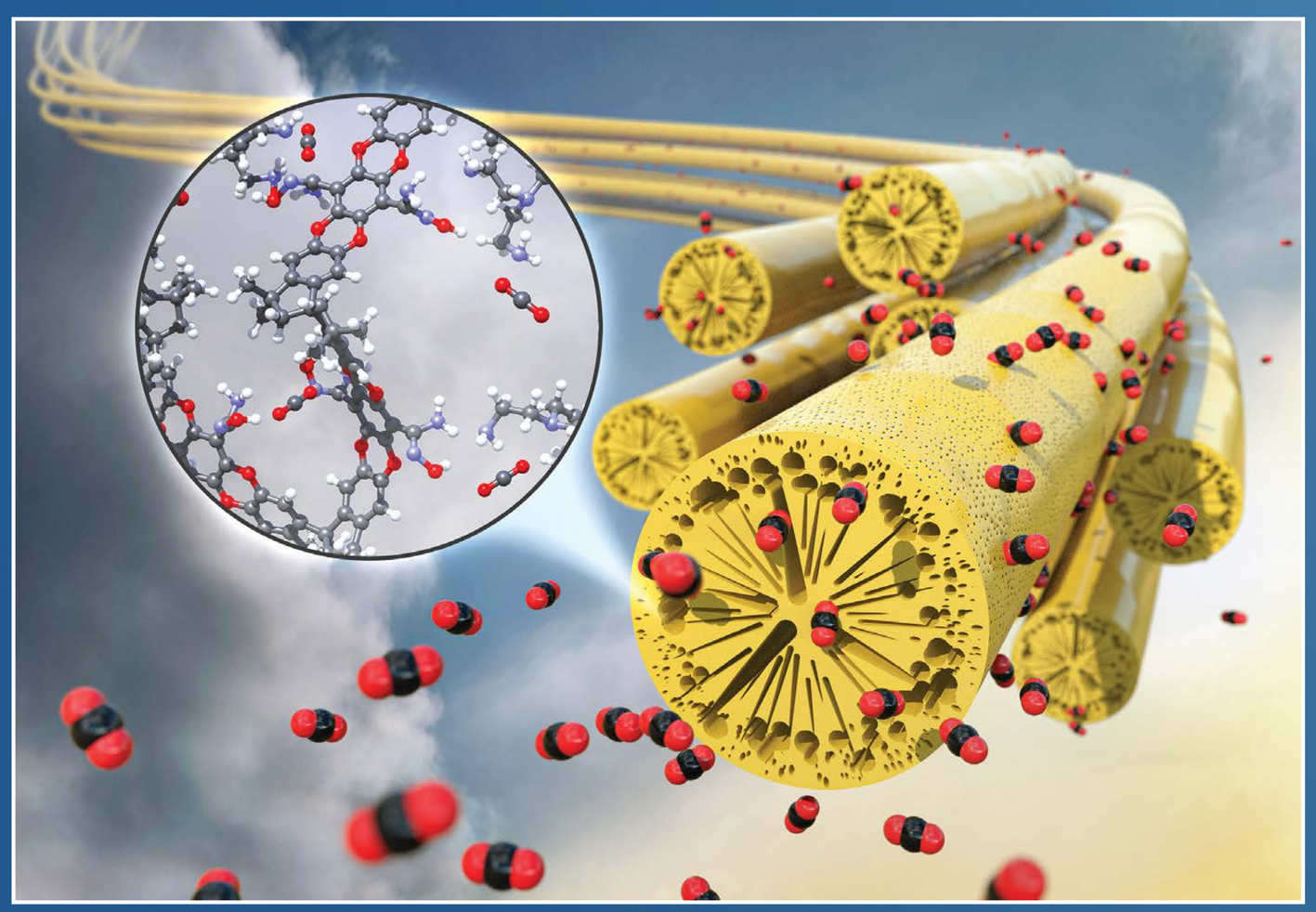
# NETL ENGAGES IN FOUR-YEAR PLAN TO ADVANCE DIRECT AIR CAPTURE TECHNOLOGY

***Project integrates expertise from NETL's extensive materials design, computational materials design, computation fluid dynamics, and process system design research portfolios to advance a cutting-edge technology to remove carbon dioxide ($CO_2$) from the atmosphere.***



DAC, which removes $CO_2$ directly from the atmosphere, will be critical for counterbalancing hard-to-decarbonize sectors.

Direct air capture (DAC) technologies usesorbents to pull $CO_2$ directly out of the air in contrast to point source capture processes that capture the greenhouse gas at power plants or industrial facilities.

- The NETL team is collaborating to use an innovative sorbent developed by NETL in an efficient and low pressure-drop adsorption process.
- In a DAC process, $CO_2$ is collected from the sorbent during the regeneration step, which often relies on heating the sorbent to release the $CO_2$.
- With NETL's sorbent formulation, regeneration can occur at comparatively low temperatures that are less likely to cause sorbent degradation.
- The goal of the project is to license the materials and system to entities capable of scaling up the technology and performing commercial DAC operations.

RESEARCH PRIORITY

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