

## Seminar on current research in chemical technology for employees and students (advanced internships and theses) – WS 2023/2024

Time/Location: Tuesday, 14:00, Bldg. 11.21, HS 006, language: English; LV no. 5434,

if online: BBB <https://itcp-bbb.itcp.kit.edu/b/mar-ad9-dgf>

### Presentations:

Date	Presenter	Title	Chair
31.10.2023	Florian Völker	Production of CO <sub>2</sub> -free hydrogen via methane pyrolysis: impact of carbonaceous materials on methane conversion and product selectivity in a high-temperature reactor Master thesis final report	Ahmet Celik
	Barbara Thiele	Experimental investigation and microkinetic modeling of periodically operated exhaust gas catalysts Master thesis intermediate report	Daniel Hodonj
	Trung Hoang	Investigation of the influence of diffusion limitation and oxygen storage capacity on the periodic operation of three-way catalysts Student internship "Vertiefer" final presentation	Daniel Hodonj
7.11.2023	Alexander Hoffmann	Oxidation and reduction kinetic of iron and iron oxide particles: Optimization of a 1D particle model Master thesis intermediate report	Carola Kuhn
	Cedric Karel Fonzeu Monguen	Wastes plastics decomposition to produce hydrogen Postdoc project proposal	Ahmet Celik
14.11.2023	Daniel Hodonj	Periodic operation of TWC PhD intermediate presentation	Ahmet Celik
05.12.2023	Sven Schardt	Oxidative Coupling of Methane over Pt-based Catalysts PhD final report	Michael Borchers
	Michael Borchers	Hydrogen-SCR for hydrogen-powered engines PhD final report	Sven Schardt
12.12.2023	Yannik Neudeck	Techno-Economic Study of CO <sub>2</sub> -free Hydrogen Production and Carbon Capture via Pyrolysis of Methane and Biogas Master Thesis Final Report	Ahmet Celik
	Felix Ehrlich	Modelling of Proton Ceramic Fuel Cells with focus on defect-based charge transport PhD intermediate report	Oscar Furst
	Sinan Demir	Numerical simulation of methane and biogas Master Thesis Final Report	Ahmet Celik
19.12.2023	Barbara Thiele	Experimental investigation and microkinetic modeling of periodically operated exhaust gas catalysts Master thesis final report	Daniel Hodonj
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16.01.2024	Oscar Furst	Numerical investigation of the effects of flow maldistribution in solid oxide cell stacks PhD intermediate report	Philipp Blanck
	Sadaf Davari	Ammonia composition PhD intermediate report	Dr. Camilo Cardenas
23.01.2024	Alexander Hoffmann	Oxidation and reduction kinetic of iron and iron oxide particles: Optimization of a 1D particle model Master thesis final report	Carola Kuhn
	Gia Trung Hoang	Development and characterization of a catalytically active electrode for the electrochemically enhanced low-temperature ammonia synthesis Master thesis intermediate report	Philipp Blanck
	Jonas Tatzig	Production of CO <sub>2</sub> -free hydrogen via biogas pyrolysis: Investigation of spatially resolved concentration profiles in a high-temperature reactor Bachelor thesis final report	Ahmet Celik
06.02.2024	Andreas Happ	Experimental Investigation of the Influence of Structured Surfaces on the Mass Transfer Characteristics of a Falling Film Absorber Master thesis intermediate report	Andrea Düll
13.02.2024	Andrea Düll	Structure optimization of a falling film absorber for CO <sub>2</sub> capture PhD intermediate report	Carola Kuhn
	Carola Kuhn	Iron as energy carrier PhD intermediate report	Andrea Düll
12.03.2024	Felix Straub	Investigation of wastes plastics Pyrolysis for Hydrogen Production: influence of process parameters in a high-temperature reactor Master thesis intermediate report	Ahmet Celik
	Florian Mian	Modeling and simulation of a methane pyrolysis kinetic reactor to investigate the thermal behavior Master thesis intermediate report	Ahmet Celik
	Marie Richter	Spatially resolved measurements of the selective catalytic reduction of nitrogen oxides in the context of future hydrogen engines Master thesis final report	Prof. Dr. Olaf Deutschmann

### Organization/ Contact:

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\* Please note: Changes to the program will be announced on the ITCP homepage:  
<https://www.itcp.kit.edu/364.php>.