



New material for repeated carbon capture

Slide by Neil Goalby. Available from rsc.li/4gEtuhQ

Trapping carbon dioxide, CO₂, from the air could help fight the climate crisis. However, current methods such as the fans shown are expensive and energy-intensive.

Researchers have developed COF-999, a new porous material that can effectively capture CO₂ from the air and trap it in its structure. This new material has two advantages over existing materials. Firstly, it can release captured CO₂ at lower temperatures. Secondly, it maintains its performance over 100 cycles of capture and regeneration without degrading. Existing carbon capture materials tend to lose performance after about 10 cycles.



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Carbon removal plants capture CO₂ from the air and turn it to stone

Questions

1. What is carbon capture?
2. Describe how carbon capture can help fight against climate change.
3. Suggest why scientists need to develop the material for use on a larger scale.