

HELMHOLTZ Energy

## Energy Symposium 2025

Powering the Future – Accelerating the Energy Transition

June 24<sup>th</sup> to 27<sup>th</sup>, 2025, Karlsruhe, Germany

## Energy Symposium 2025 Powering the Future – Accelerating the Energy Transition

Program Overview

Tuesday, 24 June 2025           09:30 - 10:00         Registration and Welcome Coffee           09:00 - 10:02         Welcome and Opening toatime. Aute, FU           10:20 - 12:33         Session 1: From Electricity to Hydrogen to Power-to-X and Fusion Lecture. Aute, FU           10:20 - 12:34         Session 1: From Electricity to Hydrogen Production in European Carbon-Neutral Energy Systems Patrick Jochem German Aerospace Center (DLR)           Modularity: the Game-Changer for Commercial Scale F-fuel Production from Power-to-X/PKX           Samantha Michaux         INERAFEC GmbH           Hydrogen for the Energy Transition         Daniel Banuti           Saphial Henneberg         Max Planck Institute of Technology (KIT)           Advancing the Frontiers of Fusion: Background, Breakthroughs, and Burning Ambitions         Sophial Henneberg           Sophia Henneberg         Max Planck Institute of Technology (KIT)           Advancing the Frontiers of Fusion: Background, Breakthroughs, and Burning Ambitions         Sophial Henneberg           14:00 - 15:30         Session 2: Innovations for Energy Storage         Annelies Vandersickel           Iarmessing Heat: Advancements in High-Temperature Thermal Energy Storage         Annelies Vandersickel           Isoon 10:00         Coffee Break         Session 3: Pathways to a Resilient Energy Future           Isoon 11:00         Session 3: Pathways to a Resilient Energy Future         Session 3: Pathw					
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10:00 - 10:20       location: Auls, FTU         10:20 - 12:37       Session 1: From Electricity to Hydrogen to Power-to-X and Fusion Location: Auls, FTU         Intermittent Renewables and Hydrogen Production in European Carbon-Neutral Energy Systems         Patrick Jochem       German Aerospace Center (DLR)         Modularity: the Game-Changer for Commercial Scale E-Fuel Production from Power-to-X/PtX         Samantha Michaux       INERATEC GmbH         Hydrogen for the Energy Transition       Daniel Banuti         Daniel Banuti       Karlsruhe Institute for Flosma Physics (IPP)         12:30 - 14:00       Lumch break         14:00 - 15:30       Session 2: Innovations for Energy Storage         Location: Auls, FTU       Storing Energy: The Different Roles of Storage Technologies in Energy Storage         Location: Auls, FTU       Harnessing Heat: Advancements in High-Temperature Thermal Energy Storage         Annelies Vandersickel       German Aerospace Center (DLR)         Harnesing Heat: Advancements in High-Temperature Thermal Energy Storage       Annelies Vandersickel         Isi30 - 16:00       Coffee Break       German Aerospace Center (DLR)         Isi30 - 16:00       Session 3: Pathways to a Resilient Energy Future       Location: Auls, FTU         Location: Auls, FTU       Harnesity of North Carolina at Charlotte       Power Hardware in the Loop: How Experiments can Accelerate the Energy Transition	09:30 - 10:00				
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Giovanni De CarneKarlsruhe Institute of Technology (KIT)18:00BBQWednesd=: S June 202509:00 - 12:00Lab Tours and Site Visits 1 Location: Campus North, Campus South12:00 - 13:30Lunch break14:00 - 16:00Postersession and Get together Location: Pavilion and Foyer FTU16:00 - 16:00Greetings from Helmholtz Vice President Bernd Rech, KIT President Jan Hesthaven Location: Aula, FTU16:30 - 17:30Presentation of the Heinrich Hertz Award Location: Aula, FTU17:30 - 18:30Science Slam Location: Aula, FTU					
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14:00 - 16:00Postersession and Get together Location: Pavilion and Foyer FTU16:00 - 16:30Greetings from Helmholtz Vice President Bernd Rech, KIT President Jan Hesthaven Location: Aula, FTU16:30 - 17:30Presentation of the Heinrich Hertz Award Location: Aula, FTU17:30 - 18:30Science Slam Location: Aula, FTU	09:00 - 12:00				
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	17:30 - 18:30	Science Slam			
	19:00 - 23:00				

ritursuay, 2	26 June 2025				
09:00 - 10:30	Session 4: Advanced Materia	ls and Circular Processes			
	Location: Aula, FTU				
	Material Bottlenecks of the Energy Transition – Exemplary Case Studies from a Systems Perspective				
	Heidi Heinrichs Forschungszentrum Jülich (FZJ)				
	The Role of Information and Energy for Closing Material Cycles				
	Karl Gerald van den Boogaart Helmholtz-Zentrum Dresden-Rossendorf (HZDR)				
	A Hybrid Workflow to Discover Optimized Materials and Processes for the Energy Transition				
	Christoph J. Brabec	Forschungszentrum Jülich (FZJ)			
10:30 - 11:00	Coffee Break				
11:00 - 12:30	Session 5: Energy Economics and Perspectives Location: Aula, FTU				
	Flexibility in the Electricity Syste	m – Surplus or Bottleneck?			
		Karlsruhe Institute of Technology (	(KIT)		
	Energy Innovations		,		
	Sara Beck Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) gGmbH				
		Industrial Solutions for the Energ			
	Jens Dietrich Siemens Energy Global GmbH & Co KG, Innovation Center Berlin				
12:30 - 12:40	Closing of the presentation part				
12:40 - 14:00	Lunch, Get-together				
	Lab Tours and Site Visits 2 Open Space				
14:00 - 16:00		- P P			
14.00 - 10.00	Location: Campus North, Campus South, Campus East	Location: Pavilion, FTU			
16:15 - 17:45	Science-Policy Dialogue: insig	hts from scientists and politici	ans		
Friday, 27 J	une 2025				
	Energy Workshops for Y	oung Scientists			
	08:30 - 10:30				
		Good Leadershin in Teams	Career Compass: Where You Are		
09:00 - 10:30	Energy Breakfast and	First Aid for Getting Started	and Where You Want to Go		
05.00 - 10.50	Networking event	That Ald for Getting Started			
	Helmholtz Energy Office				
	Πειπποιιζεπείαν Οπιζε	Dritta Hoffmann	Datrizia Kählor, Katria Hoss		
		Britta Hoffmann	Patrizia Köhler, Katrin Hess		
	Location: Pavillion, FTU	Britta Hoffmann Location: Room 164, FTU	Patrizia Köhler, Katrin Hess Location: Aula, FTU		
10:30 - 11:00					
10:30 - 11:00	Location: Pavillion, FTU	Location: Room 164, FTU			
10:30 - 11:00	Location: Pavillion, FTU Coffee break	Location: Room 164, FTU	Location: Aula, FTU		
10:30 - 11:00	Location: Pavillion, FTU Coffee break	Location: Room 164, FTU	Location: Aula, FTU Deep Dive into Your Network:		
10:30 - 11:00 11:00 - 12:30	Location: Pavillion, FTU Coffee break	Location: Room 164, FTU Ideas on Demand. Strategies for Creative	Location: Aula, FTU Deep Dive into Your Network: Analyze, Reflect and Strengthen		
	Location: Pavillion, FTU Coffee break Clear Communication	Location: Room 164, FTU Ideas on Demand. Strategies for Creative Problem-Solving	Location: Aula, FTU Deep Dive into Your Network: Analyze, Reflect and Strengthen Your Career Connections		
	Location: Pavillion, FTU Coffee break Clear Communication Simone McInturff	Location: Room 164, FTU Ideas on Demand. Strategies for Creative Problem-Solving Stefan Götze	Location: Aula, FTU Deep Dive into Your Network: Analyze, Reflect and Strengthen Your Career Connections Patrizia Köhler, Katrin Hess		
11:00 - 12:30	Location: Pavillion, FTU Coffee break Clear Communication Simone McInturff Location: Room 163, FTU	Location: Room 164, FTU Ideas on Demand. Strategies for Creative Problem-Solving	Location: Aula, FTU Deep Dive into Your Network: Analyze, Reflect and Strengthen Your Career Connections		
	Location: Pavillion, FTU Coffee break Clear Communication Simone McInturff Location: Room 163, FTU Lunch break	Location: Room 164, FTU Ideas on Demand. Strategies for Creative Problem-Solving Stefan Götze	Location: Aula, FTU Deep Dive into Your Network: Analyze, Reflect and Strengthen Your Career Connections Patrizia Köhler, Katrin Hess Location: Aula, FTU		
11:00 - 12:30	Location: Pavillion, FTU Coffee break Clear Communication Simone McInturff Location: Room 163, FTU Lunch break How to Network and Make	Location: Room 164, FTU Ideas on Demand. Strategies for Creative Problem-Solving Stefan Götze Location: Room 164, FTU Your Personal AI-SSISTANT	Location: Aula, FTU Deep Dive into Your Network: Analyze, Reflect and Strengthen Your Career Connections Patrizia Köhler, Katrin Hess Location: Aula, FTU Leading with Responsibilty - First		
11:00 - 12:30	Location: Pavillion, FTU Coffee break Clear Communication Simone McInturff Location: Room 163, FTU Lunch break	Location: Room 164, FTU Ideas on Demand. Strategies for Creative Problem-Solving Stefan Götze Location: Room 164, FTU Your Personal AI-SSISTANT has arrived: Using	Location: Aula, FTU Deep Dive into Your Network: Analyze, Reflect and Strengthen Your Career Connections Patrizia Köhler, Katrin Hess Location: Aula, FTU		
11:00 - 12:30 12:30 - 13:30	Location: Pavillion, FTU Coffee break Clear Communication Simone McInturff Location: Room 163, FTU Lunch break How to Network and Make	Location: Room 164, FTU Ideas on Demand. Strategies for Creative Problem-Solving Stefan Götze Location: Room 164, FTU Your Personal AI-SSISTANT has arrived: Using Generative AI as a	Location: Aula, FTU Deep Dive into Your Network: Analyze, Reflect and Strengthen Your Career Connections Patrizia Köhler, Katrin Hess Location: Aula, FTU Leading with Responsibilty - First		
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