

MIRAI 2.0 Materials Science Workshop: Nov. 29 (Mon) - Dec. 1 (Wed), 2021

[Workshop Homepage: https://www.sophia.ac.jp/eng/news/Research/2021/mirai211117eng.html](https://www.sophia.ac.jp/eng/news/Research/2021/mirai211117eng.html)

8:00 (SE) - 12:00 (SE) / 16:00 (JP) - 20:00 (JP)

Nov. 29 (Mon)		MIRAI 2.0 Materials Science TEG Workshop: Nov. 29 (Mon) - Dec. 1 (Wed) : 8:00 (SE) - 12:00 (SE) / 16:00 (JP) - 20:00 (JP)		
8:00-8:15 (SE) / 16:00-16:15 (JP)	Opening Session			Chair: Takehito Kamata (Sophia Univ.)
	• Opening Remarks	Peter Lindblad (Uppsala Univ.)		
	• Workshop Overview	Takehito Kamata (Sophia Univ.)		
8:15-9:00 (SE) / 16:15-17:00 (JP)	Session 1: Plenary Session (Special Session - from MIRAI 1.0)			Chair: Björgvin Hjörvarsson (Uppsala Univ.)
	• Invited talks & Discussion	Kristina Edström (Uppsala Univ.) - Engaged research partnership from MIRAI 1.0 Masahiro Yoshizawa-Fujita (Sophia Univ.) - Engaged research partnership from MIRAI 1.0		
9:00-10:00 (SE) / 17:00-18:00 (JP)	Session 2: “Neutrons”			Chair: Magnus Borgström (Lund Univ.)
	• Invited talks & Discussion	Alexei Vorobiev (Uppsala Univ.) - Swedish Neutron Reflectometer Super ADAM at ILL		
		Masaaki Kitaguchi (Nagoya Univ.) - Neutron Interferometry		
		Martin Månsson (The Royal Institute of Tech.) - SwedNess: the Swedish Graduate School in Neutron Scattering		
		Daisuke Okuyama (Tohoku Univ.) - Moving state of magnetic-swirling textures in a solid-state material observed by neutron diffraction		
10:00-10:10 (SE) / 18:00-18:10 (JP)	<< Break >>			
10:10-10:30 (SE) / 18:10-18:30 (JP)	Session 3: University Profile Presentation			Chair: Takehito Kamata (Sophia Univ.)
	• University Profile	Yasuchika Hasegawa - (Hokkaido Univ.)		
		Jens Birch (Linköping Univ.)		
		Noriko Morisue - (Nagoya Univ.)		
		Viktor Öwall (Lund Univ.)		
10:30-11:20 (SE) / 18:30-19:20 (JP)	Session 4: Breakout Sessions: Networking and Engagement			
	• Breakout Session	Chair: Björgvin Hjörvarsson (Uppsala Univ.)	Chair: Magnus Borgström (Lund Univ.)	Chair: Lars Johansson (Karlstad Univ.)
		• Breakout Session 4-a (Session 1: Plenary Session)	• Breakout Session 4-b (Session 2: “Neutrons”)	• Breakout Session 4-c (Session 9: “Electrons”)
11:20-11:30 (SE) / 19:20-19:30 (JP)	Check-out & Announcements			Chair: Takehito Kamata (Sophia Univ.)

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Nov. 30 (Tues)		MIRAI 2.0 Materials Science TEG Workshop: Nov. 29 (Mon) - Dec. 1 (Wed) : 8:00 (SE) - 12:00 (SE) / 16:00 (JP) - 20:00 (JP)		
8:00-8:10 (SE) / 16:00-16:10 (JP)	Check-in	Chair: Helin Bäckman Kartal (Uppsala Univ.)		
8:10-9:10 (SE) / 16:10-17:10 (JP)	Session 5: "Photons"	Chair: Jens Birch (Linköping Univ.)		
	<ul style="list-style-type: none"> • Invited talks & Discussion Elizabeth Blackburn (Lund Univ.) - Structural Distortions and Deformations in Cuprate Superconductors Susumu Yamamoto (Tohoku Univ.) - Catalytic surface reactions studied by operando soft X-ray spectroscopy Hermann Dürr (Uppsala Univ.) - Probing magnetism with soft x-rays Xiaoyu Liang (Tohoku Univ.) - Developing a multibeam X-ray imaging system for high-speed tomography 			
9:10-10:10 (SE) / 17:10-18:10 (JP)	Session 6: "Materials for Energy Devices"	Chair: Syo Matsumura (Kyushu Univ.)		
	<ul style="list-style-type: none"> • Invited talks & Discussion Ellen Moons (Karlstad Univ.) - Organic solar cells Miho Yamauchi (Kyushu Univ.) - Inorganic Nanocatalysts for Hydrogenation Reactions toward Sustainable Material Conversions Gunnar Pålsson (Uppsala Univ.) - Amorphous metal hydrides Naoki Shimosako (Japan Aerospace Exploration Agency) - Contamination Control for Spacecrafts using Photocatalysts 			
10:10-10:20 (SE) / 18:10-18:20 (JP)	<< Break >>			
10:20-10:40 (SE) / 18:20-18:40 (JP)	Session 7: University Profile Presentation	Chair: Helin Bäckman Kartal (Uppsala Univ.)		
	<ul style="list-style-type: none"> • University Profile Jorge Solis (Karlstad Univ.) Helin Bäckman Kartal (Uppsala Univ.) Moto Kobayashi (Tohoku Univ.) Shunichi Horiuchi (Sophia Univ.) 			
10:40-11:30 (SE) / 18:40-19:30 (JP)	Session 8: Breakout Sessions: Networking and Engagement			
	<ul style="list-style-type: none"> • Breakout Session 	Chair: Jens Birch (Linköping Univ.)	Chair: Syo Matsumura (Kyushu Univ.)	Chair: Yasuchika Hasegawa (Hokkaido Univ.)
	<ul style="list-style-type: none"> • Breakout Session 8-a (Session 5: "Photons") 		• Breakout Session 8-b (Session 6: "Materials for Energy Devices")	• Breakout Session 8-c (Session 10: "Materials for Sensing Applications")
11:30-11:40 (SE) / 19:30-19:40 (JP)	Check-out & Announcements	Chair: Helin Bäckman Kartal (Uppsala Univ.)		

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Dec. 1 (Wed)		MIRAI 2.0 Materials Science TEG Workshop: Nov. 29 (Mon) - Dec. 1 (Wed) : 8:00 (SE) - 12:00 (SE) / 16:00 (JP) - 20:00 (JP)	
8:00-8:10 (SE) / 16:00-16:10 (JP)	Check-in	Chair: Takehito Kamata (Sophia Univ.)	
8:10-9:10 (SE) / 16:10-17:10 (JP)	Session 9: "Electrons"	Chairs: Takehito Kamata (Sophia Univ.) & Björgvin Hjörvarsson (Uppsala Univ.)	
	<ul style="list-style-type: none"> • Invited talks & Discussion Mattias Borg (Lund Univ.) - Ferroelectric nanoelectronics for energy-efficient machine-learning Satoshi Hata (Kyushu Univ.) - Fast 3D imaging of crystal defects using scanning transmission electron microscopy Moyses Araujo (Karlstad Univ.) - Interplaying artificial intelligence and quantum mechanics in energy-materials design Koji Yonekura (Tohoku Univ./RIKEN SPring-8 Center) - Hydrogen properties revealed by cryo-EM and ED 		
9:10-10:10 (SE) / 17:10-18:10 (JP)	Session 10: "Materials for Sensing Applications"	Chair: Yasuchika Hasegawa (Hokkaido Univ.)	
	<ul style="list-style-type: none"> • Invited talks & Discussion Masatoshi Maeki (Hokkaido Univ.) - Protein-ligand complex structure analysis using a microfluidic device Masaki Yoshida (Hokkaido Univ.) - Control of metalphilic interactions of platinum(II) complexes for stimuli-sensing systems Arif Md. Rashedul Kabir (Hokkaido Univ.) - Sensing surface mechanical deformation of soft materials using biomolecular motors Anna Herland (The Royal Institute of Tech.) - Evaluating in vitro tissue function – implications for drug development and disease modelling 		
10:10-10:20 (SE) / 18:10-18:20 (JP)	<< Break >>		
10:20-10:30 (SE) / 18:20-18:30 (JP)	Session 11: University Profile Presentation	Chair: Takehito Kamata (Sophia Univ.)	
	<ul style="list-style-type: none"> • University Profile Yuta Matsuo (Kyushu Univ.) 		
10:30-10:45 (SE) / 18:30-18:45 (JP)	Closing Session	Chair: Helin Bäckman Kartal (Uppsala Univ.)	
	<ul style="list-style-type: none"> • TEG Co-chairs Hideki Kuwahara (Sophia Univ.; TEG Co-chair) Björgvin Hjörvarsson (Uppsala Univ.; TEG Co-chair) • Closing Remarks Takashi Okada (Sophia Univ.) 		