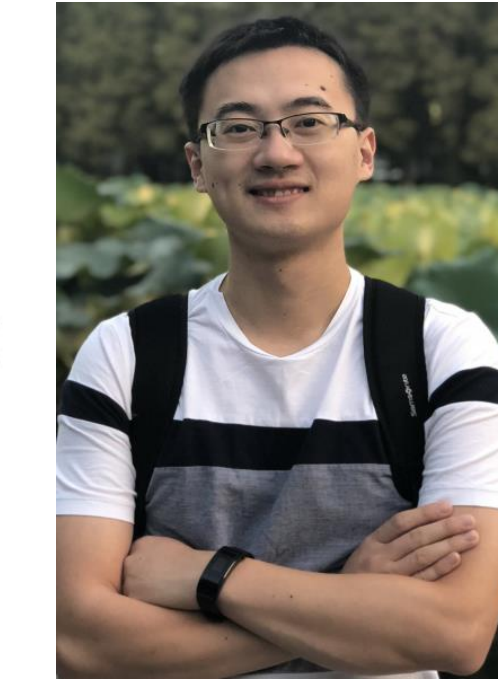
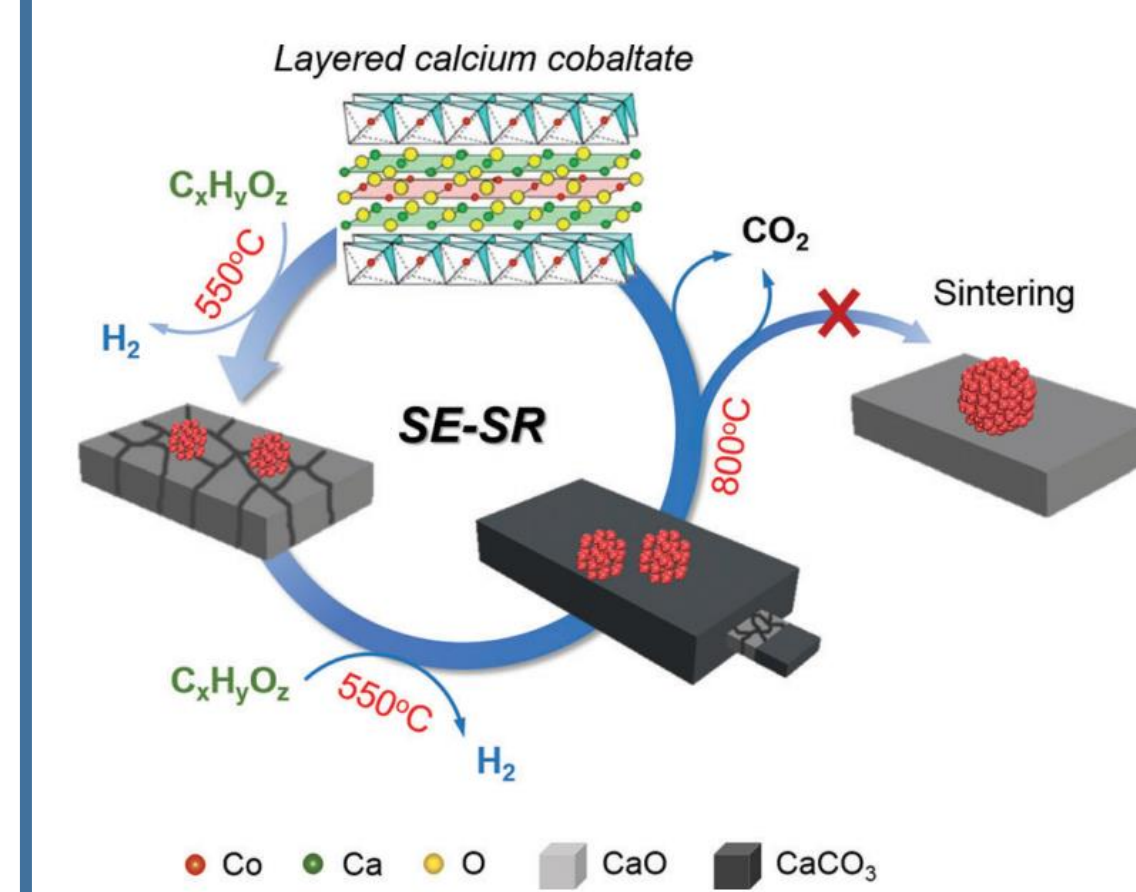
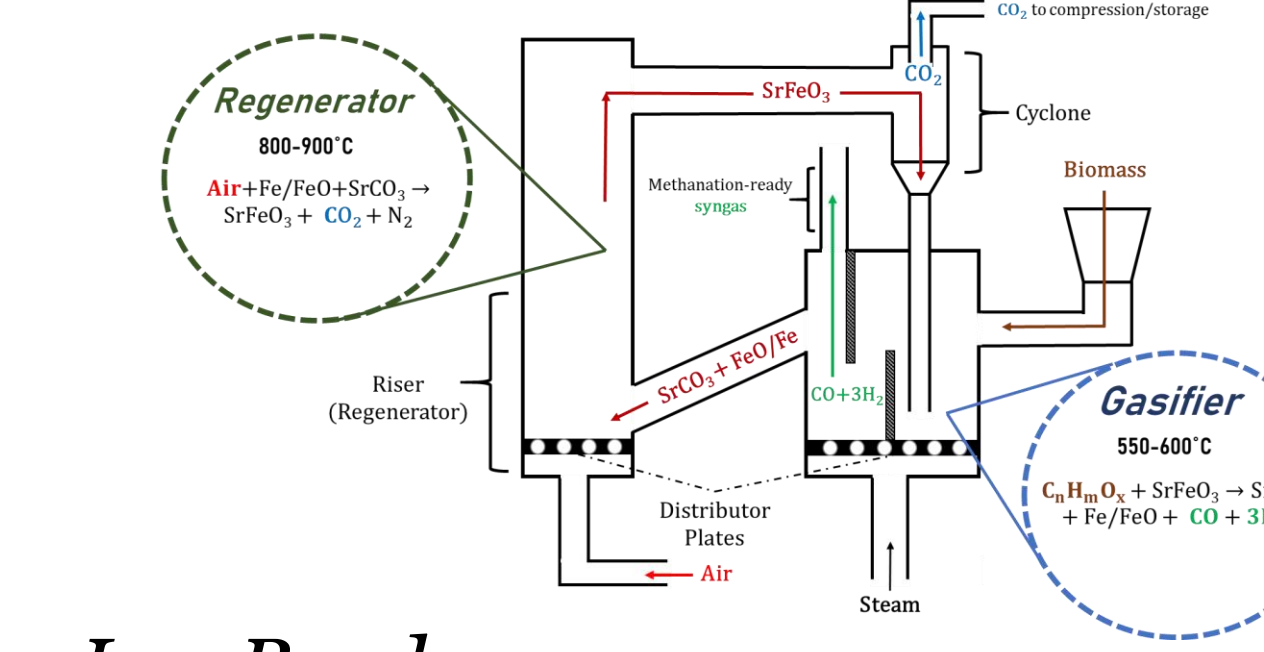


"Here at the Li Research Group, we focus on the **design, synthesis, and characterization of nanomaterial-based catalyst and reagent particles** for biomass and fossil energy conversions, green liquid fuel synthesis, CO₂ capture, and pollutant control. Our research also encompasses **chemical reaction engineering and process synthesis and optimization**. Density Functional Theory (DFT) based methods are also used to elucidate the particle reaction mechanisms and to identify potential ways to improve particle performance."
— Fanxing Li, Ph.D

Sorption-Enhanced Steam Reforming for Sustainable Hydrogen Production

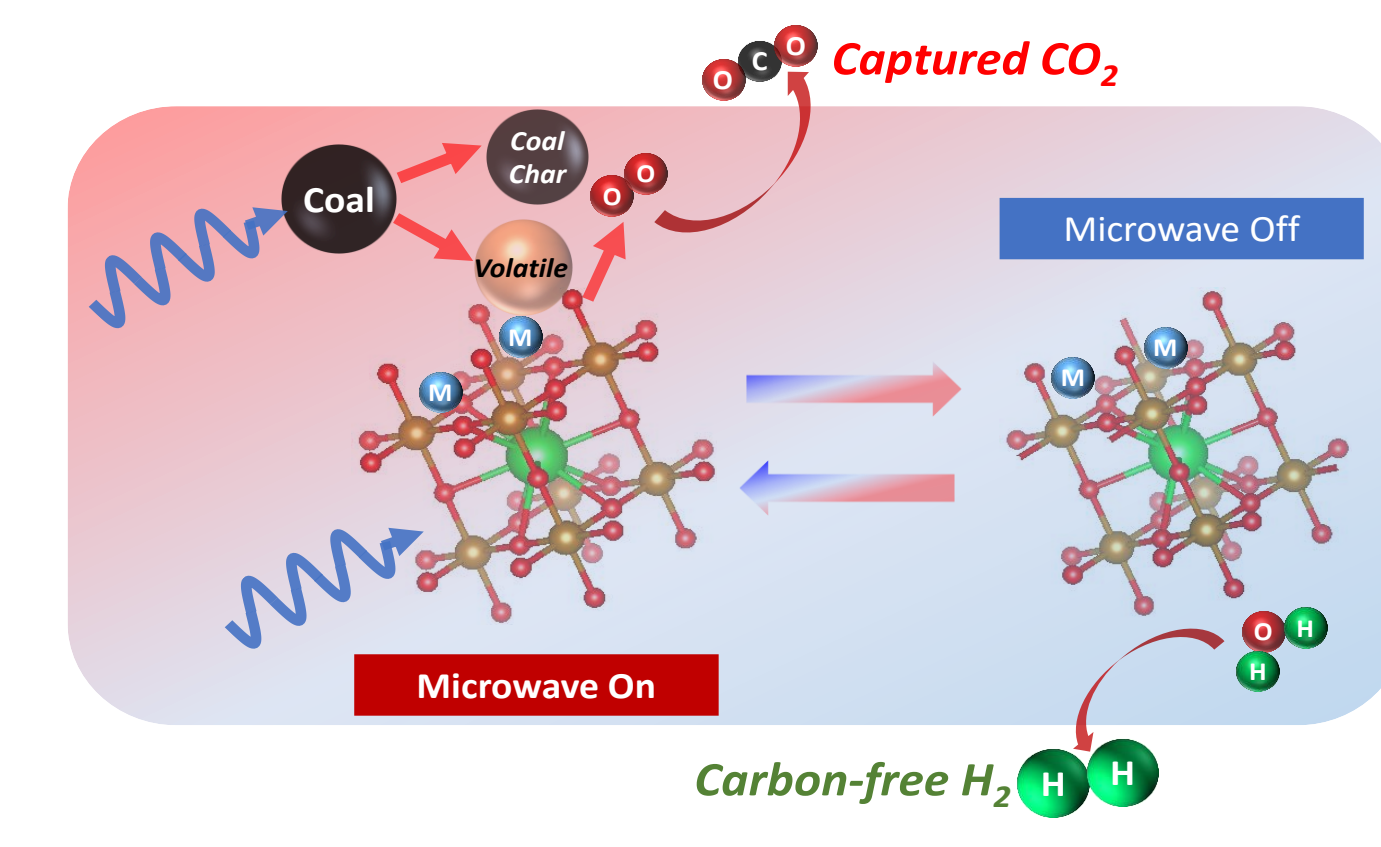


Dr. Runxia Cai



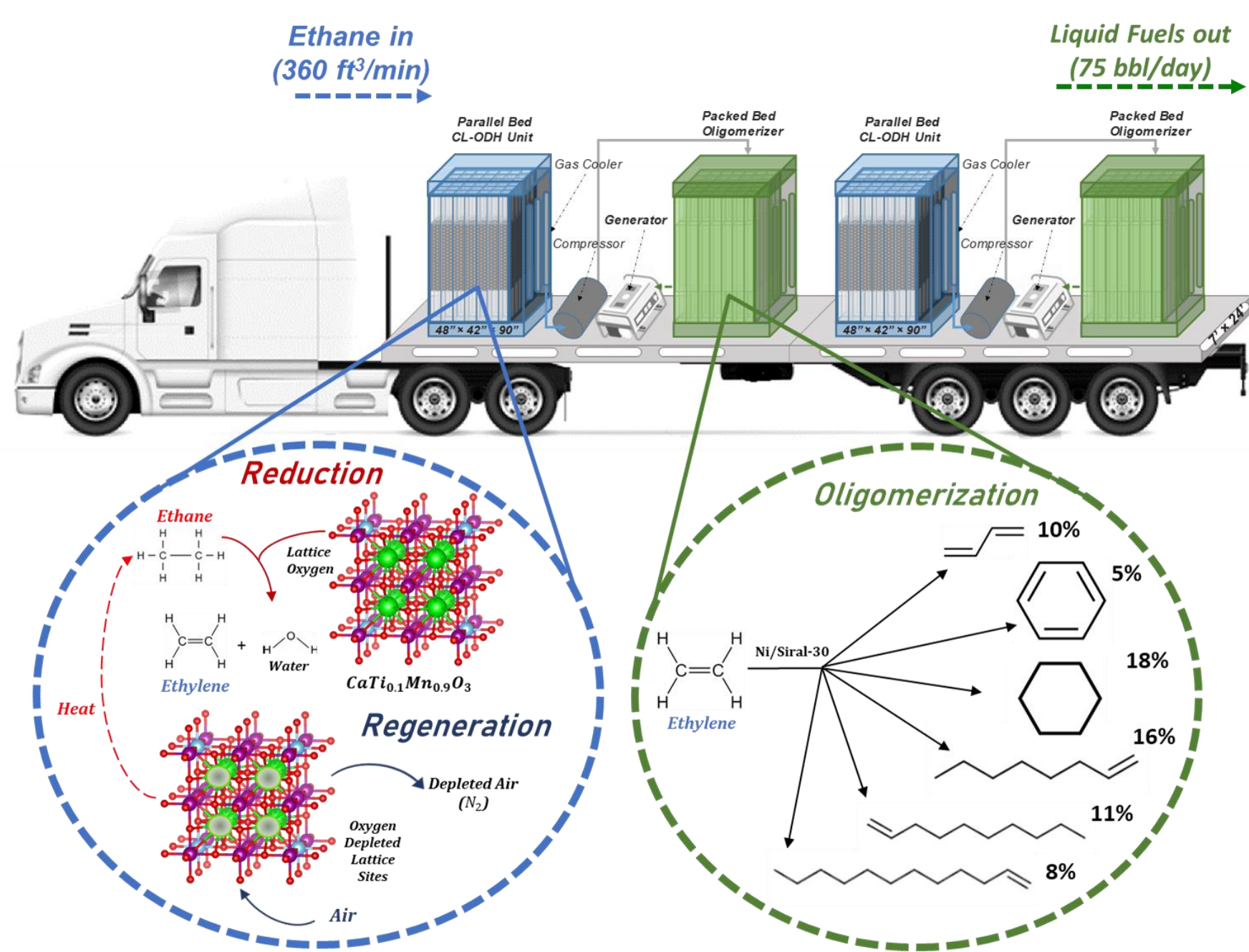
Leo Brody
Megan Yaffey (not pictured)
Alajia Thornton (not pictured)

Microwave-assisted Reduction for Carbon-free Hydrogen Production



Joey Funderburg
Dr. Jian Dou
Dr. Runxia Cai
Leo Brody

Chemical Looping Oxidative Dehydrogenation for Sustainable Olefin Production



Modular Ethane-To-Liquids



Dr. Luke Neal

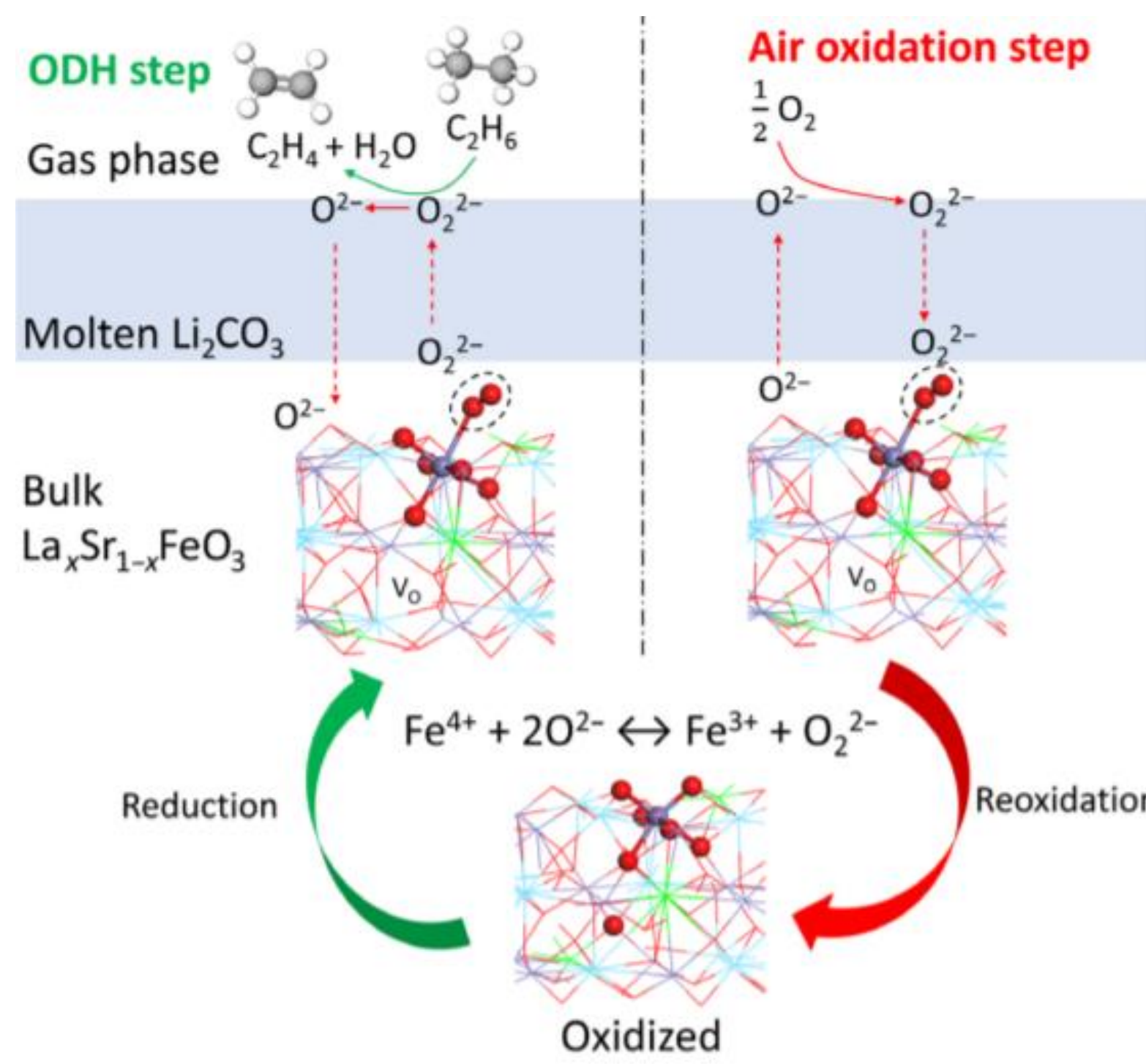


Leo Brody

Molten Salt-Mediated Ethane ODH with Integrated CO₂ Capture



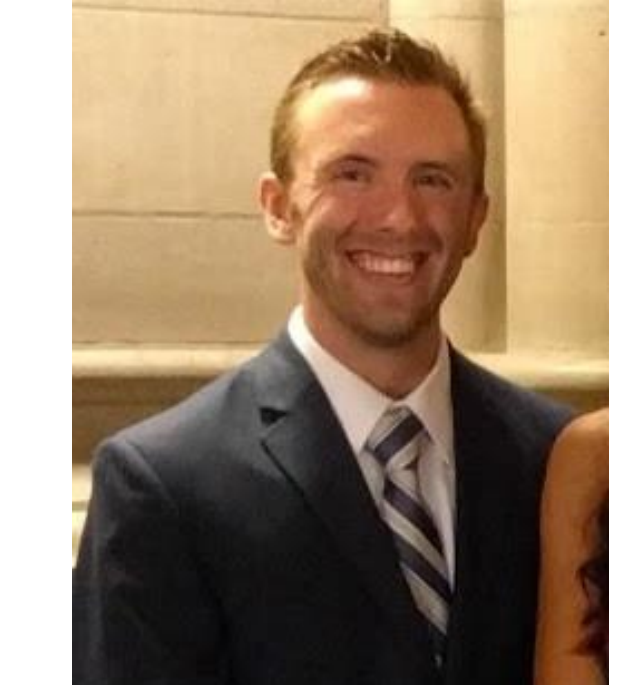
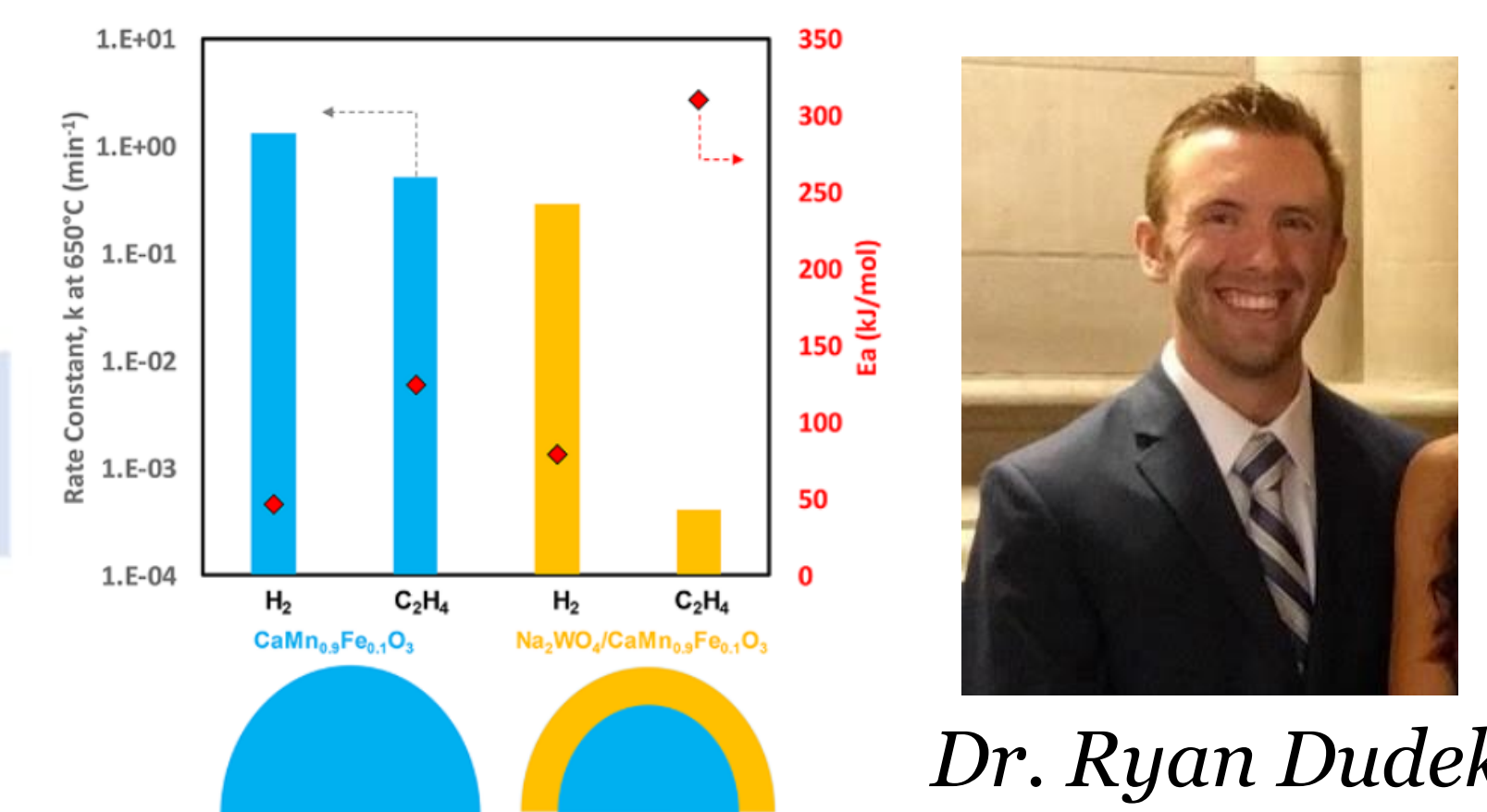
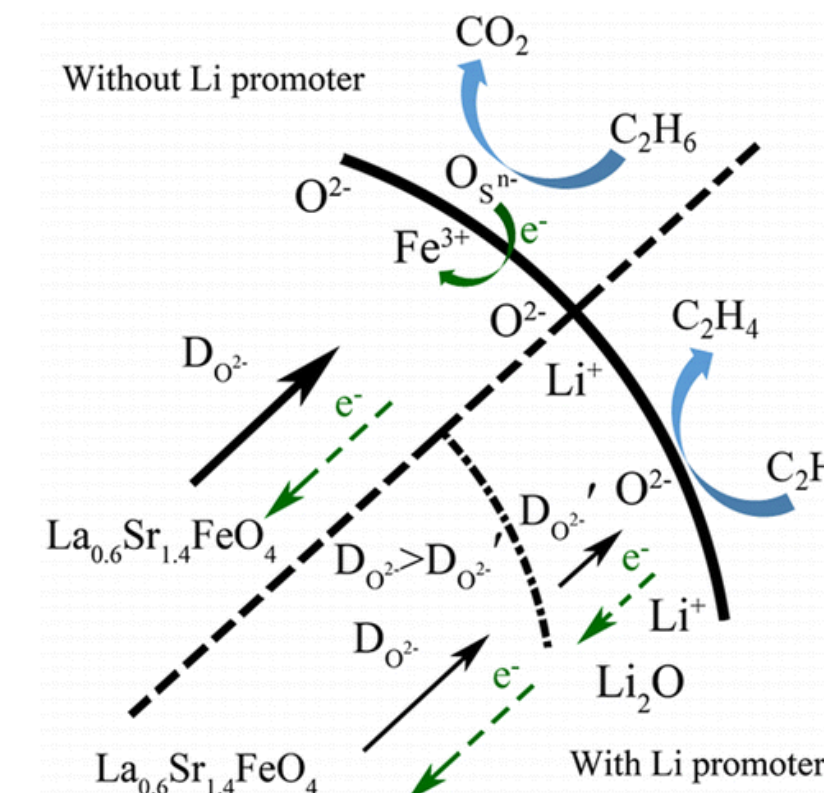
Junchen Liu Dennis Chacko Kyle Vogt-Lowell



Core-shell Redox Catalysis

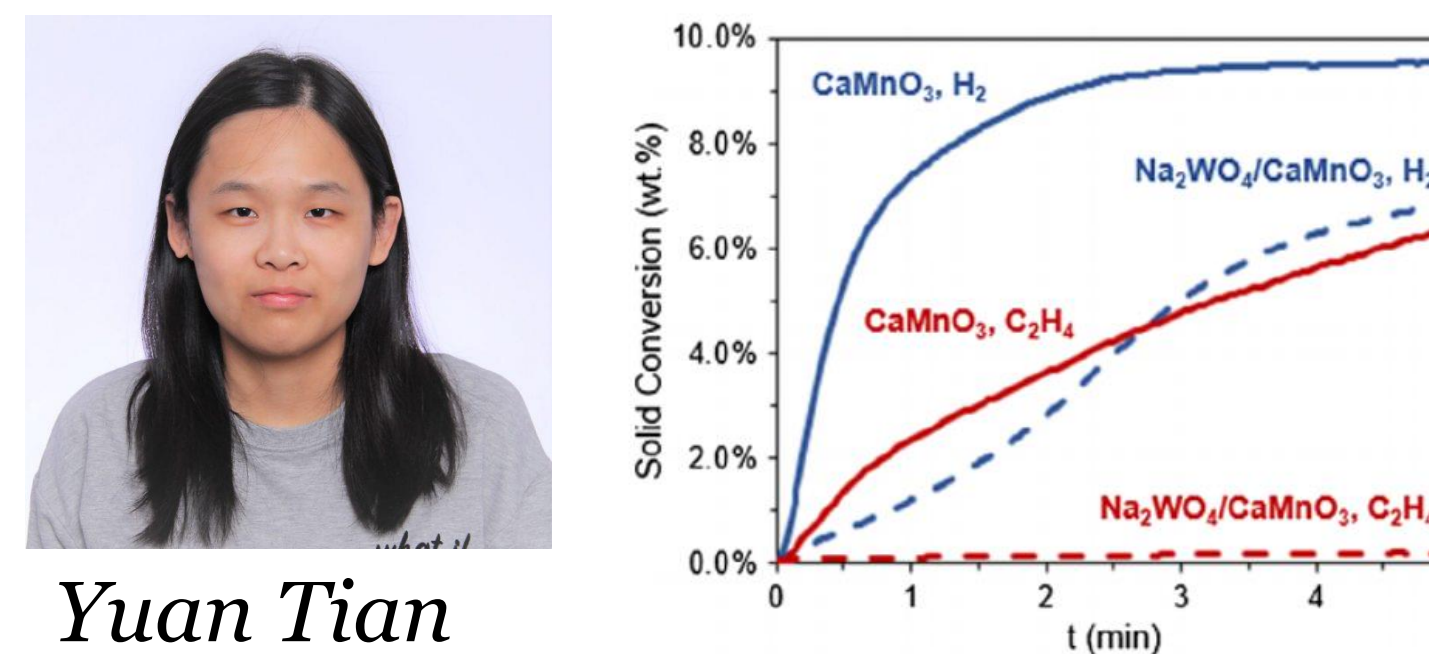


Dr. Yunfei Gao



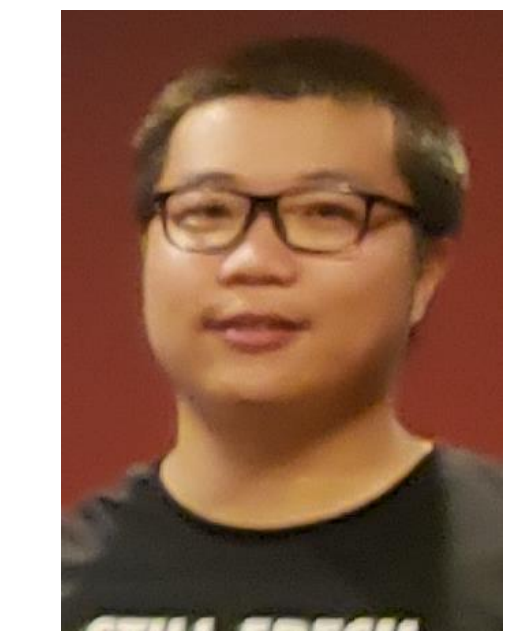
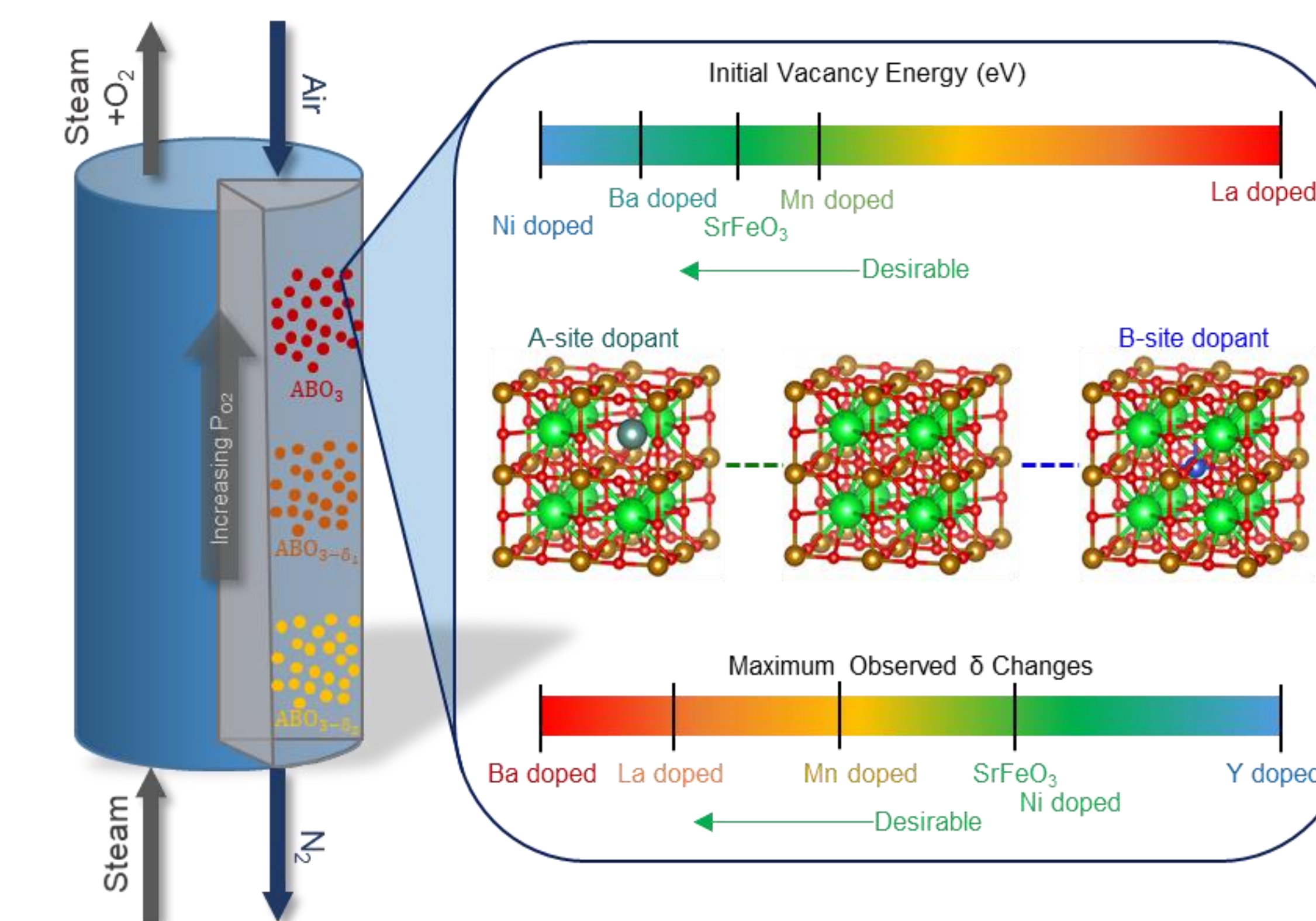
Dr. Ryan Dudek

ODH Reaction Kinetics

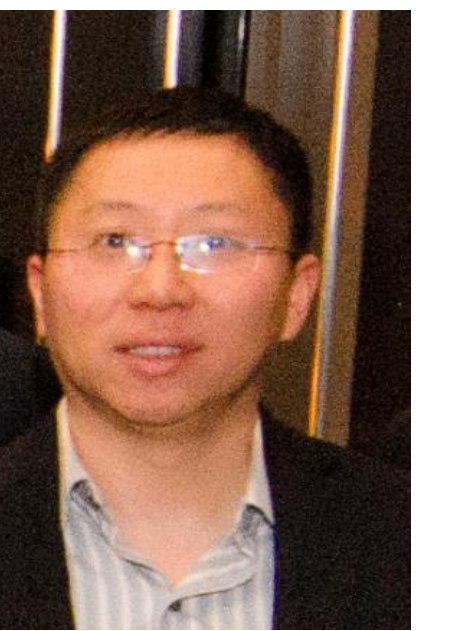


Yuan Tian

Chemical Looping for Energy Efficient Air Separation



Dr. Xijun Wang



Dr. Jian Dou

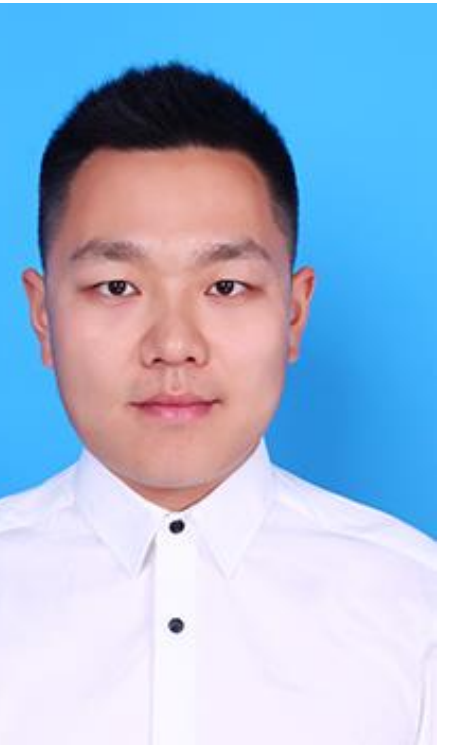
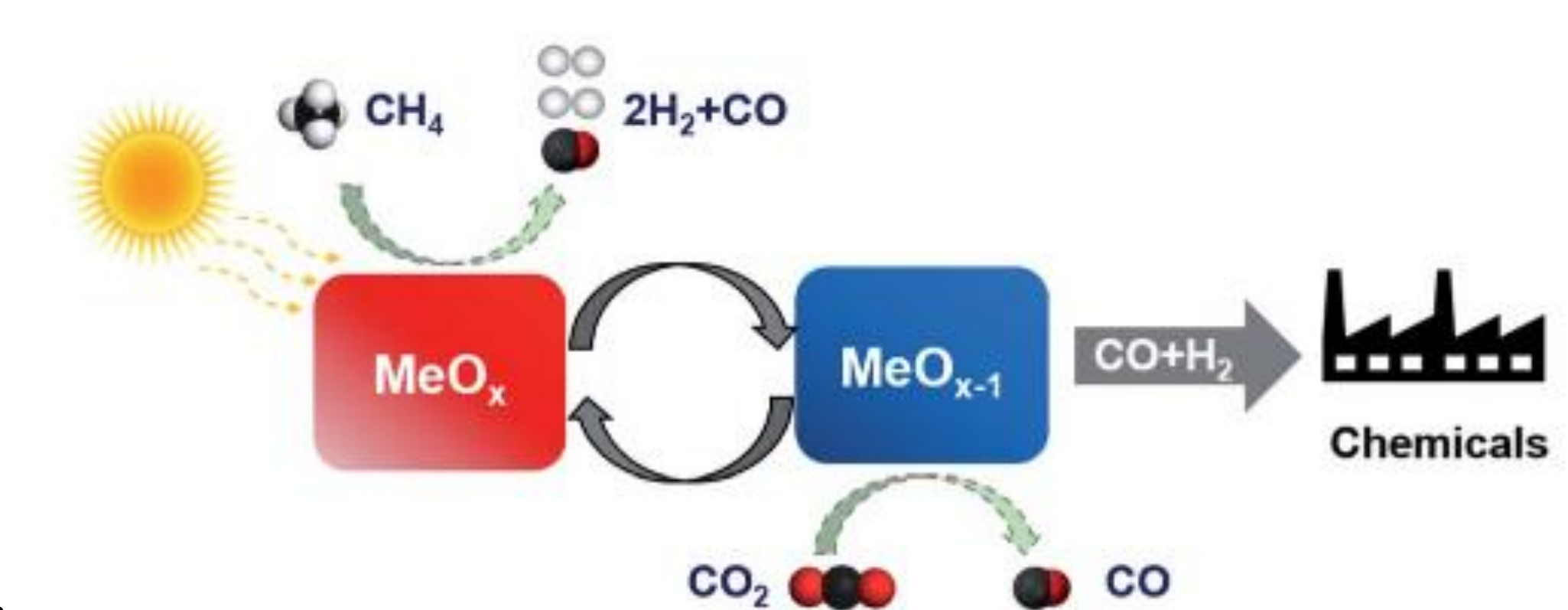


Emily Krzystowczyk

Chemical Looping Dry Reforming for Sustainable Syngas Production



Sherafghan Iftikhar



Dr. Chongyan Ruan

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Where we End Up

