



INTERNATIONAL INSTITUTE FOR CARBON-NEUTRAL ENERGY RESEARCH

2026 I²CNER ANNUAL SYMPOSIUM
“CHALLENGE AND INNOVATION
FOR A CARBON-NEUTRAL SOCIETY AND BEYOND”
I²CNER HALL/ HYBRID
ITO CAMPUS, KYUSHU UNIVERSITY

MONDAY, JANUARY 26TH, 2026

9:30 a.m. Opening Remarks
Tatsuro Ishibashi, *President, Kyushu University*
Tatsumi Ishihara, *Director, I²CNER, Kyushu University*
Akira Ukawa, *WPI Program Director*

9:45 a.m. Introduction
Shigenori Fujikawa, *Associate Director, I²CNER, 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. I²CNER Presentation A
“Steam Electrolysis by Use of Proton-Conducting Metal Oxides for Energy-Effective Hydrogen Production”
Hiroshige Matsumoto, *Professor, I²CNER, 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. I²CNER Presentation B
“Development of a Membrane-Based Approach to Direct Air CO₂ Capture: From Materials to Device”
Roman Selyanchyn, *Associate Professor, I²CNER, 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 CO₂ 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. I²CNER Presentation C
“Theoretical Design of Nanomaterials for CO₂ Gas Separation”
Aleksandar Staykov, *Associate Professor, I²CNER, Kyushu University*
- 5:30 p.m. Closing Remarks
Hiroshige Matsumoto, *Associate Director, I²CNER, Kyushu University*

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