

**Session Title: CCUS**

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More than 90% of the raw materials used by the chemical industry are from fossil origin. Carbon dioxide (CO<sub>2</sub>) is currently considered an alternative feedstock that could allow the chemical industry to decrease its demand on fossil resources and impact on climate change. In this talk I will provide an overview of key challenges and expectations faced by CO<sub>2</sub> utilization concepts. I will further discuss the benefits of ex-ante technology assessment (e.g., techno-economic, life cycle analysis) for actively shaping the development of CO<sub>2</sub> utilization concepts using as example the electrochemical conversion of CO<sub>2</sub> into formic acid.