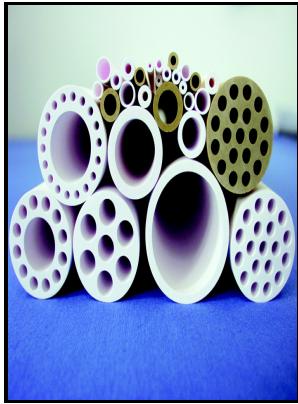


Ceramic membranes for reaction and separation

John Wiley - Catalytic ceramic oxygen ionic conducting membrane reactors for ethylene production



Description: -

- Watertown (Mass.) -- History.
Waltham (Mass.) -- Description and travel.
Waltham (Mass.) -- History.
Membranes (Technology)
Gases -- Separation
Ceramic materials
Gas separation membranesCeramic membranes for reaction and separation
-Ceramic membranes for reaction and separation
Notes: Includes bibliographical references and index.
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Gas separation ceramic membranes

Our goal is to show that functionalization of an alumina ceramic membrane with cysteic acid should increase the flux through the membrane for a particular pore size and that cysteic acid-functionalized alumina membranes can separate oil emulsions from frac and produced water.

High Temperature Ceramic Membranes for Energy Technology Applications

All samples were stored and transported in sealed containers under refrigeration.

Low

On the other hand, chitosan, for example, possesses unique flexible structure and excellent absorption properties toward polar substances. Then the centroid of each cell is determined and taken as the new position for the seed, and the plane is tessellated again using the new set of seeds. The treated membranes are very hygroscopic and will attain a wet appearance, even after being dried, even if they are stored in a low humidity environment.

Gas separation ceramic membranes

The present work shows that it is possible to treat frack flowback and produced water from shale oil and gas wells to reduce the hydrocarbon content to levels that are acceptable for re-use using a single pass through the membrane without pretreatment. Similar analysis of the permeate from the Barnett and Eagle Ford waters indicates that hydroxyacetonitrile, 1,1-dimethylcyclopropane, and 2-methyl-1-butene are potentially not rejected by the membrane. These showed that no chemicals were leached from the O-rings in the jar or contamination from other sources during handling and storage.

Palladium membranes applications in reaction systems for hydrogen separation and purification: A review

Ceramic Membranes and Membrane Processes. The membrane was covered in a 1 M aqueous solution of cysteic acid; again vacuum was placed

on the container until the membrane stopped effervescing.

Superhydrophilic Functionalization of Microfiltration Ceramic Membranes Enables Separation of Hydrocarbons from Frac and Produced Water

Starting by attaching triethoxysilyl propylamine to silica particles, they realized the successive growth of the branched polymer using a divergent synthesis scheme by consecutive amine-epoxy reactions with 1,4-butanedioldiglycidyl ether and aniline Fig. Open Access This article is licensed under a Creative Commons Attribution 4. Infrared spectroscopy IR of functionalized and un-functionalized membranes was analysed on a Nicolet FTIR Infrared Microscope with diamond window.

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