

A Universal Hybrid Adsorbent Based on Chitosan for Water Treatment

Authors : Sandrine Delpoux-Ouldriane, Min Cai, Laurent Duclaux, Laurence Reinert, Fabrice Muller

Abstract : A novel hybrid adsorbent, based on chitosan biopolymer, clays and activated carbon was prepared. Hybrid chitosan beads containing dispersed clays and activated carbons were prepared by precipitation in basic medium. Such a composite material is still very porous and presents a wide adsorption spectrum. The obtained composite adsorbent is able to handle all the pollution types including heavy metals, polar and hydrophobic organic molecules and nitrates. It could find a place of choice in tertiary water treatment processes or for an 'at source' treatment concerning chemical or pharmaceutical industries.

Keywords : adsorption, chitosan, clay mineral, activated carbon

Conference Title : ICEPR 2017 : International Conference on Environmental Pollution and Remediation

Conference Location : Zurich, Switzerland

Conference Dates : April 20-21, 2017