

**2023**  
**wed. 12 July**  
**Members only**

**InfoSyEnergy Research and Education Consortium  
Academy of Energy and Informatics**

**7th InfoSyEnergy Members' Workshop for Energy Research**

**“Can CCU (Carbon dioxide capture and utilization)  
and DAC (Direct Air Capture) really be effective  
technologies for achieving carbon neutrality?”**

Recently, Carbon Capture and Utilization (CCU) has been attracting attention as an important technology for achieving carbon neutrality. This technology comprises the separation and recovery of carbon dioxide from mixed gases, as well as the synthesis of hydrocarbons (such as fuels and plastic raw materials) using the recovered carbon dioxide. Additionally, there is a growing focus on the material and chemical recycling of plastics derived from carbon dioxide. In this workshop, we will discuss Direct Air Capture (DAC) technology, which enables the direct capture of carbon dioxide from the atmosphere, the chemical conversion of carbon dioxide, and the material/chemical recycling of plastics. Our discussions will start from the basic concepts in thermodynamics and extend to the challenges that need to be addressed for industrial processes and practical applications.

In addition, a panel discussion will be held on “Can CCU and DAC really be effective technologies for achieving carbon neutrality?” the panelists will discuss the validity of these technologies from a thermodynamic point of view and the current progress of these technologies, and discuss future issues.

**Date & Time : wed.12 July 2023 14 : 00-17:40**

**Conference method : Hybrid (Online and in-person)**

English interpretation available for online participants only.

**Venue : Tokyo Tech Ookayama Campus North Bldg.3 (EEI Bldg.) 1st Floor**

**Charge : Free※**

※Joint Research Bronze Member and Long Term Project Member need payments to join. Please ask the Office.

**Target : Tokyo Tech faculty and students**

**(ISE students are strongly encouraged to come to the venue.)**

**Members of InfoSyEnergy Research and Education Consortium**

**Registration : All attendee online and in-person need to register with URL printed back before the Workshop.**

**Registration required deadline : Fri.30 June 17 : 00**

※For only ISE members (companies, faculty and students) who participate at the venue : After the workshop, the optional reception is scheduled (charged). Further information will be announced later.



# 7th InfoSyEnergy Members' Workshop for Energy Research

**"Can CCU (Carbon dioxide capture and utilization) and DAC (Direct Air Capture) really be effective technologies for achieving carbon neutrality?"**

**wed.12 July2023**

**13:30 open**

**Members Only**

**(InfoSyEnergy Consortium Members, Tokyo Tech faculty and students)**

**Registration required deadline is 30 June.**

**English interpretation available**

## Schedule

- 14:00 **Opening greetings**  
**Osamu WATANABE** (Executive Vice President for Research, Tokyo Tech)
- 14:05 **Materials Informatics and Future Activity Plans in InfoSyEnergy**  
**Manabu IHARA** Head of InfoSyEnergy Research and Education Consortium  
Director of Academy of Energy and Informatics  
Professor; School of Materials and Chemical Technology, Tokyo Tech
- 14:15 **Outline of Workshop**  
**Teruoki TAGO** Professor; School of Materials and Chemical Technology, Tokyo Tech
- 14:20 **Lecture 1 「Thermodynamic Considerations and the Role of Catalysts in Carbon Dioxide Chemical Conversion」**  
**Teruoki TAGO** Professor; School of Materials and Chemical Technology, Tokyo Tech
- 15:00 **Lecture 2 「Carbon Neutral Initiatives at Sumitomo Chemical "Responsibility and Contribution"」**  
**Junpei TSUJI** Executive Officer; Research Planning & Coordination Department, Sumitomo Chemical Co., Ltd.
- 15:40 **Lecture 3 (To Be Announced)**  
**Masakazu SUGIYAMA** Professor; Director of Research Center for Advanced Science and Technology, The University of Tokyo
- 16:20 <Break>
- 16:35 **Panel discussion**  
**Theme : "Can CCU and DAC really be effective technologies for achieving carbon neutrality?"**
- Moderator: **Manabu IHARA** Professor; Tokyo Tech  
Panelists : **Masakazu SUGIYAMA** Professor; The University of Tokyo  
**Junpei TSUJI** Executive Officer; Sumitomo Chemical Co., Ltd.  
**Teruoki TAGO** Professor; Tokyo Tech  
**Tetsuya SUEKANE** Professor; School of Engineering, Tokyo Tech  
**Yusuke SHIMOYAMA** Professor; School of Materials and Chemical Technology, Tokyo Tech
- 17:35 **Closing greetings**  
**Manabu IHARA** Head of consortium; Director of Academy of Energy and Informatics, Professor, School of Materials and Chemical Technology, Tokyo Tech

\* For only ISE members (companies, faculty and students) who participate at the venue, Optional reception is scheduled (charged). Further information will be announced later.

## ► Registration:

<https://us06web.zoom.us/meeting/register/tZYpf-GgpjoqHdYFIxxBmAOAR4AAm7Fz8lyr>

\* All attendee online and in-person need to register.

\* Tokyo Tech faculty and students must register using " **titech.ac.jp** " email address.

\* **ISE students** are strongly encouraged to participate. Come to the venue whenever possible.

