

UK-Japan Next-Generation Batteries Seminar

Jointly organised by King's College London & Waseda University

Organizers:

Laura LANDER (King's College London), Masashi OKUBO (Waseda University)

Date:

Saturday 20th July 2024

Location:

River Room, Strand Campus, King's College London
WC2R 2LS London

Meeting point: Main Reception – Strand Campus

<https://maps.app.goo.gl/UWNLURub6uBMwSjZA>

Programme

Presentation time: 15 min + 5 mins Q&A or 10 mins + 5 mins Q&A

Attendees	Talk Title	Time
	Reception – Coffee & Pastries	9:45 - 10:00
Dr Laura Lander & Prof. Masashi Okubo	Welcome from Hosts	10:00 - 10:10
Prof Emma Kendrick (University of Birmingham)	Towards a more sustainable battery; materials and recycling	10:10 – 10:30 20 min
Dr Tomotaro Mae (Assist. professor, Noda Lab, Waseda Univ.)	Development and environmental impact assessment of carbon nanotube-based Li secondary batteries	10:30 – 10:45 15 min
Dr Zih-Ee Lin (Assist. professor, Noda Lab, Waseda Univ.)	Addressing life cycle assessment challenges in battery recycling	10:45 – 11:00 15 min
Dr Dominika Gastol (University of Birmingham)	3D printing of dual-chemistry and dual- structured electrodes for high energy and controlled recycling of Li-ion batteries	11:00 – 11:20 20 min
Dr Mauricio Cordova (Assist. professor, Tokoro Lab, Waseda Univ.)	Research on battery recycling methods at Tokoro Laboratory	11:20 – 11:35 15 min
Dr Dominic Spencer-Jolly (University of Birmingham)	(Semi-) Solid-state batteries and their interfaces	11:35 – 11:55 20 min
Dan Ito (PhD candidate, Waseda Univ.)	Self-diffusion mechanisms of Li ⁺ , Na ⁺ , and K ⁺ Ions in Prussian Blue cathode by first-principles calculations	11:55 – 12:10 15 min
	Lunch break	12:10 – 13:00



Dr Florian Strauss (KIT, Germany)	Tuning ion mobility in lithium argyrodite solid electrolytes via entropy engineering	13:00 – 13:20 20 min
Dr Saneyuki Ohno (Associate professor, Tohoku Univ.)	The detail matters: transport properties of new Na-ion conducting halides, NaNbCl_6 and NaTaCl_6	13:20 – 13:40 20 min
Dr Kota Motohashi (Assist. professor, Hayashi Lab, Osaka Metropolitan Univ.)	Development of sodium-ion conducting amorphous chloride with Ta central cation	13:40 – 13:55 15 min
Prof Magda Titirici (Imperial)	Perspectives on future research on batteries and electrocatalysis in my research group	13:55 – 14:15 20 min
Dr Yosuke Ugata (Assist. professor, Yabuuchi Lab, Yokohama National Univ.)	Data-driven electrolyte engineering for Li-ion batteries	14:15 – 14:30 15 min
Prof Yoshitaka Tateyama (Tokyo Institute of Technology)	Nanometer-size Na cluster formation in micropore of hard carbon suggested by DFT calculations	14:30 – 14:50 20 min
	Break	14:50 – 15:10
Park Sung Hyun (PhD candidate, Yamada Lab, The University of Tokyo)	Electrochemical proton intercalation properties of bronze-type VO_2 in non-aqueous protic electrolyte	15:10 – 15:25 15 min
Dr Kosuke Kawai (Assist. professor, Okubo lab, Waseda Univ.)	Proton intercalation of $\text{Mo}_3\text{Nb}_2\text{O}_{14}$ in aqueous rechargeable batteries	15:25 – 15:40 15 min
Dr Cheng Chao Zhong (Assist. professor, Orikasa Lab, Ritsumeikan Univ.)	Design of fluoride-ion conductors	15:40 – 15:55 15 min
Prof Neeraj Sharma (UNSW, Australia)	Understanding battery materials	15:55 – 16:15 20 min
Teppey Ohno (PhD candidate, Yabuuchi Lab, Yokohama National Univ.)	Optimization of synthesis conditions and electrochemical properties of Li-excess V-based oxides	16:15 – 16:30 15 min
Dr Laura Lander & Prof. Masashi Okubo	Wrap-up and final words by hosts	16:30 – 16:40
	Discussions/Networking/Dinner at the Old Bank of England (optional)	17:00 – 21:00

Additional attendees:

Dr Rob Sommerville (University of Birmingham)