

France-Taiwan scientific Symposium on Industry Décarbonisation

Place : Espace Keeze Montaigne

53 Avenue Montaigne, 75008 Paris, France

<https://keeze.co/espaces/salle-de-reunion-montaigne>

13th NOVEMBRE 2024

09:00 Welcome coffee

PLENARY SESSION 1

09:30 - 09:40 Welcome remark

09:40 - 10:10 **Presentation of the French low carbon strategy** : Igor Sguario, advisor of the Energy director, Direction Générale de l'Energie et du Climat

10:10 - 10:40 **Presentation of Taiwan's Net-zero Science and Technology Policy** : Dr. Ming-Hsu Li, Professor of Graduate Institute of Hydrological and Oceanic Sciences, National Central University, Taiwan; Deputy Executive Director, Taiwan Science and Technology Office for Net-zero Emission (T-STONE), National Science and Technology Council, Taiwan

10:40 - 11:00 Coffee break

PLENARY SESSION 2

11:00 - 11:30 **Presentation of energy-related activities, at CNRS, focus on green hydrogen**
Dr. Abdelilah Slaoui, director of the energy department at CNRS, co-director of the PEPR Green Hydrogen, France

11:30 - 11:50 **Presentation of geothermal, Taiwan (Toward geothermal conceptual and numerical model in Geothermal Early-stage-exploration)**
Dr. Jian-Cheng Lee, Research Fellow, Institute of Earth Sciences, Academia Sinica, Taiwan

11:50 - 12:10 **Presentation of Carbon Capture and Utilization with Microalgae for Biofuel Production and Circular Economy**
Dr. Jo-Shu Chang, Vice President of Tunghai University, Taiwan

12:10 - 12:20 **Instructions for the parallel working sessions**
Dr. Fabrice Lemoine, Dr. Ruey-An Doong

10:40 - 11:00 Lunch break and networking

14:00 - 17:30

PARALLEL WORKING SESSIONS

ROOM 1

Conversion of biomass into high added value chemicals and advanced carbon materials, CO₂ valorisation into chemicals and fuels (SAF)

ROOM 2

Energy Efficiency Improvement, Carbon Capture

ROOM 3

Underground exploitation in the framework of the energy transition: carbon storage, geothermal, native hydrogen, and social governance

14:00 - 14:05

Opening remark for the sessions

14:05 - 15:05

SESSION 1

Conversion of biomass into high added value chemicals and advanced carbon materials 1

Reducing greenhouse gas emissions from the remediation system through microbial conversion of CH₄ and CO₂ absorption materials

Carbon Capture and Utilization with Microalgae for Biofuel Production and Circular Economy

Sound triggered assisted catalysis: an unconventional route for biomass conversion to value added chemicals

Energy efficiency improvement 1

AI and Energy Efficiency

Efficient conversion of waste heat into industrial heat with high-temperature heat pumps

Taiwan's energy-saving strategic plan and practical case achievement and technology development

Carbon Capture and Storage - CCS

Developing CCS Programs in Taiwan

CCS in France: from reducing CO₂ emissions to the concept of negative emissions

15:05 - 15:50

SESSION 2

Conversion of biomass into high added value chemicals and advanced carbon materials 2

Insect Biorefinery: A Green Solution for Upcycling Agro-Industrial Waste into Valuable Resources

Carbon materials to decarbonize energy

Energy efficiency improvement 2

Cooling of datacenter, liquid cooling is here to stay

Energy efficiency improvement in heat recovery systems using phase change materials and spray cooling

Geothermal

EGS: A Solution for Taiwan Geothermal

The current state of deep geothermal energy for power production

15:50 - 16:05

Coffee break

16:05 – 17:05

SESSION 3

CO₂ valorisation into chemicals and fuels (SAF) 1

Biomass Conversion to Bioenergy and Biofuel for Industrial Applications

CO₂ to X: From the material to the process (thermal or assisted plasma catalysis)

1e- and 4e- reduction of CO₂: difficult access to highly reactive and versatile products

Carbon capture

Evaluation of CO₂ Capture and Utilization Technologies through Rigorous Process Simulation

Membrane contactor technology for CO₂ capture)

Adsorption and utilization of CO₂ into unique carbon materials and used in energy-storage devices

CCUS by microalgae

Natural hydrogen

Is there a natural hydrogen deposit in Taiwan?

Research on natural H₂ and its exploration potential in Taiwan

17:05 - 17:50

SESSION 4

CO₂ valorisation into chemicals and fuels (SAF) 2

Anaerobic Biotechnology for Renewable Energy Production from Wastewater Treatment

CO₂ to hydrocarbons: When Non-Thermal Plasma meets catalysis for breakthrough activation

What tools to go towards large scale CO₂ radiolysis

Social governance

Social Communication and Governance on Underground Engineering Projects: the Social challenge to Taiwan's Geothermal (and CCS) projects

Researches on the controversies around the place of subsurface in energy transition processes

18:05 - 18:15

Closing remark for the sessions

19:30

Social dinner in Paris : Restaurant Prince Wagram

14th NOVEMBRE 2024

09:00 Welcome coffee

The introduction of bilateral collaboration funding mechanism

- 09:30 - 09:40 **Presentation of the France-Taiwan bilateral scientific cooperation Agreement**
Dr. Jing-yi Lin, Director of Science & Technology Division, Taipei Representative Office in France
- 09:40 - 09:50 **Presentation of the French-Taiwanese funding tools - Orchid program**
Prof. Christophe Delacourt, head of the Expertise desk, MESR (French higher education and research ministry)

Wrap-up of parallel sessions by moderators and

- 09:50 - 10:20 **Conversion of biomass into high added value chemicals and advanced carbon materials, CO₂ valorisation into chemicals and fuels (SAF)**
- 10:20 - 10:50 **Energy Efficiency Improvement, Carbon Capture**
- 10:50 - 11:20 **Underground exploitation in the framework of the energy transition: carbon storage, geothermal, native hydrogen, and social governance**
- 11:20 - 12:00 **Identification of common and cross-cutting topics of interest**
- 12:00 - 12:15 **Conclusions and next steps**
- 12:30 **Lunch break and networking**

Departures for the field

- 14:00 - 17:30 **Saint Cyr laboratories (40 minutes from Paris by public transportation) : CO₂ to X activities**
- IPGP - Pavillon Curie (underground exploitation)**
- 17:30 **End of the symposium**