

# **2024 Sophia Symposium on Advanced Electrolyte Materials for Energy Storage and Conversion (hybrid event)**

**December 11, 2024**

**Venue: AM (Building No.10, Auditorium), PM (Building No.6, 101)**

10:00	Opening remarks Prof. Takashi Okada (Vice President for Academic Research Affairs)
	<i>Plenary session 1 (Chair: Yoichi Tominaga)</i>
10:10 – 10:50	Dr. Jonas Mindemark (Uppsala University) <i>Polymer–ion Interactions and Ion Conduction in Polymer Electrolytes: A Complicated Story</i>
10:50 – 11:30	Dr. Kan Hatakeyama-Sato (Inst. Science Tokyo) <i>Challenges in Constructing Large Language Models for Chemical Reasoning</i>
11:30 – 12:10	Prof. Daniel Brandell (Uppsala University) <i>Discovering Redox-stable Organic Battery Electrodes using AI</i>
12:10 – 13:30	LUNCH <i>Plenary session 2 (Chair: Masahiro Yoshizawa-Fujita)</i>
13:30 – 14:10	Prof. Teppei Yamada (The University of Tokyo) <i>Use of Phase Transition for Electrochemical Thermoelectric Conversion</i>
14:10 – 14:50	Prof. Takahiro Ichikawa (Tokyo Univ. of Agri. & Tech.) <i>Design of Advanced Proton Conductive Electrolytes Based on Gyroid Nanostructure</i>
14:50 – 15:10	Fika <i>Plenary session 3 (Chair: Jonas Mindemark)</i>
15:10 – 15:50	Prof. Yasuhide Inokuma (Hokkaido University) <i>Polyketone-based Synthesis of Ion-receptor Molecules</i>
15:50 – 16:30	Dr. Feng Wang (Linköping University) <i>The Use of Organic Molecules in Perovskite Solar Cells</i>
16:30 – 17:10	Dr. Shi Tang (Umeå University) <i>Development of Electrolyte in Light-Emitting Electrochemical Cells</i>
17:30 – 19:30	Banquet (Faculty Club, 17 <sup>th</sup> floor, No.6)

**December 12, 2024**

**Venue: Building No.6, 101**

*Plenary session 4 (Chair: Manabu Tanaka)*

9:00 – 9:40 Prof. Kazuhide Ueno (Yokohama National University)

*Ionic Liquid-based Soft Materials for Next Generation Batteries*

9:40 – 10:20 Dr. Kento Kimura (Tokyo Univ. of Agri. & Tech.)

*Development of Salt-Concentrated Solid Polymer Electrolytes Based on Understanding the Correlation between Structure and Electrochemical Properties*

10:20 – 10:30 Fika

*Plenary session 5 (Chair: Kazuhide Ueno)*

10:30 – 11:10 Dr. Manabu Tanaka (Tokyo Metropolitan University)

*Anion Conductive Polymers: Synthesis, Ion Transport Analysis, and Water Electrolysis Application*

11:10 – 11:50 Prof. Masamichi Nishihara (Kyusyu University)

*The Relationship between the Gas Permeability of Polymer Electrolyte Materials and Their Durability and Fuel Cell Performance*

11:50 – 12:30 Prof. Ranjula Bali Swain (Stockholm School of Economics)

*Harnessing science, technology, and innovation to drive synergy between climate goals and the SDGs*

12:30 – 12:35 Closing remarks

Prof. Masahiro Yoshizawa-Fujita

PM

Excursion (Tokyo downtown area)