

**Session Title: Negative Emission Technologies**

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**Abstract title: Direct air carbon capture and storage (DACCS): Challenges for up-scaling**

Direct air carbon capture and storage (DACCS) or direct air capture (CO<sub>2</sub>) is receiving increasing attention from scientists, policymakers, entrepreneurs, and businesses. This talk discusses the prospect and challenges of the upscaling of DACCS as well as opportunities ahead. Among a variety of negative emissions technologies or carbon dioxide removal (CDR) options, its primary barrier to upscaling is the high cost and large energy requirement, rather than environmental side effects. It also has locational flexibility. Policy leaders can initiate niche markets to accelerate RD&D of this potentially promising technology.