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
Hirotada 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-
Hirotada FUJIWARA, Kyushu University (Japan)

PP04 Effect of Rubber Compounding and Kneading on Rubber Properties on High Pressure Hydrogen Characteristics
Hirotada 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
Hirotada 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
Hirotada 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 Polytetrafuoroethylen(PTFE) with high pressure hydrogen exposure
Hirotada FUJIWARA, Kyushu University (Japan)