



燃料電池

Vol.17
No.3

Winter 2018



The Journal of Fuel Cell Technology

巻頭言 世界に先駆けて水素社会実現へ

特集 燃料電池・水素の普及啓発活動

投稿論文 酸性水溶液中での種々の Pt-Ru 電極触媒における
CO₂ 還元特性評価

会員紹介 ヘレウス株式会社



The Journal of Fuel Cell Technology

Contents

Foreword

■ Ahead of the World to Realize Hydrogen Society

M. Yamakage – Director, Advanced Energy Systems and Structure Division/
Hydrogen and Fuel Cells Strategy Office, Energy Efficiency and Renewable Energy Department
Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry …… 1

Special Issue

Public Awareness of Fuel Cell & Hydrogen

■ Saitama Prefecture's Efforts to Expand the Diffusion of Hydrogen Energy

T. Oshima – Eco-Town Project and Environment Division, Department of Environment,
Saitama Prefectural Government …… 7

■ Introduction of Kamisu City's Initiatives – Hydrogen Energy Strategy of Kamisu City and Educational Activities for Citizens

K. Aoyagi – Policy Planning Division, Planning Department, Kamisu City …… 14

■ Extracurricular Activities and Class Lessons on Fuel Cell in High School Chemistry

T. Nosohara – Former Chemistry Teacher, Chiba Prefectural Awa Senior High School …… 19

■ Introduction of Bio-fuel Cell Project by Tokushima University Students

H. Yoshimoto, K. Fujiwara, T. Oji, Y. Shibasaki, D. Sugisako, Y. Okiyoshi, H. Sayama,
S. Shibamoto, M. Yoshizaki, T. Tanada – Tokushima University Innovation Plaza …… 24

■ Leave a Nest Efforts to Educate Hydrogen Energy with Companies & Local Governments

D. Fujita – Director, Education Research Institute, Leave a Nest Co., Ltd. …… 28

■ Fuel Cell and Hydrogen Education, Outreach and Training in Overseas

A. Maruta – Group Manager, Energy & Hydrogen Group, Technova, Inc. …… 33

■ An Example of Awareness Activities – Tokyo Tower Kids, Doctor of Environmental Science

T. Nagai – Green Hydrogen Research Center, Yokohama National University
T. Wada – Fuel Cell Development Information Center (FCDIC) …… 42

■ Fuel Cell and Hydrogen Exhibition Facilities and Books on Experiment

T. Wada – Fuel Cell Development Information Center (FCDIC) …… 46

Topics

■ Mud Battery for Development of Advanced Environmental Conservation System

M. Tominaga – Professor, Graduate School of Science and Engineering, Saga University
S. Ototani – Graduate School of Science and Engineering, Saga University …… 52

■ New 3GeV Synchrotron Radiation Facility Project, SLiT-J : A Promising Tool to Accelerate a Strategy for Hydrogen and Fuel Cells

M. Watanabe, M. Abukawa, W. Yashiro, T. Ejima, H. Odajima – Photon Science Innovation Center
M. Takata – Photon Science Innovation Center, Tohoku University …… 56

● The cover is
“Tokyo Hydrogen Museum adjacent to Shiomi
hydrogen refueling station”

Vol.17 No.3 Winter 2018

Report

■ Report on 15th International Symposium on Solid Oxide Fuel Cells (SOFC-XV)

H. Sumi – Inorganic Functional Materials Research Institute, National Institute of
Advanced Industrial and Science Technology (AIST)64

■ Report on Smart Energy Week OSAKA 2017

T. Hirabayashi – HT Enterprise
M. Matsuda – Fuel Cell Development Information Center (FCDIC)68

■ Report on 145th Workshop – Visit to Tokyo Gas Senju Techno Station

N. Ogasawara – SOFC Project Corporate R & D, NGK INSULATORS, LTD.70

■ Report on ECSJ 2017 Fall

M. Mori – Central Research Institute of Electric Power Industry72

■ Report on 10th New Electrocatalysts Symposium & Stay Seminar

Y. Nabae – Department of Materials Science and Engineering, Tokyo Institute of Technology74

Paper

■ Study of CO₂ Reduction at Pt-Ru Electrocatalysts in Acidic Aqueous Solution

H. Furukawa, S. Matsuda – Department of Materials Science and Technology,
Graduate School of Engineering, Nagaoka University of Technology
M. Umeda – Department of Materials Science and Technology, Graduate School of Engineering,
Nagaoka University of Technology, JST ACT-C77

Laboratory

■ Functional Integration Technology Group, Inorganic Functional Materials Research Institute of Advanced Industrial Science and Technology (AIST)

Y. Fujishiro – Deputy Director, Inorganic Functional Materials Research Institute,
National Institute of Advanced Industrial Science and Technology (AIST)83

Member Introduction

■ Heraeus K.K.87

Information

Fuel Cell Development Information Center (FCDIC)88

Postscript

H. Kishimoto – Editorial Committee Member95