HYDROGENIUS トライボロジー研究部門
& I^{2}CNER 水素適合材料部門
<2018 HYDROGENIUS & I^{2}CNER TRIBOLOGY SYMPOSIUM>

<日時>　2018 年 2 月 2 日 (金曜日) 10:00-18:00
<場所>　九州大学　伊都キャンパス　椎木講堂　3F　Lecture　Room
<言語>　英語
<テーマ>　「Various Aspects of Hydrogen-related Processes at Tribo-interface」

<プログラム及び講演者>

時間	プログラム・講演者
10:00-10:05	**Opening remarks** Joichi Sugimura, Kyushu University
10:05-11:55	**Session 1** Chairperson: Yoshinori Sawae, Kyushu University
10:05-10:45	**基調講演 1** Tribology of Polymers Materials in Cryogenic Hydrogen and Methane Géraldine Theiler, BAM, Germany
10:45-11:10	**招待講演** Technological trends of high pressure hydrogen compressor - Approach of KOBELCO Group - Naofumi Kanei, Kobe Steel, Ltd.
11:10-11:35	**招待講演** Influences of sulfur-containing additives on grease decomposition and hydrogen generation by nascent metal surface Go Tatsumi[1], Yuji Shitara[1], Peng Yao[2], Toshiaki Wakabayashi[2] [1] JXTG Nippon Oil & Energy Corporation, [2] Kagawa University
11:35-11:55	**招待講演** Inhibiting hydrogen permeation in bearing steel by controlling tribofilm growth in the contact Vlad B. Niste, Hiroyoshi Tanaka, Joichi Sugimura, Kyushu University
11:55-12:50	Lunch
12:50-14:45	**Session 2** Chairperson: Kanao Fukuda, Universiti Teknologi Malaysia
12:50-13:30	**基調講演 2** The role of hydrogen in carbon tribology: A mechanistic overview Ali Erdemir, Argonne National Laboratory, USA
13:30-13:55	**招待講演** Super-low friction mechanism of diamond-like carbon lubricated with an environmentally friendly ester based oil Shinya Sasaki, Hiharu Okubo, Tokyo University of Science, Japan
13:55-14:20	**招待講演** Tribochemical wear of silicon-based materials mediated by proton transfer: Molecular dynamics sliding simulation analysis Yusuke Ootani, Tohoku University, Japan

14:20-14:45	**招待講演** Visualization of real contact area of rubber materials sliding on hard substrates Satoru Maegawa, Tottori University, Japan
14:45-15:00	Break
15:00-16:25	**Joint Symposium of Hydrogen Tribology Team and Hydrogen Polymers Team** Chairperson: Dr. Neha RUSTAGI, Fuel Cell Technologies Office, DOE, USA
15:00-15:40	**招待講演** Hydrogen Compatible Polymeric Materials Dr. Kevin Simmons, Pacific Northwest National Laboratory, USA
15:40-16:20	Tribology of rubbers in hydrogen Joichi Sugimura, Kyushu University, Japan
16:20-16:25	**Closing Remarks of Oral Session** Prof. Shin Nishimura, Kyushu University
16:25-16:30	Break
16:30-18:00	**Poster Session**

Poster Session

PT01 Frequency modulation atomic force microscopy (FM-AFM) observation of adsorbed films on diamond-like carbon (DLC) surfaces
Hikaru Okubo, Shinya Sasaki, Tokyo University of Science, Japan

PT02 Tribology of polyethylenimine / molybdenum disulphide $(PEI/MoS_2)_{15}$ films in dry atmospheres
Prabakaran Saravanan, Roman Selyanchyn, Hiroyoshi Tanaka, Joichi Sugimura, Kyushu University, Japan

PT03 Effect of environmental gas on friction and wear of various ceramics
Kohei Shirahama[1], Hiroyoshi Tanaka[1], Takeshi Maeda[2], Joichi Sugimura[1]
[1] Kyushu University, [2] Kyocera Corporation, Japan

PT04 Effects of oxygen and water on friction and wear of DLC slid against pure metals
Keisuke Manabe, Hiroyoshi Tanaka, Joichi Sugimura, Kyushu University, Japan

PT05 Friction and wear of polymer composites in hydrogen environment at low temperature
Naotoshi Shimizu[1], Yoshinori Sawae[2], Takehiro Morita[2], Shugo Onitsuka[2], Joichi Sugimura[2]
[1] IHI Corporation , [2] Kyushu University, Japan

PT06 Effect of trace moisture content on low friction mechanism of carbon fiber filled PTFE in high purity hydrogen
Reona Umei, Keiji Sakaki, Takehiro Morita, Yoshinori Sawae, Joichi Sugimura, Kyushu University, Japan

PT07 Friction and wear of polymer composites in high pressure hydrogen
Yoshinori Sawae, Eiichi Miyakoshi, Shunichiro Doi, Takehiro Morita, Joichi Sugimura,Kyushu University, Japan

PT08 Effects of environmental gases on friction and wear of stainless steels
Shotaro Koizumi[1], Hiroyoshi Tanaka[1], Yuuya Hayashi[2], Naruhiko Inayoshi[2], Joichi Sugimura[1]
[1] Kyushu University, [2] DENSO Corporation, Japan

PT09 Hydrogen generation from cyclic compounds in rolling contact of steel
Daisuke Takekawa[1], Yoji Sunagawa[1], Hiroyoshi Tanaka[2], Joichi Sugimura[2]
[1] Idemitsu Kosan Co., Ltd., [2] Kyushu University, Japan

PT10 Evaluation of new type bearing retainer for liquid rocket engine turbopump
Hiromitsu Kakudo, Satoshi Takada, Makoto Yoshida, Japan Aerospace Exploration Agency, Japan