

Preliminary Program MODEGAT VIII 2025

Monday, September 22, 2025

Time	Topic	Presenter	Title
09:00-10:00	SCR	Kamasamudram	Plenary: Technical Challenges and Modelling Strategies for NOx Reduction over Selective Catalytic Reduction Catalysts
10:00-10:20	SCR	Zheleznyak	Sites transformation in Cu/SSZ-13 catalyst under mild hydrothermal aging and its impact on oxidation reactions and sulfur poisoning
10:20-10:50	<i>coffee break</i>		
10:50-11:10	SCR	Uglietti	Unravelling the kinetics of Cu-CHA catalysts in driving conditions: a multi-mechanism SCR concept
11:10-11:30	SCR	Suarez-Corredor	Towards Improved SCR catalyst models: A framework for NH3 adsorption, mass transfer, and redox dynamics
11:30-11:50	SCR	Sari	Reduced-Order Kinetic Model for NH ₃ -SCR Catalysts: Calibration and Transient Validation for EU Applications
11:50-12:10	SCR	Hahn	Modelling the combined HCHO/SCR reaction on V2O5/WO3/TiO2 catalyst in lean gas engine exhaust
12:10-13:10	<i>lunch</i>		
13:10-13:50	CFD	Tonkovich	Solving Advanced Combustion Challenges with DETCHEM Tools
13:50-14:10	CFD	TBA	Title tba
14:10-15:00	Poster Presenters		Poster Talks
15:00-16:00	<i>poster session with coffee</i>		
16:00-16:20	New Fuel	Koltsakis	Greenhouse gas reduction potential of NH3 engines with tailored exhaust gas aftertreatment
16:20-16:40	New Fuel	Maunula	Simulation and design of emission catalysts for marine applications with green hydrogen, ammonia, methanol and methane and diesel fuel
16:40-17:00	CO2	Sokolov	Model-Based Screening of Honeycomb Sorbents for Carbon Capture
17:00-17:15	<i>Refreshments</i>		
17:15-18:15		Loschek	Plenary: Climate Research - What can we learn from earth's climate history for its future?
19:00	<i>dinner</i>		

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Time	Topic	Presenter	Title
09:00-10:00	TWC	Kusaka	Plenary: The Challenges with Three-way Catalysts in Strong Hybrid Systems for Passenger Cars
10:00-10:20	TWC	Conde	Computational optimization of TWC performance for pollutant control under transient conditions in an MD-SI engine fuelled with LPG
10:20-10:50	<i>coffee break + Poster</i>		
10:50-11:30	ML	Votsmeier	Efficient model generation using neural networks with embedded Physics/Chemistry prior knowledge
11:30-11:50	ML	Ferreri	Neural Network-Based Surrogate Modelling of Diesel Oxidation Catalyst
11:50-12:10	ML	Chacko	Leveraging Optimization Algorithms and Surrogate Modeling to Understand Methane Oxidation Kinetics
12:10-13:30	<i>lunch</i>		
13:30-14:30	SCR	Maestri	Plenary: A multiscale and multi-technique approach to Selective Catalytic Reduction (SCR) of NOx
14:10-14:30	SCR	Nordhausen	Spatially and temporally resolved analysis of UWS decomposition inside an SCR catalyst
14:30-14:50	SCR	Lange	Experimental and Numerical Investigation of UWS Film Formation in a Generic SCR Channel
14:50-15:20	<i>coffee break</i>		
15:20-15:40	New Fuel	Werner	Emission simulation: a fast tool for designing hydrogen engine aftertreatment systems
15:40-16:00	DPF	Watling	An Analytic Model for Wall-Flow Particulate Filters Valid for Symmetric and Asymmetric Filters and Accounting for Compressible Flow
16:00-16:20	DPF	Studenik	Pore-scale simulation study of diffusion-limited conversion of gas pollutants in soot-loaded catalytic filters
16:45-17:15	<i>coffee and farewell</i>		

This schedule may be subject to change.

last edit: 01.08.2025