

CARBON CAPTURE AND STORAGE (CCS): A NEW FRONTIER IN CLEAN TECH?

KEY FINDINGS OF CCS PATENT ACTIVITIES

MARCO GRUBER | PATENT EXAMINER | 7 DECEMBER 2023

CCS TECHNOLOGY CONCEPTS



Carbon Capture

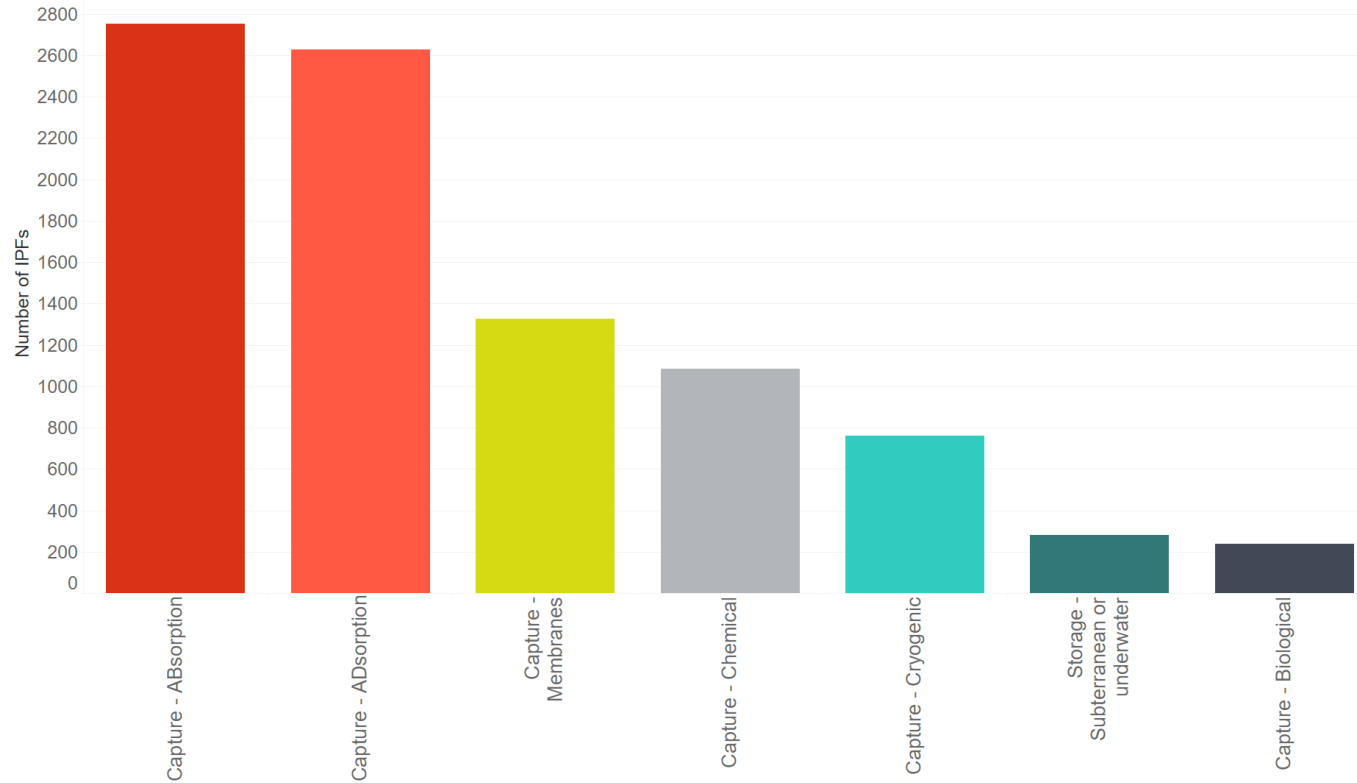
- Absorption
- Adsorption
- Biological
- Chemical
- Cryogenic
- Membranes



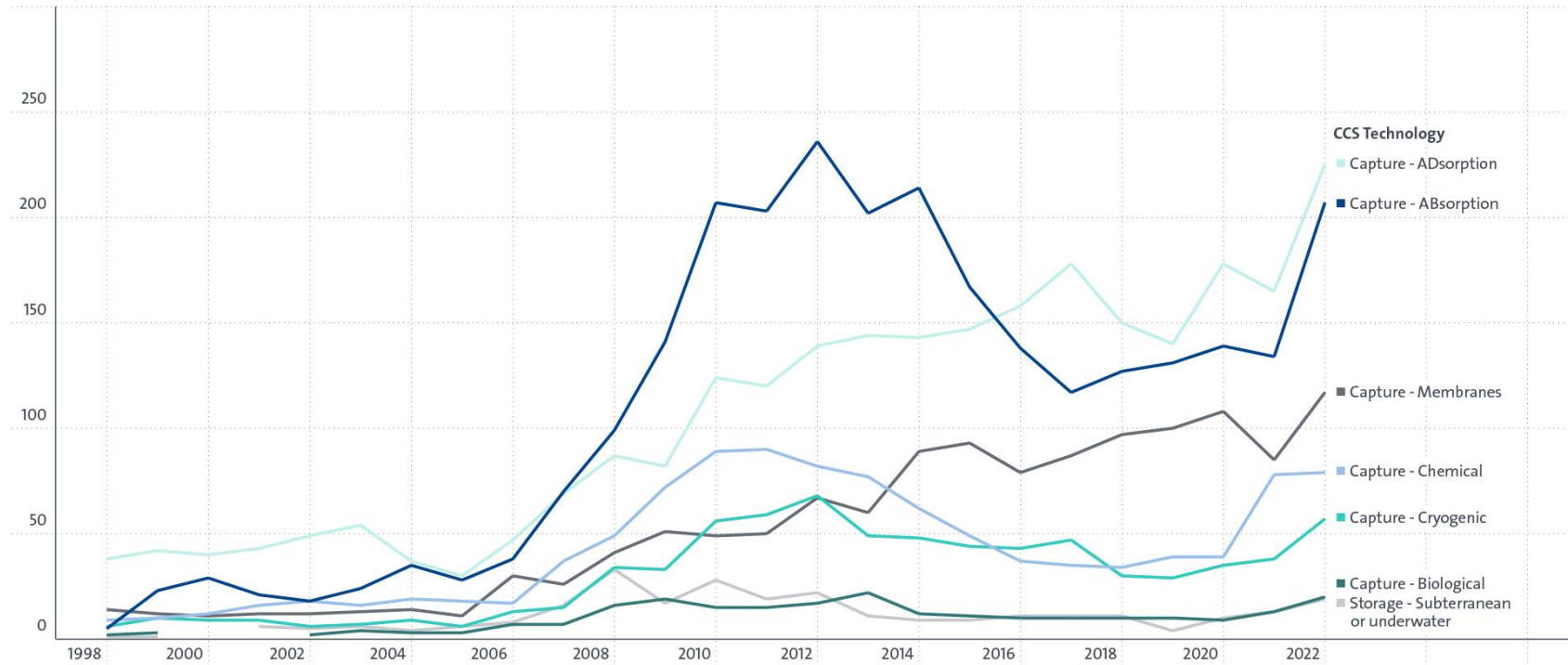
Carbon Storage

- Subterranean or underwater

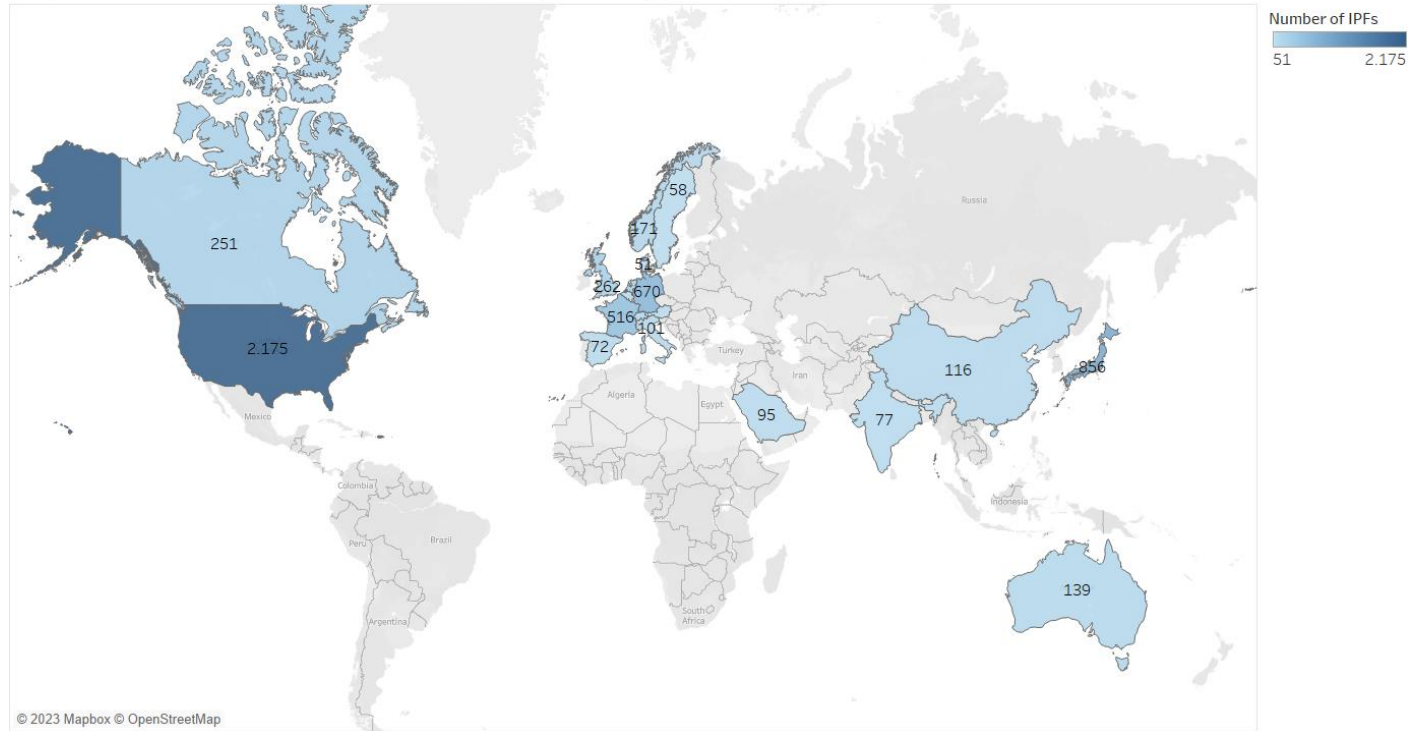
International Patent Families (IPFs) by CCS Technology concepts, 1998–2022



Trends in international patent families (IPFs) for carbon capture and storage technologies, 1998-2022

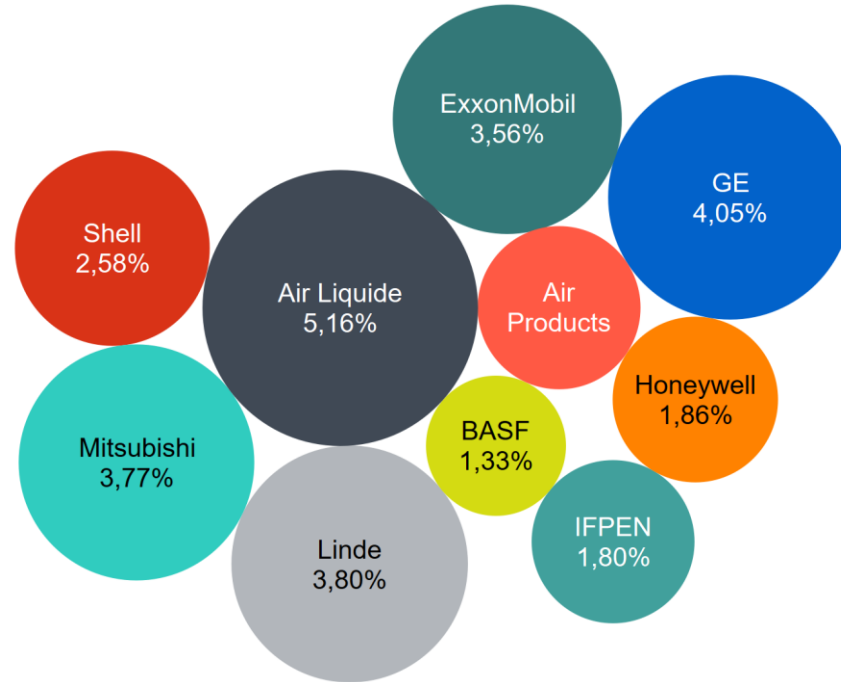


Map: Number of IPFs in CCS technologies by country, 1998-2022



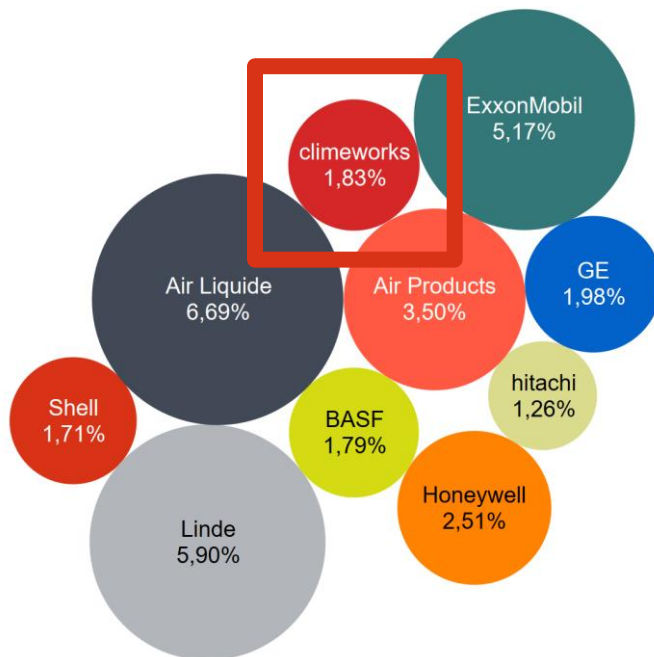
The map shows the number of IPFs by “Country of inventor”. Only those countries with more than 50 IPFs are displayed

Top 10 applicants by % of total IPFs in CCS Technologies, 1998-2022



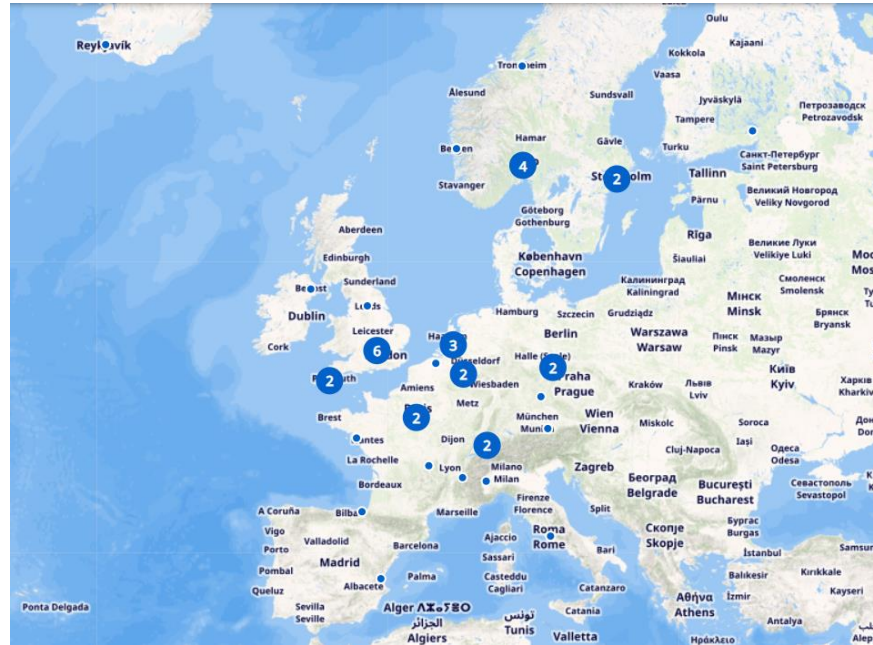
The % shows the weight of IPFs by company in CCS technologies, e.g., Air Liquide holds 5,16% of IPFs in CCS

A FOCUS ON CARBON ADSORPTION: TOP 10 APPLICANTS IN THIS CCS TECHNOLOGY, 1998-2022



The % shows the weight of IPFs by company in the domain of Carbon Adsorption, e.g., ExxonMobil holds 5,17%

THE EPO'S DEEP TECH FINDER: +40 STARTUPS IN EUROPE WITH PATENT APPLICATIONS ON CCS TECHNOLOGIES



epo.org/deep-tech-finder