## Hydrogen Carrier Research at Fukushima Renewable Energy Institute, AIST

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### Abstracts

National institute of advanced industrial science and technology (AIST) established a brand-new institute, Fukushima Renewable Energy institute AIST (FREA) in April 2014. FREA has two essential missions: “Promotion of R&D of renewable energy which is open to the world,” and “Contribution to industrial clusters and reconstruction for East Japan suffered from the great earthquake.” Introduction at high rate of renewable energy is expected for energy security, energy diversification, and for prevention of global warming, and FREA recognizes the importance of storage and usage of hydrogen energy carrier safely and efficiently. Hydrogen energy carrier team is one of 6 research teams in FREA, and the goal of the team is to realize the importance above. R&D are conducted on efficient production technology of hydrogen carriers (chemical hydride, ammonia, etc.) which are able to store a lot of hydrogen. As a utilization technology of hydrogen carrier, R&D are performed on co-generation engine fueled by hydrogen and bio-diesel. In the Automotive Summit 2014, the recent activities and facilities in FREA will be introduced.

### Biography

Dr. Taku TSUJIMURA is a leader of Hydrogen Energy Carrier Team in Fukushima Renewable Energy institute AIST (FREA). He earned PhD. (Mechanical Engineering) at Doshisha University in 2004. He had worked for Research Center for New Fuels and Vehicle Technology AIST before working for FREA. He was a visiting scientist in Lawrence Livermore National Laboratory in the US from 2010 to 2012. He also worked as a planning officer of planning headquarter AIST to establish FREA. He is interested in spray and combustion science for reciprocating engine with new fuels such as hydrogen, natural gas, bio-fuel, synthetic fuel, etc.