

A SPONGE TO SOAK UP CO₂ IS IN THE WORKS

(<https://energyfactor.exxonmobil.com/news/mosaic-ccs/>)

NEWS

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Sometimes solutions to complex, wide-ranging challenges can fit in the palm of your hand.

That is certainly true with a developing technology that could help bring carbon capture to scale around the world.

Invented at the University of California, Berkeley and supported by a group of entrepreneurial scientists at Cyclotron Road (https://urldefense.proofpoint.com/v2/url?u=https-3A__energyfactor.exxonmobil.com_science-2Dtechnology_cyclotron-2Droad_&d=DwMGaQ&c=5oszCido4egZ9x-32Pvn-g&r=azF4K7g7hB2XN4uNPawL_0lwxeNfsYjQfK5P4prHe9M&m=JotJJrR17_RccKxAQdKlpKqZrAchXfoXZaYufezek94&s=AG86mBLzND40962j5NndlpRrGZg2uq6rSACC2fdXfjM&e=), these breath-mint sized pellets efficiently adsorb carbon dioxide from emission sources. These pellets may enable greater removal of CO₂ *before* it enters the atmosphere and ultimately help create more energy with fewer emissions.

The company behind this bite-size powerhouse, Mosaic Materials (https://urldefense.proofpoint.com/v2/url?u=https-3A__mosaicmaterials.com_&d=DwMGaQ&c=5oszCido4egZ9x-32Pvn-g&r=azF4K7g7hB2XN4uNPawL_0lwxeNfsYjQfK5P4prHe9M&m=JotJJrR17_RccKxAQdKlpKqZrAchXfoXZaYufezek94&s=EWpF2f2x3h8s22NseaJHjyVBO0v9VRk0mqAtU4iHy6o&e=), is a recent arrival on the energy scene. However, it has already received funding from the U.S. Navy, NASA and the Department of Energy. It has also piqued the interest of ExxonMobil, which will work with Mosaic Materials (<https://corporate.exxonmobil.com/News/Newsroom/News->

releases/2019/0826_ExxonMobil-and-Mosaic-Materials-to-explore-new-carbon-capture-technology) to accelerate the trajectory of carbon capture adoption, potentially making it more affordable, and even more effective.

For Mosaic's founder and chief executive, Thomas McDonald, the signing of an agreement with ExxonMobil is significant.

"Through this agreement with ExxonMobil, we look to accelerate the pace of our development and demonstrate the business and environmental benefits that our technology can offer," he said.

Specifically, Mosaic's highly porous, crystalline solids are ultra-high-capacity sponges for gases. The materials have very high internal surface areas and porosity that enable them to adsorb larger volumes of CO₂ while using less energy.

Ultimately, Mosaic's technology could be applied to huge industrial sites and power generation facilities or to capture CO₂ directly out of the air. On the smaller scale, check out this demonstration on how the pellets adsorb CO₂ out of a party balloon.



(<https://energyfactor.exxonmobil.com/wp-content/uploads/2019/08/Cyclotron-Balloon-GIF-D2.gif>)

TAGS: carbon capture and storage (<https://energyfactor.exxonmobil.com/tag/carbon-capture-and-storage/>),
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