

International Symposium of Hydrogen Polymers Team, HYDROGENIUS

Date: **Thursday, 30th January 2020**

Venue: **Centennial Hall, Hospital Campus, Kyushu University**

Oral Session

Time	Program and Speaker
	Update of Hydrogen Compatible Polymeric Materials Chairperson: Dr Hiroaki ONO, Kyushu University
11:00-11:40	Opening Remarks/ Polymeric Materials for Hydrogen Devices Prof Shin NISHIMURA, Kyushu University (Japan)
11:40-13:10	Lunch Break
13:10-13:50	Effect of Hydrogen Pressure Cycle Condition on the Damage of Rubber Materials Dr Hiroaki ONO, Kyushu University (Japan)
13:50-14:30	Compatibility of elastomers in hydrogen environments: interactions of fillers and plasticizers with hydrogen Dr Nalini MENON, Sandia National Laboratory (USA)
14:30-15:00	Coffee Break
	Joint Symposium of Hydrogen Tribology Team and Hydrogen Polymers Team Chairperson: Dr Hiroaki ONO, Kyushu University
15:00-15:40	H-Mat: Science based Advancement of Polymeric Materials for Hydrogen Technologies Dr Kevin SIMMONS, Pacific Northwest National Laboratory (USA)
15:40-16:20	Tribological behavior of PTFE composites in hydrogen Prof Yoshinori SAWAE, Kyushu University (Japan)
16:20-16:25	Closing Remarks of Oral Session Prof Shin NISHIMURA, Kyushu University (Japan)
16:30-18:00	Poster Session

- PP01 Activities of Research Group on Elastomers for Hydrogen Equipment
Shin NISHIMURA, Kyushu University (Japan)
- PP02 An efficient evaluation method for high-pressure hydrogen sealing materials
Hirotda FUJIWARA, Kyushu University (Japan)
- PP03 Evaluation of Properties of High-presser Gas Sealing Materials
-High-pressure Permeation Testing Method and Evaluation with various types of Gases-
Hirotda FUJIWARA, Kyushu University (Japan)
- PP04 Effect of Rubber Compounding and Kneading on Rubber Properties on High Pressure Hydrogen Characteristics
Hirotda FUJIWARA, Kyushu University (Japan)
- PP05 Influence of Kneading on Rubber Properties under High-Pressure Hydrogen Exposure
-Dispersion of Compounding Agent and Physical Properties at Atmospheric Condition-
Masayuki FUTAKUCHI, Chemicals Evaluation and Reserch Institute(Japan)
- PP06 Development status update and durability evaluation of FKM for hydrogen station equipment, under high temperature hydrogen.
Ryo TAKAHASHI, Takaishi Industry co.,ltd (Japan)
- PP07 Properties of polyamide 11 and its potential for Hydrogen contact applications
Shintaro OGATA , Arkema K.K. (Japan)
- PP08 Evaluation Method for High-pressure Hydrogen Filling Hoses
Hirotda FUJIWARA, Kyushu University (Japan)
- PP09 ISO 19880-5 Development Gaseous hydrogen — Fuelling stations —
Part 5: Dispenser Hoses and hose assemblies
Hiro TANIMURA, Hiro Tech Communications (Japan)
- PP10 Phase transition in crystalline PA11 (polyamide-11) investigated using temperature-controlled WAXD (Wide Angle X-ray Diffraction)
Masahiro KASAI, Kyushu University (Japan)
- PP11 Reversible decrease of flexural modulus in PA11 (polyamide-11) and non-linear ss (stress-strain) curves
Masahiro KASAI, Kyushu University (Japan)
- PP12 Observation of Nano-voids Caused by Exposure to High-pressure Hydrogen Gas Using Small Angle X-ray Scattering: Influence of Crystallinity
Keiko OHYAMA, Kyushu University (Japan)
- PP13 In-situ Volume measurement (PVT) under 100MPa pressure
Hirotda FUJIWARA, Kyushu University (Japan)
- PP14 Induced IR absorption of H₂ dissolved in polymers
Hiroaki ONO, Kyushu University (Japan)
- PP15 Investigation of the critical pressure for blister using cured epoxy resin differing curing agent amount
Shinpei HASHIGUCHI, Kyushu University (Japan)
- PP16 Influence of phase transition on Polytetrafluoroethylen(PTFE) with high pressure hydrogen exposure
Hirotda FUJIWARA, Kyushu University (Japan)