

International Symposium of Hydrogen Polymers Team, HYDROGENIUS

Date: **Wednesday, 30th January 2019**

Venue: **Shiiki Hall, Kyushu University**

Oral Session

13:00-14:40 **Session 1**

Chairperson: Dr Hiroaki ONO, Kyushu University

13:00-13:20 Opening Remarks/

Polymeric Materials for Hydrogen Devices

Prof Shin NISHIMURA, Kyushu University (Japan)

13:20-14:00 Statistical and image analysis in materials science

Dr Azdine NAIT-ALI, Institut Pprime, ENSMA (France)

14:00-14:40 Effect of stress hold time on fatigue life for injection molded PA11

Prof Takashi KURIYAMA, Yamagata University (Japan)

14:40-15:00 Coffee Break

Session 2

Chairperson: Dr Hiroaki ONO, Kyushu University

15:00-15:40 Influence of High-Pressure Hydrogen Gas on Crystalline Polymers:

an Attempt at In-Situ FTIR Measurements

Prof Fumitoshi KANEKO (Japan)

15:40-16:50 **Joint Symposium of Hydrogen Tribology Team and Hydrogen Polymers Team**

15:40-16:20 Material Challenges and the Design Parameters for Reducing the Cost of Cryogenic and Cold Gas Hydrogen Storage Technologies

Dr Kevin SHIMMONS, Pacific Northwest National Laboratory (USA)

16:20-16:25 Closing Remarks of Oral Session

Prof Shin NISHIMURA, Kyushu University (Japan)

16:25-16:30 Break

16:30-18:00 **Poster Session**

PP01 Activities of Research Group on Elastomers for Hydrogen Equipment

Shin NISHIMURA, Kyushu University (Japan)

PP02 Establishment of evaluating methods aiming to develop long-life sealing rubber

-New attempt of HYDROGENIUS Polymer Team-

Hirotda FUJIWARA, Kyushu University (Japan)

PP03 Analysis of filler types in the viewpoint of influence on hydrogen property in NBR

Hirotda FUJIWARA, Kyushu University (Japan)

PP04 Influence of morphology on high-pressure hydrogen property of rubber material

Hirotda FUJIWARA, Kyushu University (Japan)

PP05 Influence of different rubber compounds with different compounding methods under high pressure hydrogen gas

Takuya KAMINO, Kurume College (Japan)

- PP06 Vibrational spectroscopic study on the interaction between carbon black and rubber molecular chain
Hiroto YAMAGUCHI, Kogakuin University (Japan)
- PP07 Estimation of void volume generated by high pressurized hydrogen exposure using a dielectric relaxation measurement
Masahiro KASAI, Kyushu University (Japan)
- PP08 Effect of mechanical properties of diaphragm rubber on gas transfer efficiency for hydrogen circulation blower
Ryo HISATSUNE, Graduate school of engineering Kyushu University (Japan)
- PP09 Mechanical Properties and Degradation of NR with Different State of Cure
Kazumi NAKAYAMA, Chemicals Evaluation and Research Institute (Japan)
- PP10 The compound design of FKM for compressors on Hydrogen Refueling Stations
Ryo TAKAHASHI, Takaishi Industry co.,ltd (Japan)
- PP11 Study on High-pressure Hydrogen Seal Durability of Rubber O-ring
Atsushi KOGA, NOK CORPORATION (Japan)
- PP12 Influence of phase transition on Polytetrafluoroethylen(PTFE) with high pressure hydrogen exposure
Hirotda FUJIWARA, Kyushu University (Japan)
- PP13 Hydrogen permeation property of polyethylene under high pressure condition
Hirotda FUJIWARA, Kyushu University (Japan)
- PP14 Influence of the high-pressure hydrogen gas exposure repetition on the internal damage evolution of high-density polyethylene
Hiroaki ONO, Kyushu University (Japan)
- PP15 Structure Change Caused by Exposure to High-pressure Hydrogen Gas: Influence of Crystallinity in Polyamide11
Keiko OHYAMA, Kyushu University (Japan)
- PP16 Effect of Propylene carbonate on ionic conductance of Polyethylene carbonate polymer electrolyte
Kazuma MATSUSHITA, Graduate school of engineering Kyushu University (Japan)