巻頭言 分散型エネルギーシステムにおける燃料電池への期待
特集 燃料電池の未来～東京 2020 レガシーを踏まえて～
基礎講座 第1回 電気化学システムとしての燃料電池の理論効率—熱力学からみた燃料電池—
寄稿 地球温暖化問題と水素および燃料電池への期待
投稿論文 太陽光発電直結水電解槽数制御法の評価
会員紹介 稲畑産業株式会社
Contents

Foreword

■ Expectations for Fuel Cell Systems in Distributed Energy Systems
  F. Honda – Managing Director, The Japan Gas Association …… 1

Special Issue  Future of Fuel Cells – Legacy of Tokyo 2020 –

■ Tokyo’s Initiative for a Hydrogen-Powered Society
  Tokyo Metropolitan Government, Bureau of Environment, Climate Change and Energy Division …… 7

■ JXTG’s Efforts toward the Realization of Hydrogen-utilized Society
  T. Shioya – Hydrogen Business Promotion Department, JXTG Nippon Oil & Energy Corporation …… 10

■ Panasonic’s Activity for HARUMI FLAG as Tokyo 2020 Legacy
  N. Kawamura, Y. Takebe – Smart Energy System Business Division, Appliances Company, Panasonic Corporation …… 14

■ Development of Light-duty Truck Powered by Fuel Cell (FCV) in Tokyo R&D
  N. Okawa – Tokyo R&D Co., Ltd …… 18

Basics

A. Ishihara – Professor, Institute of Advanced Sciences, Yokohama National University …… 24

Contribution

■ Global Warming Issues and Expectations for Hydrogen and Fuel Cells
  A. Kurosawa – Research and Development Division, The Institute of Applied Energy …… 32

Topics

■ Development of Fuel Cell Production System Contributes to Higher Productivity and Lower Costs
  Y. Takagi – Engineering Department, New Business Operations Division, SCREEN Finetech Solutions Co., Ltd …… 37

Column

■ Fuel Cells and Me No.30
  N. Hashimoto – Visiting Professor, Fuel Cell Nanomaterials Center, University of Yamanashi …… 42

Report

■ Report on The U.S. Department of Energy’s (DOE’s) 2019 Hydrogen and Fuel Cells Program Annual Merit Review (AMR) and Peer Evaluation Meeting
  K. Yokomoto – New Energy and Industrial Technology Development Organization (NEDO)
  H. Kanazawa – Research Center, FC-Cubic, TRA
  T. Horita – Institute for Energy Conservation, National Institute of Advanced Industrial Science and Technology (AIST) …… 45

■ Report on World Hydrogen Technologies Convention 2019
  Fuel Cell Development Information Center (FCDIC) …… 51
Fuel Cell Development Information Center (FCDIC) 55

Report on 14th Renewable Energy 2019 Exhibition
T. Wada - Fuel Cell Development Information Center (FCDIC) 58

Report on 152nd Workshop of FCDI
K. Hamada - Incubation Manager, Clean Mobility, Faurecia Japan K.K. 60

Report on ECSJ Fall Meeting 2019
M. Mori - Materials Research Laboratory, Central Research Institute of Electric Power Industry (CRIEPI) 63

Report on 16th International Symposium on Solid Oxide Fuel Cells (SOFC-XVI)
M. Mori - Materials Research Laboratory, Central Research Institute of Electric Power Industry (CRIEPI) 66

Dokiya Fund with Personal Memories on Hot Spirit but Warm Heart
H. Yokokawa - Senior Cooperater, Institute of Industrial Science, The University of Tokyo Emeritus Researcher, National Institute of Advanced Industrial Science and Technology 71

Paper
Evaluation of the Control Method of Number of Active Multiple Water Electrolyzer Directly Coupled with Photovoltaic
A. Iwamoto - Graduate School of Systems and Information Engineering, University of Tsukuba Renewable Energy Research Center, National Institute of Advanced Industrial Science and Technology (AIST) T. Maeda, K. Goshime - Renewable Energy Research Center, National Institute of Advanced Industrial Science and Technology (AIST) M. Ishida - Graduate School of Systems and Information Engineering, University of Tsukuba 74

Laboratory
Environmental Chemical Energy Engineering, Otomo Laboratory
- Ionic Transport Phenomena and Chemistry of Energy Conversion Systems -
H. Matsuo - Assistant Professor, Graduate School of Frontier Sciences, The University of Tokyo J. Otomo - Associate Professor, Graduate School of Environmental Studies, The University of Tokyo 79

Member Introduction
Inabata & Co., Ltd. 84

Information
Fuel Cell Development Information Center (FCDIC) 88

Postscript
Y. Hashimasa, K, Hato - Editorial Committee Member 95