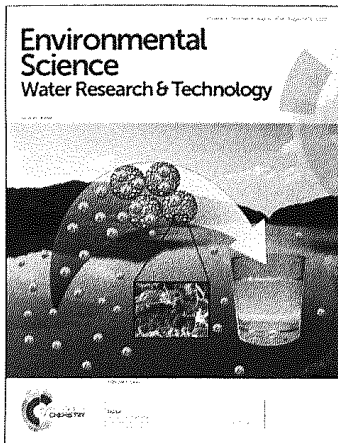


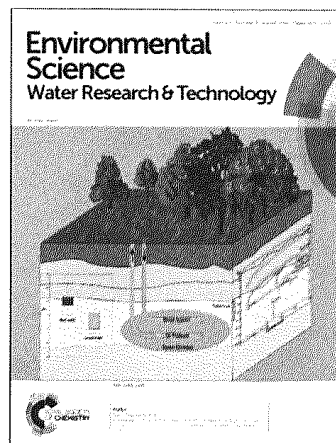
Environmental Science Water Research & Technology

IN THIS ISSUE

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Cover
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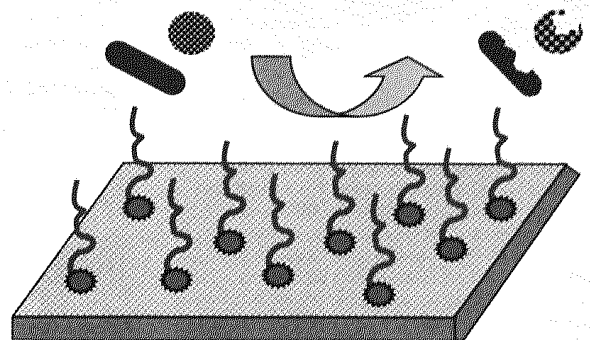
CRITICAL REVIEW

1078

Antibacterial polymeric membranes: a short review

Munmun Mukherjee and Sirshendu De*

Water disinfection mechanism of polymeric membrane.



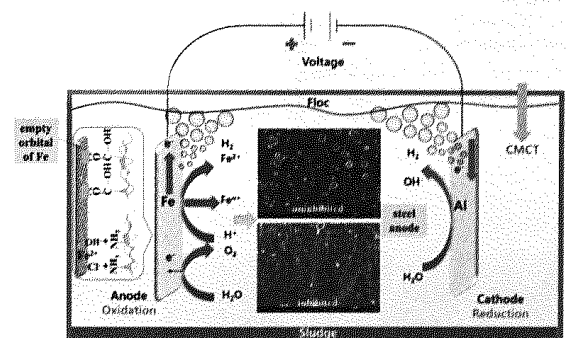
COMMUNICATION

1105

Enhanced removal of heavy metals from electroplating wastewater through electrocoagulation using carboxymethyl chitosan as corrosion inhibitor for steel anode

Hao Sun, Han Wang, He Wang and Qun Yan*

To prolong the life of electrodes, application and evaluation of carboxymethyl chitosan (CMCT), as a corrosion inhibitor for a steel anode, through electrocoagulation during the treatment process of electroplating wastewater was conducted.

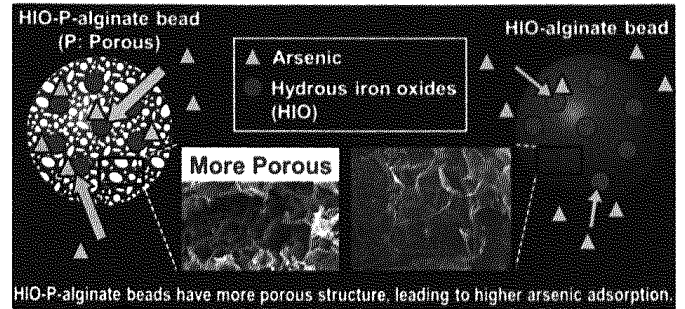


1114

Immobilization of hydrous iron oxides in porous alginate beads for arsenic removal from water

Abinashi Sigdel, Joowan Lim, Jeongwon Park, Hyeun Kwak, Sojin Min, Keehong Kim, Hosung Lee, Chang Hyun Nahm and Pyung-Kyu Park*

For removal of arsenic in the aqueous phase, hydrous iron oxides (HIOs) were immobilized in alginate beads with enhanced porosity (designated as HIO-P-alginate beads).

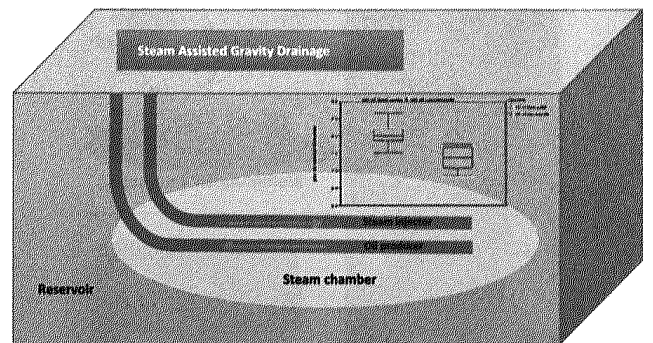


1124

Preliminary studies on the impact of *in situ* oil sand extraction methods on the movement of water soluble organics and inorganics by a pilot scale test

Xiaomeng Wang,* Kim Kasperski, Amanda Cook and Adrian Ilko

Pilot scale tests on the impact of the elevated temperatures and pressures of *in situ* thermal operation on groundwater chemistry.

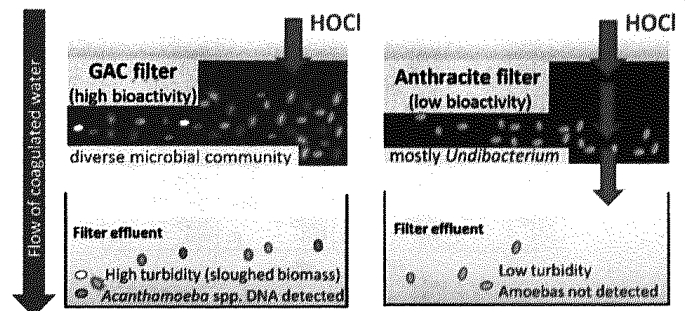


1133

Impact of upstream chlorination on filter performance and microbial community structure of GAC and anthracite biofilters

Glen Andrew de Vera, Daniel Gerrity, Mitchell Stoker, Wilbur Frehner and Eric C. Wert*

Dechlorination in GAC biofilters leads to greater bioactivity and growth of a diverse microbial community.

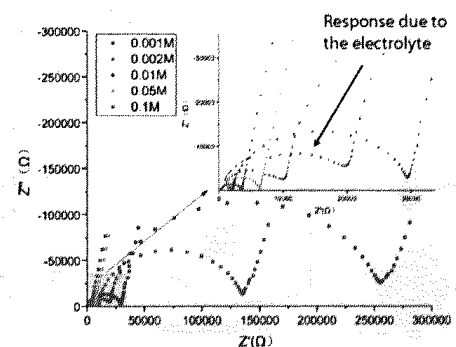


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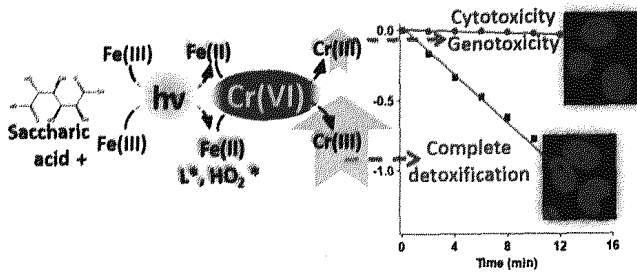
The effect of electrolyte concentration on electrochemical impedance for evaluating polysulfone membranes

Qing Huang, Qizhao Luo, Zhe Chen,* Lei Yao,* Ping Fu and Zhidong Lin

Lower electrolyte concentration would result in the appearance of resistance-capacitor arc at high frequency.



1152

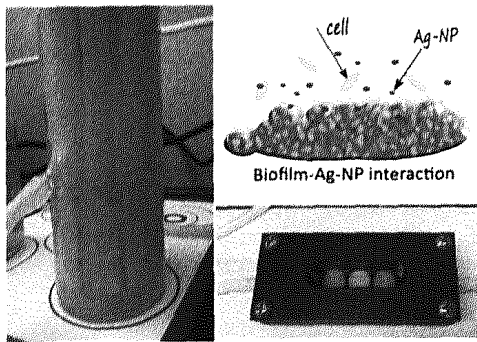


Photochemical detoxification of Cr(vi) using iron and saccharic acid: insights from cytotoxic and genotoxic assays

Gokulakrishnan Subramanian,*
Ganugapati Sai Srivatsa Kumar, Venkatraman Ravi,
Nagalingam Ravi Sundaresan and Giridhar Madras

Saccharic acid strongly enhances Cr(vi) photoreduction by iron, leading to the complete detoxification of Cr(vi) towards human cell lines.

1163

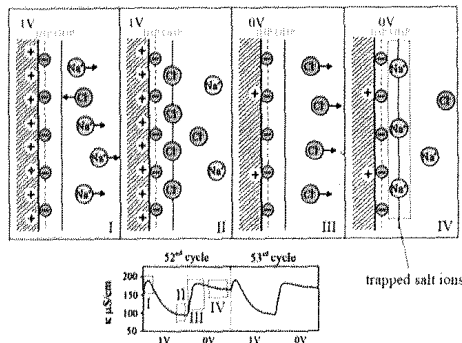


Bioaccumulation of silver nanoparticles in model wastewater biofilms

C. Walden and W. Zhang*

Engineered nanoparticles are increasingly incorporated into consumer products and inevitably released into wastewater.

1172

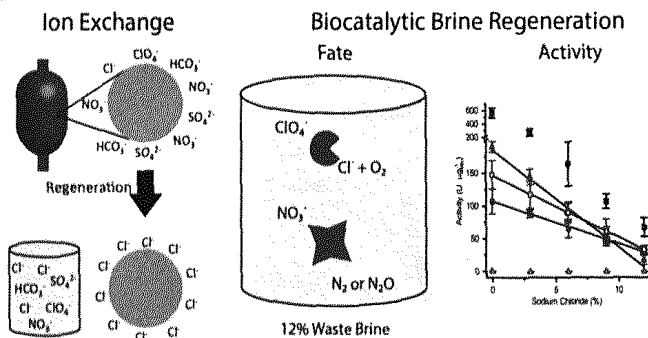


Role of metastable-adsorbed charges in the stability degradation of carbon-based electrodes for capacitive deionization

Bei Li, Tianye Zheng, Sijia Ran, Po-Heng Lee, Baojun Liu and Steven T. Boles*

The dynamic movement of metastable ions at the surface of aged anodes is illustrated to elucidate the inversion effect.

1181



Biocatalytic removal of perchlorate and nitrate in ion-exchange waste brine

Justin M. Hutchison and Julie L. Zilles*

This work demonstrates biocatalytic reduction of perchlorate and nitrate in ion-exchange waste brines. Biocatalysis could allow regeneration of the brines and prevent reintroduction of these contaminants into the environment.

1190

Microaeration through a biomembrane for biogas desulfurization: lab-scale and pilot-scale experiences

Lucie Pokorna-Krayzelova,* Jan Bartacek,
Shelmith Nyawira Theuri,
Camilo Andres Segura Gonzalez, Jindrich Prochazka,
Eveline I. P. Volcke and Pavel Jenicek

Microaeration through biomembrane; a novel method for biogas desulfurization.

