

“Greener” aerogel technology holds potential for oil and chemical clean-up

This is an organic aerogel. What makes this aerogel special is that it can remove oil, and metal ions from water. More than 98 percent of the material is porous. It is essentially a sponge, but only for certain substances; a type of water purification.

Here, a small portion of the aerogel is shown repelling water. This organic aerogel is environmentally friendly, as it is made from cellulose nanofibrils derived from wood, and a biocompatible polymer.

Here is the aerogel absorbing oil. Because the material takes in oil and not water, it provides an alternative technology that may have applications in oil spill clean up.

Here, the aerogel rejects water and only soaks up the oil colored in red. This aerogel is inexpensive, can be mass produced, and even reused for several cycles.