Climeworks – removing CO_2 from the Earth's atmosphere through direct air capture

H. Träger[1], C. Gropp[1]*

[1]Climeworks AG, Technoparkstrasse 1, 8005 Zürich, Switzerland

Removing carbon dioxide from the atmosphere—legacy emissions and future unavoidable emissions—has become a must to meet climate goals, as pointed out by the latest IPCC report,[1] and is set to become common practice within the next decades. However, the marathon to build a carbon removal industry that successfully operates at gigaton scale has only just begun.

Climeworks was founded in 2009 and has since grown to be the leader in technological carbon removal through direct air capture (DAC). Much of Climeworks' focus has been on building plants and advancing engineering and sorbent technologies. Here, we present Climeworks' synergies between engineering, materials science, and chemistry to advance CO_2 capture from air and its permanent storage. This effort is built on a platform for material development with many of the tools that modern chemistry can provide us.

[1] https://www.ipcc.ch/report/ar6/syr/; accessed on May 16 **2023**.