



PSI

ReMade@ARI workshop on Energy materials in circular economy meet X-rays and Neutrons

PROGRAMME

Wednesday 20 November 2024

09:00 - 10:00	Registration and Coffee – ESRF Central Building Entrance hall	
10:00 - 10:55	Welcome and introduction from the Organising Committee and facilities	
10:55 - 12:00	TEESMAT: Bringing X-rays to the battery innovation game	J. Drnec <i>ESRF, France</i>
	Investigating the “cold sintering” of Li6PS5Cl solid electrolyte through multi-scale characterization techniques	O. Korjus <i>Institut Laue-Langevin – ILL, France</i>
	Infrastructure for Energy Materials Research at SuperXAS (PSI)	M. Nachtegaal <i>Paul Scherrer Institute, Switzerland</i>
12:00 - 13:30	Lunch – onsite restaurant	
13:30 - 14:25	Routes to Direct Recycling of Battery Materials	E. Kendrick <i>University of Birmingham, UK</i>
14:25 - 14:45	Fermi Level Engineering of Sustainable Oxygen Transport Membranes	M. Widenmeyer <i>TU Darmstadt, Germany</i>
14:45 - 15:05	Sorption mechanisms in Mg/Mg ₂ Ni composites considered as circular materials for hydrogen storage	L. Laversenne <i>Institut Néel - CNRS UPR 2940, France</i>
15:05 - 15:30	Coffee break and group photo	
15:30 - 16:25	Structure-activity relationships of active sites in homogenous and heterogenous catalysts for organic reactions	D. De Vos <i>KU Leuven</i>
16:25 - 16:45	Materials Circularity with Sustainable Green Chemistry Methods	M. Revello <i>Institute of Applied Resource Strategies</i>
16:45 - 17:05	Neutron spectroscopy studies of hydrogen diffusion in energy materials	P. Fouquet <i>Institut Laue-Langevin – ILL, France</i>
17:05	Poster session and Cheese & Wine – ESRF Central Building	

Thursday 21 November 2024

08:30 - 09:25	Eco-design strategies in photovoltaics	D. Munoz <i>CEA/DES/LITEN, France</i>
09:25 - 09:45	Investigation of ionomer adsorption in catalyst inks as a function of ink solvent composition using contrast-variation small angle neutron scattering	M. Stando <i>Institut Laue-Langevin – ILL, France</i>
09:45 - 10:05	Operando characterization of heterogeneous catalysts for CO ₂ hydrogenation	N. Kosinov <i>Eindhoven University of Technology, Netherlands</i>
10:05 - 10:30	Coffee break	
10:30 - 10:50	Turning metal-support interaction in Pd/TiO ₂ catalysts	A. Bugaev <i>Paul Scherrer Institute, Switzerland</i>
10:50 - 11:10	Correlative High-Resolution Neutron and X-Ray Imaging for Energy Research	L. Helfen <i>Institut Laue-Langevin – ILL, France</i>
11:10 - 11:30	Transforming All-Solid-State Battery Manufacturing with Electrochemical Fast Sintering and Faster X-ray Total Scattering	R. Fukada <i>ICGM, France</i>
11:30 - 11:50	Low-temperature carbothermic reduction for recycling of LiCoO ₂ : the crucial role of cellulose	E. Carena <i>Universita degli Studi di Milano Bicocca, Italy</i>
11:50 - 13:20	Lunch – onsite restaurant	
13:20 - 14:15	Neutron scattering to aid the development of polymer electrolyte membranes for a sustainable future	K. Smith <i>University College London, UK</i>
14:15 - 14:35	X-ray and neutron imaging analysis of solid-liquid phase change materials for optimised latent thermal energy storage	J. Martinez Garcia <i>Lucerne School of Engineering and Architecture, Switzerland</i>
14:35 - 14:55	Non-destructive elemental analysis of hard carbons derived from polymer-based waste streams for battery applications	L. Beran <i>Leibniz-Institut fuer Neue Materialien gGmbH, Germany</i>
14:55 - 15:25	Coffee break	
15:25 - 15:45	Operando investigation of NMC622/Argyrodite based All-Solid-State Battery using Neutron Diffraction	S. Anil-Kumar <i>Institut Laue-Langevin – ILL, France</i>
15:45 - 16:05	Hydrogen dynamics in the nitride-hydride Ca ₃ CrN ₃ H	L. Fine <i>Institut Laue-Langevin – ILL, France</i>
16:05 - 16:25	Redox Behavior of Heavy Metals in Supercapacitor Electrodes Derived from Recycled Wastewater Adsorbents	M. Amaro de Andrade <i>CNRS, France</i>
16:25 - 17:20	Open discussion: How can Research Infrastructures best support Circular Economy research?	
17:20	Concluding remarks	
19.30	Social dinner and Best Poster Prize	

Friday 22 November 2024

08:30 - 12:00 ESRF and ILL tours

12:00 - 13:30 **Lunch – onsite restaurant**

13:30 - 15:00 ReMade tutorial – Proposals and best Practices for a successful experiment

15:00 - 15:30 **Coffee break**

15:30 - 17:00 Parallel optional tutorials – Spectroscopy (EXAFS) and Diffraction (Fullprof use)