

第1回液体水素材料開発センターオープンセミナー & 第15回水素液化PJコロキウム



*The 1st CLean Open Seminar & 15th Hydrogen-liquefied
PJ Colloquium*

Liquid hydrogen - a potential future energy carrier

- **Date & Time : Monday, July 1, 2019**
- **Place : 8F Middle Seminar Room, Sengen Main Bldg., Sengen site, NIMS
Small Conference room, Sakura site, NIMS (Video Conference)**
- **Speaker: Dr. Manfred Wanner**
**Fusion for Energy (F4E), Max Plank Institute for Plasma Physics,
IPP Garching, Germany**

Abstract:

Storage of energy is a major issue for the transformation from a hydrocarbon based to a more ecological energy system. Liquid hydrogen has a high potential for storage and distribution of energy because of its high density compared to gaseous hydrogen. The presentation will start with a short overview of the interesting physical characteristics of hydrogen. The basic thermodynamic principles and the efficiency of cryogenic processes for refrigeration and liquefaction of hydrogen will be introduced. Different hydrogen liquefaction processes realized in the past and will be described together with their main design drivers. Studies to improve the process efficiency for future high capacity hydrogen liquefaction plants will be outlined.

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