



Smart Cities and Infrastructure

Digital Production and
Products – Industry 4.0



Future Mobility

Business Opportunities
for German and Korean
Companies

Energy for our Future

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Power-to-X: Re-designing the Interface of the Energy and Chemistry Sectors

The catalytic conversion of carbon dioxide opens interesting opportunities for technologies coupling the energy and chemical industrial sectors. In favourable cases, CO₂ can replace petrochemical feedstocks contributing to more sustainable production processes of large volume chemicals and polymers. In context of storing, using, and harvesting carbon-free electricity, CO₂ is also envisaged as feedstock for so-called „power-to-x“-concepts. They can offer low-carbon footprint pathways to molecular structures of established chemical products and may provide access to tailor-made fuels with improved combustion and emission characteristics. The talk will focus on fundamental scientific challenges and presents successful examples for application from catalysis research, while critically discussing the challenges and opportunities of these concepts.

- since 2017 Director, Molecular Catalysis, MPI CEC
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