

FCDIC Report 16th Issue

To World Members

“FCDIC Report No.16” is issued on 30th July 2020. Please refer to the following contents. It is appreciated if you give us any comment on this new report.

1. Contents of “The Journal of Fuel Cell Technology”, Vol.20 No.1

<https://www.fcdic.com/journal-fuel-cell/>

Foreword: Toward realization of Hydrogen Society

Y. Furukawa – NEDO

Special Issue Various Application Development of Fuel Cells

A New Grid Architecture: Cell Grid and the role of Fuel Cell Generation

R. Abe · Digital Grid Consortium

Fuel Cell for Base Transceiver Station (BTS) at NTT DOCOMO

T. Takeno – NTT DOCOMO

Fundamentals and Applications of Microbial fuel cells

S. Yamada · Tokyo University of Pharmacy and Life Sciences

Development of SOFC Drone for Long-term Operation

H. Sumi – AIST

Fuel Cells in 2070

Outlook for the future of methanol and fuel cell

M. Taniguchi – Mitsubishi Gas Chemical

Biological Fuel Cells

K. Kano – Kyoto University

Electrocatalytic Reaction and Mechanism using Fuel Cell Reactor for Development of Efficient Chemical Process

I. Yamanaka – Tokyo Institute of Technology

Award

Tanaka Kikinzoku Kogyo's contribution to the industry in the field of fuel cell catalysts

K. Matsutani – Tanaka Kikinzoku Kogyo

Development of Fuel Cell Electrocatalysts Based on Surface Atomic Structure Control by Dry Process Methods

N. Todoroki – Tohoku University

Molecular Dynamics Study of Ionomer Thin Film Structures in Catalyst Layers

T. Mabuchi – Tohoku University

Basics

4th · Influence of Mass Transfer on Electrode Reaction Kinetics of Fuel Cells

S. Sugawara – FC-Cubic

Essay

Fuel cells and Me (No.33)

S. C. Singhal – Pacific Northwest National Laboratory

Report

Report on 27th Fuel Cell Symposium



Fuel Cell Development Information Center

Paper

Efficiency evaluation of hydrogen production systems with proton/oxide-ion conducting solid oxide electrolysis cells by calculation

K. Li · Yokohama National University

Book Review

Post COVID-19

M. Yoshitake – Fuel Cell Development Information Center

The book is published on 30th July and sent to oversea members.

3. Topics related to fuel cell, hydrogen energy and renewable energy: from 29st May to 30th July, 2020

Open call for the NEDO's new development programs on hydrogen and fuel cell has begun and the decision will be done after June.

On the other hand, news which contain "Post COVID" have been frequently published in the global sites. Various programs of clean energy development such as German one get great interest in Japan.

<Government, NEDO, AIST, JST, NIMS, JAXA, JETRO>

- 1) **"Online Event of Hydrogen Energy Ministerial Meeting to be Held"**, METI, 10th July, 2020.

URL: https://www.meti.go.jp/english/press/2020/0710_003.html

In English

On October 14, 2020, the Ministry of Economy, Trade and Industry (METI) and the New Energy and Industrial Technology Development Organization (NEDO) will jointly hold a special event concerning the Hydrogen Energy Ministerial Meeting online. The meeting will be held online from the viewpoint of preventing expansion of the novel coronavirus disease. It will provide an opportunity for participants to share efforts for producing and utilizing hydrogen in member countries, aiming to continue to maintain and expand the global momentum for building a hydrogen-based society. Participants will strive to further strengthen international collaboration.

- 2) **"Fuel Cell Power Systems Start Operations at Facilities in Fukushima Prefecture Using Hydrogen Produced from Renewable Energy"**, NEDO, 7th July, 2020.

URL: https://www.nedo.go.jp/english/whatsnew_00242.html

In English



Trailer transporting compressed hydrogen produced at FH2R



Hydrogen fuel cell power system installed at Prefectural Azuma Sports Park



Rack containing compressed hydrogen transported from FH2R

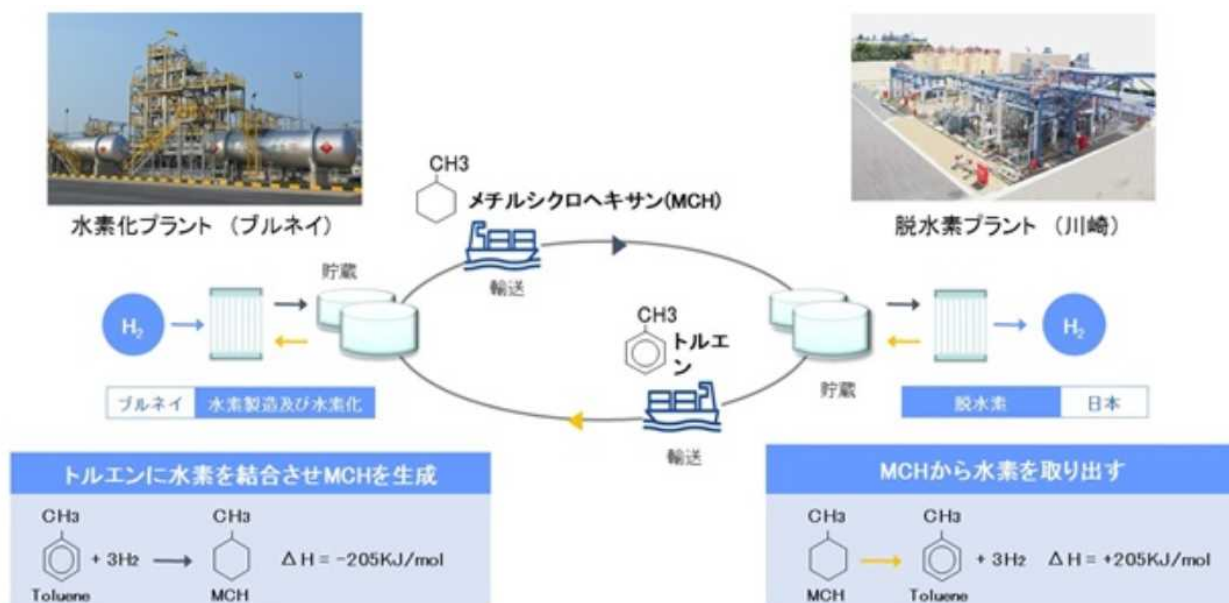


Hydrogen fuel cell power system installed at J-Village sports training facility

- 3) “World’s first international demonstration test to transport hydrogen started to demonstrate”, NEDO, 25th June, 2020.

URL: https://www.nedo.go.jp/news/press/AA5_101322.html

In Japanese



8) "AIST developed the world's first solid oxide fuel cell drone and demonstrated long flight", AIST, 15th June, 2020.

URL: https://www.aist.go.jp/aist_j/press_release/pr2020/pr20200615/pr20200615.html

In Japanese





Conventional drone (Left) and SOFC drone (Right)

<Business Papers and Sites>

Sources: Nikkei, Response, etc.

- 1) “First participation as a shipping company in NYK/Hydrogen Council”, **LNEWS**, 28th July, 2020.

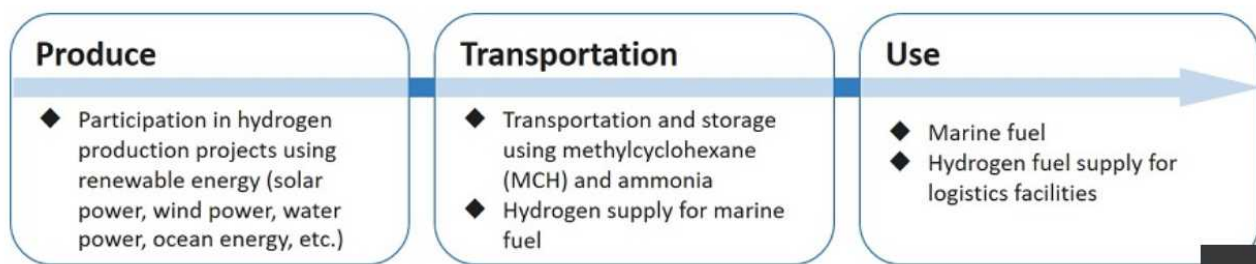
URL: <https://www.lnews.jp/2020/07/m0728303.html>

In Japanese

NYK Press Release: “NYK Becomes Member of the Hydrogen Council”, 28th July, 2020.

URL: https://www.nyk.com/english/news/2020/20200728_01.html

In English



<General papers & other publications>

- 1) “Fuel cell vehicles are becoming popular in China”, **NHK**, 13th July, 2020.

URL: <https://www.nhk.or.jp/kokusaihoudou/archive/2020/07/0713.html>

In Japanese

- 2) “Japan to shift from coal to renewable energy”, **NHK**, 3rd July, 2020.

URL: https://www3.nhk.or.jp/nhkworld/en/news/20200703_20/

In English

<Press Releases by FCDIC members*>

*Member list: <https://www.fcdic.com/member-list/>

1) “Received an order for a solid polymer water electrolysis large cell stack electrolytic cell”, **Hitachi Zosen**, 17th July, 2020.

URL:

<https://www.hitachizosen.co.jp/%e5%9b%ba%e4%bd%93%e9%ab%98%e5%88%86%e5%ad%90%e5%9e%8b%e6%b0%b4%e9%9b%bb%e8%a7%a3%e5%a4%a7%e5%9e%8b%e3%82%bb%e3%83%ab%e3%82%b9%e3%82%bf%e3%83%83%e3%82%af%e9%9b%bb%e8%a7%a3%e6%a7%bd%e3%82%92%e5%8f%97%e6%b3%a8.pdf>

(Please use copy & paste)

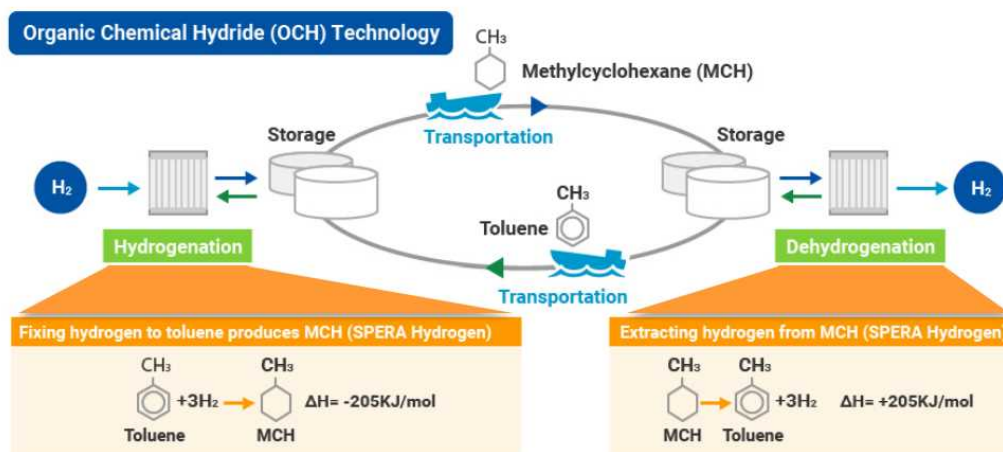
In Japanese



10) “Hydrogen transported by sea used for power generation for the first time”, **Chiyoda Corp.**, 26th May, 2020.

URL: https://www.chiyodacorp.com/media/200526_e_R1.pdf

In English



*** Please inform us your press release news related with fuel cell and hydrogen.**

3. Websites News in Japanese language

Please refer to the following URL

<http://www.fcdic.com/gaibujyoho/>

In Japanese

**The URLs are not always permanent. The article and its URL are examined this month.*

4. New members

Regular member

MORIMURA SOFC TECHNOLOGY Co., Ltd.

TOKURIKI HONTEN <https://www.tokuriki-kanda.co.jp/english/>

Schaeffler Japan Co., Ltd. <https://www.schaeffler.co.jp/content.schaeffler.jp/en/index.jsp>

5. Future Events

FCDIC fuel cell seminars and FCDIC Terakoya-style Fuel Cell Lectures are planned as events in this fiscal year events sometimes using online systems.

<<Next issue of the FCDIC Report will be published around the end of September, 2020.>>

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