

# Program ReMeF Symposium

## 12 February 2025: Day 1 – Science

Time	Subject	Responsible
8:00 - 9:05	Registering and Welcome Coffee	<b>Mihaela Dudita-Kauffeld</b> , OST, Switzerland
9:05 - 9:15	Welcome	<b>Andreas Häberle</b> , OST, Switzerland
9:15 - 9:35	Intro and Overview on Scientific Projects	<b>Michel Haller</b> , OST, Switzerland
<b>Metal to Energy - H<sub>2</sub> from Aluminium</b>		
9:35 - 9:55	The Fundamentals of Supercritical Metal-Water Reactions	<b>Keena Trowell</b> , McMaster University, Canada
9:55 - 10:15	Low Temperature Aluminium-Water Reactions	<b>Miren Agote Arán</b> , OST, Switzerland
10:15 - 10:35	Aluminium Reaction with Steam	<b>Ivan Jerman</b> , National Institute of Chemistry, Slovenia
10:35 - 10:55	Molten Aluminium Water Reaction for Production of Hydrogen and Steam	<b>Linda Barelli</b> , Università degli Studi di Perugia, Italy
10:55 - 11:25	Coffee break	
<b>Metal to Energy - Aluminium Combustion and Metal Fuel Cells</b>		
11:25 - 11:45	Aluminium and Magnesium Combustion for Energetic Use	<b>Fabien Halter</b> , Université d'Orléans, France
11:45 - 12:05	In Situ Optical Diagnostics of Combustion of Aluminum Droplets in Steam	<b>Zhongshan Li</b> , Lund University, Sweden
12:05 - 12:25	Aqueous and not-Aqueous Aluminum Batteries	<b>Stefano Passerini</b> , Helmholtz Institute Ulm, Germany
12:25 - 13:25	Lunch Break	
<b>Clean Power to Aluminium</b>		
13:25 - 13:45	Clean Aluminium Production - Overview and Challenges	<b>René von Känel</b> , KAN-NAK, Switzerland
13:45 - 14:05	Inert Electrodes for Aluminium Smelting	<b>Daniel Thor Gunnarsson</b> , IceTec, Iceland
14:05 - 14:25	Recycling of Aluminium Hydroxide to Smelter Grade Alumina	<b>Samuel Senanu</b> , SINTEF Industry, Norway
14:25 - 14:55	Poster Presentation	
14:55 - 15:25	Coffee break	
<b>The Iron Cycle</b>		
15:25 - 15:45	A No-Regret Application for Renewable Iron – A Thermodynamic Analysis of Repurposing Coal Power Plants	<b>Jannik Neumann</b> , Technischen Universität Darmstadt, Germany
15:45 - 16:05	An Overview of the Iron Fuel Cycle: a Focus on Reduction and Cyclability	<b>Giulia Finotello</b> , Eindhoven University of Technology, Netherlands
16:05 - 16:25	Direct Reduction of Iron Ore with Hydrogen: Potential and Challenges	<b>Jan Eisbacher-Lubensky</b> , Montanuniversität Leoben, Austria
16:25 - 16:45	Closing of Day 1	
16:45 - 18:00	Apéro	
18:00 - 21:00	Dinner	

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## 13 February 2025: Day 2 – Application and Market

Time	Subject	Responsible
8:00 - 9:00	Registering and Welcome Coffee	<b>Mihaela Dudita-Kauffeld</b> , OST, Switzerland
<b>Keynotes on Overview Systems and Applications</b>		
9:00 - 9:30	Overview on Renewable Metal Fuels and their Applications	<b>Jeffrey Bergthorson</b> , McGill University, Canada
9:30 - 10:00	Green Iron as Recyclable Carrier of Renewable Energy – Opportunities and Challenges	<b>Christian Hasse</b> , Technischen Universität Darmstadt, Germany
<b>Demonstrations and State of the Art: Power-to-Metal</b>		
10:00 - 10:20	Direct Reduction of Iron with Hydrogen: Advances and Insights from RIFT's Pilot Plant	<b>Lex Scheepers</b> , Rift, Netherlands
10:20 - 10:40	CO <sub>2</sub> -Free Aluminium	<b>Rauan Meirbekova</b> , IceTec, Iceland
10:40 - 11:10	Coffee Break	
<b>Demonstrations of Metal-to-Energy and Techno-Economics</b>		
11:10 - 11:30	Iron-to-Energy: MW-Scale Iron Energy Cycles	<b>Stijn van Aken</b> , Metalot, TU Eindhoven, Netherlands
11:30 - 11:50	PeakMetal: Covering Peak Energy Demand in the Cold Season Based on Metal-to-Energy	<b>Yvonne Bäuerle</b> , OST, Switzerland
11:50 - 12:10	Alu-to-Energy Prototype for Heat and Electricity in Buildings	<b>Jan Hüppi</b> , OST, Switzerland
12:10 - 12:30	Iron Oxide for Long Duration Energy Storage - From the Lab to 100 MWh Systems	<b>Samuel Heiniger</b> , ETH Zürich, Switzerland
12:30 - 13:30	Lunch Break	
<b>Company Session</b>		
13:30 - 14:30	Presentation of Companies and Products	
<b>Networking with Companies</b>		
14:30 - 15:30	Networking with Companies	
<b>Podium Discussions and Closing</b>		
15:30 - 16:30	Podium Discussion with <ul style="list-style-type: none"> <li>• <b>Dr. Stefan Oberholzer</b>, Swiss Federal Office of Energy, Switzerland</li> <li>• <b>Prof. Jeffrey Bergthorson</b>, McGill University, Montreal, Canada</li> <li>• <b>Dr. Keena Trowell</b>, McMaster University, Hamilton, Canada</li> <li>• <b>Prof. Christian Hasse</b>, TU Darmstadt, Germany</li> <li>• <b>Ass. Prof. Giulia Finotello</b>, TU Eindhoven, Netherlands</li> </ul>	
16:30 - 18:00	Closing and Networking Apéro	