

# ENZO Lecture

KIT Graduate School ENZO

## Fire and Ice

Hydrogen and Carbon Dioxide as Building Blocks  
for Fuels and Chemicals

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**October 24, 2023 - 5:30 pm**

**KIT, Campus South, Würth Building (11.30), Senate Hall**

World-wide deployment of technologies to generate electricity from renewable sources enables new catalytic pathways to produce fuels and chemicals from non-fossil raw materials ("power-to-X"). Hydrogen provides a molecular pivot between a "de-carbonized" electricity sector and a "de-fossilized" chemical value chain. The present lecture will discuss challenges and opportunities resulting from this concept and present recent advances from our own research on catalytic processes using  $H_2$  for the conversion of  $CO_2$  and biomass-derived substrates.

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