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Capturing carbon dioxide from air or emissions and locking it in solid form could mitigate climate change and help industries such as steelmaking become carbon neutral in the future, says Greeshma Gadikota.

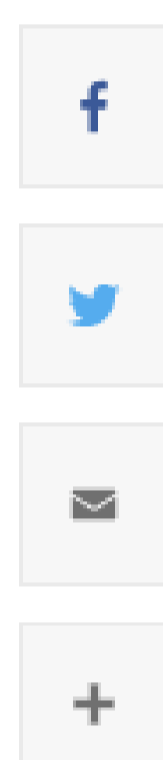
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Research in Focus: Greeshma Gadikota invents technologies to capture and upcycle carbon dioxide

By [Jackie Swift](#)

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[Greeshma Gadikota](#), assistant professor of civil and environmental engineering in the College of Engineering, likes to take risks that other researchers wouldn't contemplate. She wants her projects to push the boundaries so far beyond the parameters of current research that it creates a space most scientists don't realize is there.

"This is a space where we don't really know anything about problems that actually matter a lot to us," she explains. "You become the first person to tread into that space. You don't know if you're going to fail. You don't know if it's worth it. All you know is that if life on this planet is going to live and thrive over the next hundreds of years, those questions are critical and need to be answered."

For Gadikota, the critical questions are tied to global warming and the consequences of how we use our energy and resources. "For the longest time, people thought of energy and resource use as having their cake and eating it too," she says. "But it's not like that. There are impacts that need to be managed. There are planetary consequences to the problem of energy and resource recovery and conversion. And it's a problem not only for humans but for all life forms on the planet. It impacts our ecological balance, if you will."

Capturing Carbon, Making Chalk

One promising strategy for mitigating climate change is to capture carbon dioxide and hold it in a solid state that will not contribute to global warming. A large part of Gadikota's research focuses on developing a portfolio of technologies for carbon capture, conversion, storage and removal – an approach that is gaining global attention.

[Read the full story on the Cornell Research website.](#)

Jackie Swift is a freelance writer for the Office of the Vice President for Research and Innovation.

Energy, Environment & Sustainability

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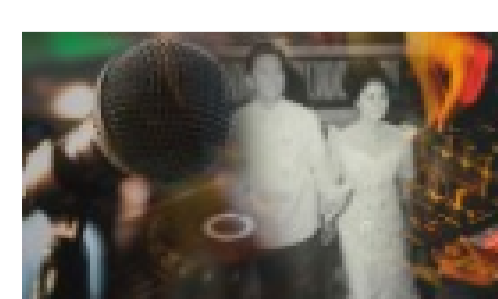
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