EFCE Spotlight Talks

Section on Sustainability

27 October 2026

CET 10:00-12:00

EFCE

Sustainable scalable technologies for Carbon Capture, CO_2 Utilisation and Storage (CCUS)

This seminar explores cutting-edge Process Systems Engineering (PSE) frameworks to accelerate global net-zero goals through sustainable carbon and fuel value chains. Presentations will examine systemic designs for carbon capture, utilisation, and storage (CCUS) network infrastructure, alongside solar-driven direct air capture (DACCU) technologies. Speakers will evaluate the technical and economic pathways of integrating green hydrogen to synthesise scalable e-fuels, focusing on massive-scale ethanol production. Ultimately, the session addresses the critical operational opportunities and scaling hurdles of delivering viable sustainable aviation fuels (SAF) to market.

PROGRAM

10:00	**Welcome and introduction** Prof. Antonis Kokossis, Chair Section Sustainability Prof. Meihong Wang, University of Sheffield - UK Boelo Schuur, EFCE Scientific Vice-President
10:10	**Opportunities and Challenges for Aviation e-fuels** Prof. Nilay Shah, Imperial College London - UK
10:35	**Designing sustainable CCUS chains: a process systems engineering perspective** Prof. Fabrizio Bezzo, University of Padova - Italy
11:00	**Integrated CO_2 hydrogenation process for large-scale ethanol production** Dr. Jie Li, University of Manchester - UK
11:25	**Systems Engineering for Solar-driven Direct Air Capture and CO2 Utilisation (DACCU) to produce sustainable aviation fuel (SAF)** Prof. Meihong Wang, University of Sheffield - UK
11:50	**Panel discussion and Conclusion** Prof. Meihong Wang, University of Sheffield - UK

REGISTRATION

free of charge but mandatory

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