

## **French-Japanese Workshop on Hydrogen 2020 (web seminar)**

### **Management of renewable energies via hydrogen for stationary applications**

**October 13<sup>th</sup>, 2020**

**9:00 – 12:30 (Paris time) | 16:00 – 19:30 (Tokyo time)**

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As the 21<sup>st</sup> century is facing the global warming crisis, decarbonization of the energy sector has become a necessity. This objective can be achieved by substituting fossil energies with renewable energies. However, this energy transition requires the development of efficient technologies to produce, store and convert energy, in order to compensate for the intermittent nature of renewable energies and to assure balance between production and consumption of green energy. Hydrogen is an energy vector that can fulfil this task.

Collaborative research on hydrogen exists between France and Japan. Both countries have shown strong common interests as well as complementary expertise on hydrogen research, as illustrated in the two French-Japanese workshops organized in 2012 and 2016.

Therefore, encouraged by the French Embassy in Tokyo, a France-Japan Hydrogen workshop on the “Management of renewable energies through hydrogen for stationary applications” was planned to be held in October 2020 in Tokyo.

Due to the current global situation, this workshop has been postponed to 2021. The present online meeting intends to go ahead with the delineation of the main topics of cooperation and to move forward on how to promote and to support the bilateral collaboration.

This meeting is jointly organized by the Embassy of France in Japan, CNRS, and CEA, with the participation of experts and representative from these institutions as well as from the Japanese Ministry of Economy, Trade and Industry (METI), the French Ministry for Higher Education, Research and Innovation (MESRI), AIST and several Japanese academics (Yokohama National University, Tokyo University of Technology, Yamanashi University, Tohoku University and Tokyo University).

## **Program**

### **Workshop opening**

Chairs: Abdelilah SLAOUI (CNRS), Florence LEFEBVRE-JOUD (CEA)

**09:00 – Welcome remarks** by Dr. Jean-Christophe AUFFRAY, Counselor for Science and Technology, Embassy of France in Japan

**09:00 – 09:10** Dr. Frederic RAVEL, Scientific Director, Department of Energy, Sustainability, Chemistry and Process, Ministry for Higher Education, Research and Innovation

**09:10 – 09:20** Mr. Masaomi KOYAMA, Director of International Affairs Office, Energy Efficiency and Renewable Energy Department, Ministry of Economy, Trade and Industry

### **1. Hydrogen production from renewable energies via electrolysis**

Chairs: Prof. Hiroyuki UCHIDA, Dr. Michel LATROCHE

**09:25 – 09:35** Prof. Christophe COUTANCEAU, Poitiers University - CNRS  
Clean hydrogen production from electroreforming of oxygenated organic compounds

**09:35 – 09:45** Prof. Shigenori MITSUSHIMA, Yokohama National University  
Advancement of Alkaline and Polymer Electrolyte Electrolysis

**09:45 – 09:55** Dr. Julie MOUGIN, CEA - Liten  
Solid Oxide Electrolysis: Overview of the technology and current challenges

**09:55 – 10:05** Prof. Teruhisa HORITA, AIST  
Status of Research, Development, and Commercialization of SOFC/SOEC Technology in Japan

**10:05 – 10:15** Questions and discussions

## **2. Materials for hydrogen storage, reservoir design and their integration**

Chairs: Prof. Tatsuoki KONO, Pierre SERRE COMBE

**10:15 – 10:25** Dr. Fermin CUEVAS, CNRS - ICMPE  
Solid-state hydrogen storage materials for stationary applications: from fundamentals to practice

**10:25 – 10:35** Dr. Kouji SAKAKI, EPRI - AIST  
Fundamental research on hydrogen storage materials and material development for stationary energy storage application

**10:35 – 10:45** Dr. Vincent FAUCHEUX, CEA - Liten  
LOHC developement for H2 storage

**10:45 – 10:55** Prof. Teruoki TAGO, Tokyo University of Technology  
Formic acid Dehydrogenation over Carbon supported Pt-based Metal Alloy Catalyst Prepared from Ion-Exchange Resin

**10:55 – 11:05** Questions and discussions

## **3. Hydrogen conversion in fuel cells and system integration**

Chairs: Prof. Teruhisa HORITA, Dr. Laurent ANTONI

**11:05 – 11:15** Prof. Daniel HISSEL, Franche-Comté University - CNRS  
Combined hydrogen-based cold and power co-generation

**11:15 – 11:25** Prof. Tatsuoki KONO, Tohoku University and Tokyo University  
Hydrogen energy system by using renewable energies

**11:25 – 11:35** Dr. Sylvie ESCRIBANO, CEA - Liten  
Durability of MEAs for stationary PEMFCs

**11:35 – 11:45** Prof. Hiroyuki UCHIDA, Yamanashi University  
Pt-Alloy Electrocatalysts with High Activity and High Durability for PEFCs

**11:45 – 11:55** Questions and discussions

## **4. Round Table**

Chairs: Abdelilah SLAOUI (CNRS), Florence LEFEBVRE-JOUD (CEA)

**11:55 – 12:30** Discussion on joint research projects and organization of next workshop