

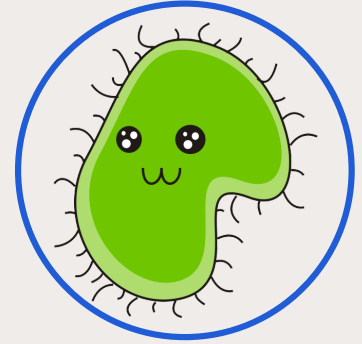
CO2 Waste Turned Into Useful Chemicals

Initiative has engineered a strain of bacteria capable of **breaking down captured carbon dioxide** and turning into acetone and isopropanol - valuable chemicals used for **fuels, fabric and cosmetics.**

SCIENCE

New gas fermentation process!

- *Clostridium autoethanogenum*, an anaerobic bacterium engineered at **LanzaTech**.
- Synthetic biology tools are used to reprogram the bacterium to ferment CO₂.
- Fermentation produces acetone and IPA



- IPA used for disinfectant and antiseptic
- Acetone is a solvent for many plastics and synthetic fibers

MARKET VALUE

ACETONE AND IPA HAVE

COMBINED GLOBAL MARKET OF \$10 BILLION.

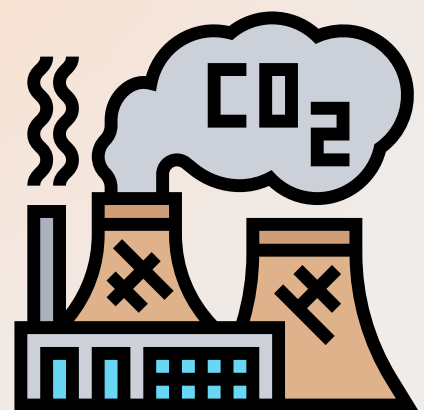
WHY THE INITIATIVE MATTERS

Carbon Dioxide absorbs and radiates heat.

Deforestation and burning fossil fuels produced unnatural, record high levels of CO₂ emissions.



Higher today than at any point in at least the past 800,000 years



CO₂ traps heat within the Earth's atmosphere, significantly contributing to **global warming and ocean acidification.**

DIMINISHING CARBON DIOXIDE EMISSIONS IS KEY FOR MITIGATING THE RAMIFICATIONS OF CLIMATE CHANGE!

Learn more about the specifics of the study and its potential applications: <https://www.nature.com/articles/s41587-021-01195-w>