

Abstract for Conference on CO₂-based Fuels & Chemicals 2022

Title:

Carbon2Chem® – using CO₂ in a cross-industrial network

Abstract:

Currently, Europe's integrated steelworks mostly convert their process gases into heat and electrical energy. With Carbon2Chem®, these top gases will partly be used to produce valuable chemical substances like methanol, as platform molecule for the chemical industry. A pilot plant is in operation since 2018 at the thyssenkrupp steelworks in Duisburg to demonstrate the feasibility of the processes and accomplish technical and economical optimizations. Besides, the project is being expanded to include other unavoidable CO₂ emissions from the industry (such as lime kilns and waste incineration) and create even larger cross-industrial networks. In order to reach this goal, a broad cooperation of in total 18 collaborates from industry and academia work together providing expertise in their respective areas developing and applying tools that reduce the global carbon footprint, i. e. carbon is recycled within the production network.

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