

Bentonite Functionalised with 2-(3-(2-aminoethylthio)propylthio)ethanamine (AEPE) for the Removal of Hg(II) from Wastewaters



Filesize: 5.5 MB

Reviews

Very useful for all group of people. It is amongst the most incredible pdf i actually have read through. Its been written in an extremely straightforward way and it is just right after i finished reading through this pdf by which basically modified me, change the way i think.
(Felicia Nikolaus)

BENTONITE FUNCTIONALISED WITH 2-(3-(2-AMINOETHYLTHIO)PROPYLTHIO)ETHANAMINE (AEPE) FOR THE REMOVAL OF HG(II) FROM WASTEWATERS

DOWNLOAD



Diplomica Verlag Nov 2008, 2008. Taschenbuch. Book Condition: Neu. 270x190x5 mm. This item is printed on demand - Print on Demand Neuware - In this study, natural bentonite clay was first purified and then functionalised with the chelating ligand 2-(3-(2-aminoethylthio)propylthio)ethanamine (AEPE) to improve the adsorption capacity and selectivity towards Hg(II) ions. The surface modification was characterised with the help of powder X-ray diffraction (XRD), Fourier transform infrared spectroscopy (FT-IR), BET isotherm to determine the specific surface area while the thermal stability of the samples was studied using thermogravimetric analysis (TGA). FT-IR and TGA demonstrated the presence of the chelating ligand on the modified clay. XRD pattern indicated that the chelating agent AEPE was only grafted onto the surface of the purified bentonite, whereas the interlayer distance did not change. N₂ specific surface area measurement also indicated the coverage of AEPE onto the surface of purified bentonite. Adsorption of Hg(II) ions from aqueous solutions as a function of pH, contact time, initial concentration, ionic strength, interfering ions and adsorbent dose was studied. The adsorption process followed a pseudo-second order kinetics and monolayer adsorption. The adsorption of Hg(II) ions increased with increasing pH and reached a plateau value in the pH range of 4.0-8.0. The removal of Hg(II) was found to be higher than 99% at an initial concentration of 20 mg/L using adsorbent dose of 0.01 g. The presence of NaNO₃ as background electrolytes at concentration ranging from 0.01 to 2.0 M decreased the adsorption of Hg(II) ions. Furthermore, the adsorption capacity increased with increasing adsorbent dose. Sorption data analysis was carried out using Langmuir isotherm for the uptake of Hg(II) ions at a concentration range of 20-400 mg/L. The adsorption process was found to be favourable as the separation parameter is less than unity (RL1). The maximal adsorption capacity was...



[Read Bentonite Functionalised with 2-\(3-\(2-aminoethylthio\)propylthio\)ethanamine \(AEPE\) for the Removal of Hg\(II\) from Wastewaters Online](#)



[Download PDF Bentonite Functionalised with 2-\(3-\(2-aminoethylthio\)propylthio\)ethanamine \(AEPE\) for the Removal of Hg\(II\) from Wastewaters](#)

Related Kindle Books



Psychologisches Testverfahren

Reference Series Books LLC Nov 2011, 2011. Taschenbuch. Book Condition: Neu. 249x191x7 mm. This item is printed on demand - Print on Demand Neuware - Quelle: Wikipedia. Seiten: 100. Kapitel: Myers-Briggs-Typindikator, Keirsey Temperament Sorter, DISG,...

[Read Book »](#)



Programming in D

Ali Cehreliz 2015, 2015. Buch. Book Condition: Neu. 264x182x53 mm. This item is printed on demand - Print on Demand Neuware - The main aim of this book is to teach D to readers...

[Read Book »](#)



Adobe Indesign CS/Cs2 Breakthroughs

Peachpit Press, 2005. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Adobe InDesign is taking the publishing world by storm and...

[Read Book »](#)



Ask Dr K Fisher About Dinosaurs

Kingfisher, Great Britain, 2007. Softcover. Book Condition: New. Sheppard, Kate (illustrator). 32 pages. Multiple copies of this title available. For the first time, Kingfisher brings its expertise in beautifully-designed, trusted non-fiction to the sphere of...

[Read Book »](#)



Mom Has Cancer!

Barron's Educational Series. Paperback / softback. Book Condition: new. BRAND NEW, Mom Has Cancer!, Jennifer Moore-Mallinos, Marta Fabrega, The sensitively written " Letas Talk About It Books " encourage preschool-age and early-grades children to explore...

[Read Book »](#)