

Program

Monday 10th January							Type of event
TIME	Total DURATION	CODE	ACTIVITY	LECTURER	AFFILIATION	TITLE	
9:00-9:20	20 min	M6INT1	WELCOME	FABIEN PERDU	CEA	TEESMAT	Hybrid (presence + online)
9:20-10:00	40 min	M6INT2	INTRODUCTION	JAKUB DRNEC	ESRF	OVERVIEW OF TEESMAT TECHNIQUES	Hybrid (presence + online)
10:00-10:20	20 min	M6INT3	EU COMMISSION	CLAUDE CHANSON	RECHARGE	EU ENERGY VISION	Hybrid (presence + online)
10:20 - 10:40	20 min		BREAK				
10:40-11:20	40 min	M6LEC1	LECTURE 1	TBD		Batteries: current status of the technology and perspective Overview	Hybrid (presence + online)
11:20-12:00	40 min	M6LEC2	LECTURE 2	Tom Van Bellingen	UMICORE	Materials for Batteries	Hybrid (presence + online)
12:00 -13:30			Lunch break				
13:30-14:30	60 min	M6PLE1	PLENARY 1	KRISTINA EDSTRÖM	UNIVERSITY UPPSALA	Characterization of material for batteries at the surface level Li-ion batteries (including Solid state)	Hybrid (presence + online)
14:30-15:30	60 min	M6PLE2	PLENARY 2	CLAIRE VILLEVEILLE	GRENOBLE INP	Characterization of material for batteries at the synchrotron/neutron scale Li-ion batteries (including Solid State)	Hybrid (presence + online)
15:30 - 15:50	20 min		BREAK				
15:50-16:30	40 min	T6LEC3	LECTURE 3	Arnaud Morin	CEA	Characterization on Fuel Cells	Hybrid (presence + online)
16:30-17:10	40 min	T6LEC4	LECTURE 4	Francisco FERNANDEZ	TECNALIA	Characterization in Redox Flow System	Hybrid (presence + online)
Tuesday 11th January							Type of event
TIME	Total DURATION	CODE	ACTIVITY	LECTURER	AFFILIATION	TITLE	
9:00-10:00	60 min	T7PLE3	PLENARY 3	Marion Chandesris	CEA	Characterization with the help of modelisation Li-ion batteries (including Solid State)	Hybrid (presence + online)
10:00-10:40	40 min	T7LECS	LECTURE 5	Vincent Caldeira	EASYL	Characterization in Zn-based systems (Ni/Zn and Zn-air)	Hybrid (presence + online)
10:40 - 11:00	20 min		BREAK				
11:00-11:40	40 min	T7LECG	LECTURE 6	Céline Merlet	CIRIMAT	Characterization in supercapacitors	Hybrid (presence + online)
11:40 - 13:00			LUNCH BREAK				
13:00-13:15	15 min		INTRODUCTION	Fabien Perdu, Matthieu Médina and Cyril Marino	SERMA and CEA	Quick Summary of the previous talks and link toward the industrial needs (SERMA own experience)	Hybrid (presence + online)
13:15-14:45	1h30	Round table session 1	TESTIMONIES	5 service users will be invited to present their user case and explain how their request was treated (without deep science) - SUs are on-line		How TEESMAT can help for the development of energy storage systems	Hybrid (presence + online)
14:45 - 15:00	15 min		BREAK				
15:00-17:00							
19:00-22:00			SOCIAL DINNER				
Wednesday 12th January							Type of event
TIME	Total DURATION	CODE	ACTIVITY	LECTURER	AFFILIATION	TITLE	
9:00-9:45	45 min	W8TEC1	CHARACTERIZATION TECHNIQUE 1	Georgia Kasriniaki	CERTH	RAMAN-Principles, probing characteristics, examples not necessary in batteries	Hybrid (presence + online)
9:45-10:30	45 min	W8TEC2	CHARACTERIZATION TECHNIQUE 2	Michaël Deschamps	Univ orléans	NMR-Principles, probing characteristics, examples not necessary in batteries	Hybrid (presence + online)
10:30 - 10:50			BREAK				
10:50-11:35	45 min	W8TEC3	CHARACTERIZATION TECHNIQUE 3	Anass Benayad	CEA	Surface and interface characterization by X-ray Photoemission spectroscopy, from post-mortem to operando	Hybrid (presence + online)
11:35-12:20	45 min	W8TEC4	CHARACTERIZATION TECHNIQUE 4	Christoph Bay	INCORE	Optical quality-Principles, probing characteristics, examples not necessary in batteries	Hybrid (presence + online)
12:20 - 14:00			LUNCH BREAK				
14:00-14:45	45 min	W8TEC5	CHARACTERIZATION TECHNIQUE 5	Sébastien Sallard	VITO	Electrochemical characterisation	Hybrid (presence + online)
14:45-15:30	45 min	W8TEC6	CHARACTERIZATION TECHNIQUE 6	Grietus Mulder	VITO	EIS- Principle, probing characteristics, examples not necessary in batteries (to be confirmed)	Hybrid (presence + online)
15:30 - 15:50			BREAK				
15:50-16:35	45 min	W8TEC7	CHARACTERIZATION TECHNIQUE 7	THOMAS WALDMANN	ZSW	GD-OES Principle, probing characteristics, examples not necessary in batteries	Hybrid (presence + online)
16:35-17:20	45 min	W8TEC8	CHARACTERIZATION TECHNIQUE 8	ABDELAZIZ ABDELATIFF	ZSW	Gas Analysis-Principle, probing characteristics examples not necessary in batteries	Hybrid (presence + online)
Thursday 13th January							Type of event
TIME	Total DURATION	CODE	ACTIVITY	LECTURER	AFFILIATION	TITLE	
9:00-9:45	45 min	T9TEC9	CHARACTERIZATION TECHNIQUE 9	Jakub DRNEC	ESRF	Coherent X-Ray diffraction imaging and Hard X-Ray total scattering, examples not necessary on batteries	Hybrid (presence + online)
9:45 - 10:05			BREAK				
10:05-10:50	45 min	T9TEC10	CHARACTERIZATION TECHNIQUE 10	Loic Lonardonì	CEA	ARC-Principle, probing characteristics, examples not necessary in batteries	Hybrid (presence + online)
10:50-11:35	45 min	T9TEC11	CHARACTERIZATION TECHNIQUE 11	Nicolas Gullet	CEA	Advanced instrumentation for operando monitoring and management of batteries	Hybrid (presence + online)
11:35-12:20	45 min	T9TEC12	CHARACTERIZATION TECHNIQUE 12	Sandrine LYONNARD	CEA	Neutron and X-ray small angle scattering, examples not necessary on batteries	Hybrid (presence + online)
12:30 - 14:00			Lunch break				
14:00-15:30	1h30	4 groups (2 at ESRF and 2 at CEA)	PRACTICE/Training	Isaac Martens, Victor Vanpeene, Marion Chandesris, Cyril marino (and/or Jakub?)	ESRF, CEA, SERMA	Topic 1 --> Data acquisition and data treatment at nanotomo beamline (Victor) // Topic 2 --> Data acquisition and data treatment at hard X-ray scattering beamline (Isaac) // Topic 3 --> practical case of modelling in batteries (Marion) // Topic 4 --> Training session on how to solve industrial problem	Presence only
15:30 - 17:00	1h30	4 groups (2 at ESRF and 2 at CEA)	PRACTICE/Training	Isaac Martens, Victor Vanpeene, Marion Chandesris, Cyril marino (and/or Jakub?)	ESRF, CEA, SERMA	Topic 1 --> Data acquisition and data treatment at nanotomo beamline (Victor) // Topic 2 --> Data acquisition and data treatment at hard X-ray scattering beamline (Isaac) // Topic 3 --> practical case of modelling in batteries (Marion) // Topic 4 --> Training session on how to solve industrial problem	Presence only
Friday 14th January							Type of event
TIME	Total DURATION	CODE	ACTIVITY	LECTURER	AFFILIATION	TITLE	
9:00-10:30	1h30	4 groups (2 at ESRF and 2 at CEA)	PRACTICE/Training	Isaac Martens, Victor Vanpeene, Marion Chandesris, Cyril marino (and/or Jakub?)	ESRF, CEA, SERMA	Topic 1 --> Data acquisition and data treatment at nanotomo beamline (Victor) // Topic 2 --> Data acquisition and data treatment at hard X-ray scattering beamline (Isaac) // Topic 3 --> practical case of modelling in batteries (Marion) // Topic 4 --> Training session on how to solve industrial problem	Presence only
10:30 - 12:00	1h30	4 groups (2 at ESRF and 2 at CEA)	PRACTICE/Training	Isaac Martens, Victor Vanpeene, Marion Chandesris, Cyril marino (and/or Jakub?)	ESRF, CEA, SERMA	Topic 1 --> Data acquisition and data treatment at nanotomo beamline (Victor) // Topic 2 --> Data acquisition and data treatment at hard X-ray scattering beamline (Isaac) // Topic 3 --> practical case of modelling in batteries (Marion) // Topic 4 --> Training session on how to solve industrial problem	Presence only
END OF SUMMER SCHOOL							