



INTERNATIONAL INSTITUTE FOR CARBON-NEUTRAL ENERGY RESEARCH

**2026 I<sup>2</sup>CNER ANNUAL SYMPOSIUM**  
**“CHALLENGE AND INNOVATION**  
**FOR A CARBON-NEUTRAL SOCIETY AND BEYOND”**  
**I<sup>2</sup>CNER HALL/ HYBRID**  
**ITO CAMPUS, KYUSHU UNIVERSITY**

**MONDAY, JANUARY 26TH, 2026**

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9:30 a.m. Opening Remarks  
**Tatsuro Ishibashi**, *President, Kyushu University*  
**Akira Ukawa**, *WPI Program Director*  
**Tatsumi Ishihara**, *Director, I<sup>2</sup>CNER, Kyushu University*

9:45 a.m. Introduction  
**Shigenori Fujikawa**, *Associate Director, I<sup>2</sup>CNER, Kyushu University*

**Session 1: Innovation in material and electrical conversion for sustainability**

9:50 a.m. Invited Lecture A  
“Multijunction Solar Cells”  
**Anita Ho-Baillie**, *Professor, School of Physics Faculty of Science, The University of Sydney*

10:20 a.m. Invited Lecture B  
“What Is Geologic Hydrogen and Its Potential as a New Energy Resource?”  
**Tsubasa Otake**, *Professor, Faculty of Engineering, Hokkaido University*

10:50 a.m. I<sup>2</sup>CNER Presentation A  
“Steam Electrolysis by Use of Proton-Conducting Metal Oxides for Energy-Effective Hydrogen Production”  
**Hiroshige Matsumoto**, *Professor, I<sup>2</sup>CNER, Kyushu University*

11:20 a.m. ***Lunch Meeting***

**Session 2: Carbon capture technologies for sustainability**

1:00 p.m. Invited Lecture C  
“Membrane Solutions for Carbon Capture from Air and Flue Gas Streams”  
**Haiqing Lin**, *Professor, Department of Chemical and Biological Engineering, University at Buffalo, The State University of New York*

- 1:30 p.m. **I<sup>2</sup>CNER Presentation B**  
“Development of a Membrane-Based Approach to Direct Air CO<sub>2</sub> Capture: From Materials to Device”  
**Roman Selyanchyn**, *Associate Professor, I<sup>2</sup>CNER, Kyushu University*
- 2:00 p.m. **Invited Lecture D**  
“CCS-Originated Innovations Advancing Supercritical Geothermal, Natural Hydrogen, and Space Exploration”  
**Takeshi Tsuji**, *Professor, School of Engineering, The University of Tokyo*
- 2:30 p.m. ***Photo session***
- 2:35 p.m. ***Coffee Break (Poster Session)***

**Session 3: Building a carbon-neutral future with intelligence**

- 4:00 p.m. **Invited Lecture E**  
“Data Driven and AI Accelerated Design of Metal Organic Framework Materials for CO<sub>2</sub> Capture”  
**Tom Woo**, *Professor, Department of Chemistry and Biomolecular Science, University of Ottawa*
- 4:30 p.m. **Invited Lecture F**  
“Data Infrastructure and Machine-Learning-Guided Exploration of Battery Materials”  
**Yibin Xu**, *Group Leader, Data-driven Inorganic Materials Group, NIMS*
- 5:00 p.m. **I<sup>2</sup>CNER Presentation C**  
“Theoretical Design of Nanomaterials for CO<sub>2</sub> Gas Separation”  
**Aleksandar Staykov**, *Associate Professor, I<sup>2</sup>CNER, Kyushu University*
- 5:30 p.m. **Closing Remarks**  
**Hiroshige Matsumoto**, *Associate Director, I<sup>2</sup>CNER, Kyushu University*

Dinner at Big Orange (within ITO campus) \*invitees only