

EERA JP ES workshop in conjunction with EFC 23 on:

“Exploring similarities, synergies and perspectives of open electrochemical reactors for long duration energy storage”

Venue: Hotel Quisisana, Capri, Italy

Date: 14 September 2023

Time: 10.00 to 18.00 (CET)

Time	Speaker	Topic/ Title
9:30	Registration	
10:00 – 11:15	Session 1: Setting the Scene (Chair: Myriam E. Gil Bardají, KIT)	
10:00	Welcome	
10:05	Holger Ihssen Helmholtz Association, DE	<i>Seasonal energy storage: the 2050 challenges</i>
10:25	Luigi Crema Chair Hydrogen Europe Research Fondazione Bruno Kessler, IT	<i>Clean Hydrogen Partnership: support for hydrogen storage, priorities and strategic research agenda and possible hybridization H2 and Batteries</i>
10:55	Thomas Malkow European Commission, JRC, BE	<i>Support by the European Commission for R&D on hydrogen technologies in the EU</i>
11:15 – 11:45	Coffee Break together with EFC23	
11:45 – 13:30	Session 2: Research Challenges Batteries (Chair: Antti Kosonen, LUT)	
11:45	Myriam E. Gil Bardají Karlsruhe Institute of Technology, DE	<i>The EERA Joint Programme on Energy Storage, StoRIES and RISEnergy</i>
12:00 (online)	Michael Aziz Harvard University, USA	<i>Research challenges in porous electrode performance in Flow batteries</i>
12:30	Linda Barelli University of Perugia, IT	<i>The innovative technology of sodium-seawater battery</i>
12:50	Daria Vladlikova Bulgarian Academia of Science, BG	<i>From Primary to Secondary Zn-air Batteries</i>
13:10	Xu Liu Helmholtz Institute of Ulm, DE	<i>Addressing the voltage and energy fading of Al-air batteries to enable seasonal/annual energy storage</i>
13:30 – 14:30	Lunch break together with EFC23	
14:30 – 15:50	Session 2: Research Challenges Electrolysis (Chair: Peter Holtappels, KIT)	
14:30	Gen Huang Karlsruhe Institute of Technology, DE	<i>The significance and challenges of electrocatalytic reduction of CO₂ to C₂+ hydrocarbons</i>
14:50	Mariya E. Ivanova Forschung Zentrum Jülich, DE	<i>R&D challenges in the field of proton-conducting ceramic cells (PCCs)</i>
15:10	Antti Kosonen Lappeenranta Univ. of Technology, FI	<i>Solar- and wind-based hydrogen generation in off-grid</i>
15:30	General Discussion	Main Research Challenges in Batteries and Electrolysers
15:50 – 16:20	Coffee Break together with EFC23	



16:20 – 17:50	Session 3: Application challenges (Chair: Linda Barelli, UNIPG)	
16:20	Jaroslav Milewski Warsaw University of Technology, PL	<i>Molten Carbonate Electrolysis for power-to-gas application</i>
16:40	Giacomo Marini University of Padova, IT	<i>Vanadium Flow batteries: a path to long duration energy storage</i>
17:00	Roberto Scipioni SINTEF Energi, NO	<i>Rethinking metal-air flow batteries for long duration energy storage</i>
17:20	Peter Holtappels Karlsruhe Institute of Technology, DE	<i>The role of microreactors in scaling of P2X technologies</i>
17:40	General Discussion	Impact of application features on the selection of the proper energy storage technology
17:50 – 18:00	Closing remarks (Chair: Holger Ihssen, HGF)	
	What answers can be extracted to the questions below? <ul style="list-style-type: none"> • What are the perspectives for each or a combination of these technologies? • What are the scientific-technical challenges? • How sustainable are current concepts, and how can this be assessed? • Which application areas benefit from which power and storage scale? • What costs are envisaged? • How long time for is anticipated for implementation? 	
18:00	End of the workshop	
18:00 – 18:40	Possibility to join the EFC 23 Poster Session	
20:00 – 22:30	Networking Dinner for JPES participants at 'Da Verginiello' Via Lo Palazzo, 25, 80073 Capri (https://goo.gl/maps/u4a2w9FudFAJfXe7A)	