorption). Maximum arsenic removal efficiency was obtained when composite was synthesized in presence of 1.5 gr/lit of PVA. The adsorption process is pH dependent and As(III) removal consistently increases with pH enhancement and equilibrium time is 1 hour. Although it is expected that by increasing composite dosage, adsorption become more efficient but at high dosages of adsorbent, agglomeration occurs, so the optimum composite dosage is 2(g/lit). Appropriate arsenite removal was obtained at trace levels (78% removal at 0.5 ppm initial concentration). The results of study have good compatibility with adsorption isotherm equations (Langmuir and freundlich). the composite also shows good desorption ability

## کلمات کلیدی:

Polyaniline Composite, Polyvinyl Alcohol, Arsenite Removal, Arsenic, Adsorption

## لینک ثابت مقاله در پایگاه سیویلیکا:

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