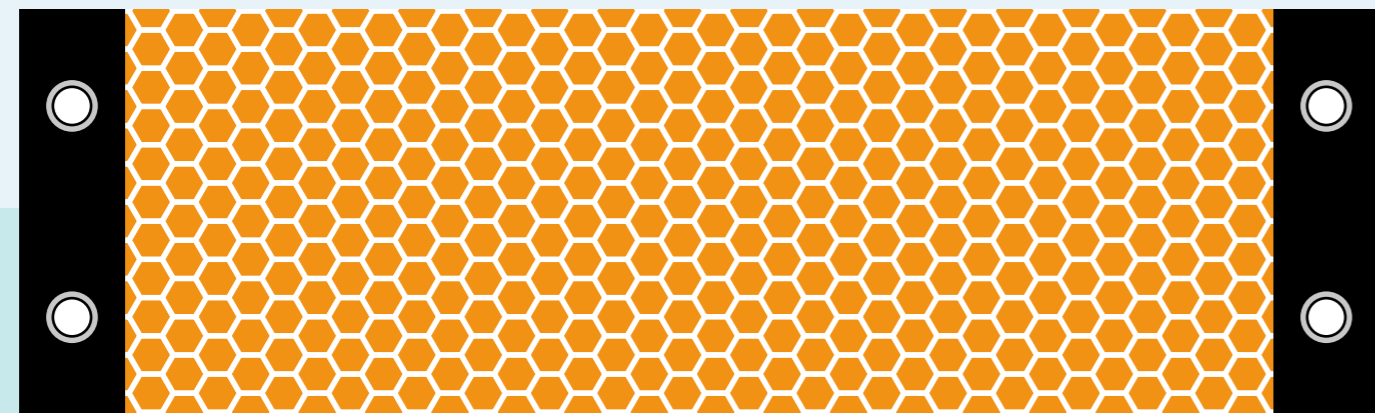


OLEO SPONGE



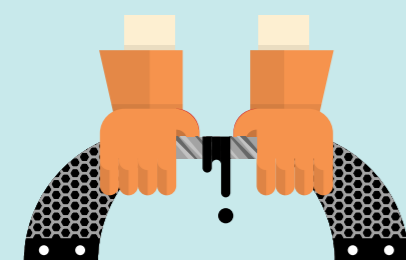
Argonne Invents Reusable Sponge that Could Revolutionize Oil Spill and Diesel Cleanup

► HOW OLEO SPONGE WORKS

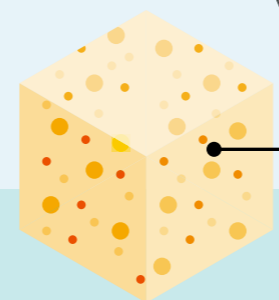
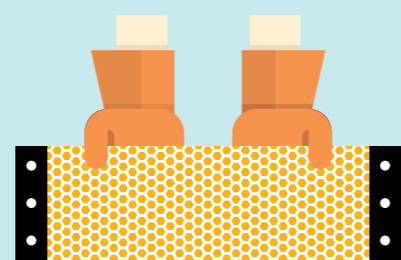
This revolutionary breakthrough could change the way we clean up oil and diesel spills. Invented by scientists at Argonne National Laboratory, Oleo Sponge can absorb up to 90 times its weight in oil, is reusable, and can collect oil both above and below the surface.

► HOW IT'S USED

When Oleo Sponge is full, it can be wrung out and the oil recovered. So far researchers have done this hundreds of times, and the material shows no sign of breakdown.



Wring & Repeat



► HOW IT'S MADE

Oleo Sponge is made possible by a nanoscience technique invented by scientists at Argonne called sequential infiltration synthesis, or SIS. SIS allows scientists to grow inorganic materials within polymers, offering a way to build custom designs at the nanoscale level with unique and complex properties.

1 Foam Fibers

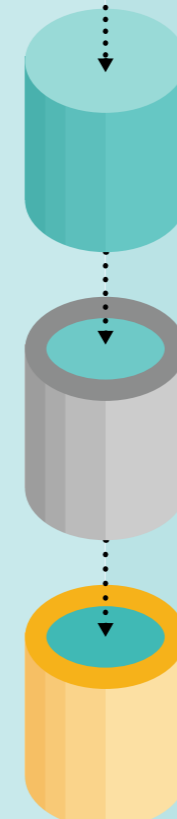
Oleo Sponge starts with common polyurethane foam, the same kind used in seat cushions.

2 Metal Oxide

Then the SIS nanoscience technique infuses a metal oxide “primer” into the nooks and crannies of the foam.

3 Oleophilic

Scientists can now attach a coating of oleophilic molecules that grab and hold oil.



Where There's A Spill, There's A Way

Droplet

After an oil spill or pipe leak, some oil collects at the surface, and some forms a plume that drifts through the ocean.

Sponge

Oleo Sponge can collect oil from beneath the surface—something no existing cleanup technology can do.

