

OS5: Advanced Applications of Multi-functional Fluids

October 29, 2021
ROOM2

- OS5-1 **Kinetics of Metastable and Atomic Species in Ns Pulse Discharge Plasmas in N₂-H₂ mixtures: Diagnostics and Modeling** (*Invited*)
9:20-9:50 Xin Yang (Ohio State University, USA / Xi'an Jiaotong University, China), Elijah R. Jans, Caleb J. Richards, Sai Raskar, Dirk van den Bekerom, Igor V. Adamovich (Ohio State University, USA)
- OS5-2 **Synthesis of Ammonia Using Atmospheric Pressure Fluidized Bed Plasma**
9:50-10:10 Kento Shimizu, Takumi Sato, Shungo Zen, Nozomi Takeuchi (Tokyo Institute of Technology, Japan)
- OS5-3 **Gas-Phase Analysis by FTIR Spectrometry for Plasma with Dilute H₂SO₄ Solution**
10:10-10:30 Siqi Deng, Nozomi Takeuchi (Tokyo Institute of Technology, Japan), Junko Hieda (Nagoya University, Japan), Katsuyuki Takahashi (Iwate University, Japan), Kosuke Tachibana (Oita University, Japan), Oi Lun Li (Pusan National University, Korea)
- OS5-4 **PIV Analysis of Plasma-induced Liquid Flows in Surfactant Solutions**
10:30-10:50 Toshiyuki Kawasaki (Nishinippon Institute of Technology, Japan), Masahiro Kamasaki (Kumamoto University, Japan), Nozomi Takeuchi (Tokyo Institute of Technology, Japan), Fumiaki Mitsugi (Kumamoto University, Japan)
- OS5-5 **Pre-ionized Inert Gas Plasma MHD Power Generation with Ne/Xe Working Gas**
11:10-11:30 Ork Kimsor, Kaito Itokawa, Yoshihiro Okuno (Tokyo Institute of Technology, Japan)
- OS5-6 **Numerical Simulation and Optical Emission Spectrometry for Multiple Thermal Plasma Jet**
11:30-11:50 Jeong-Hwan Oh, Yong Hee Lee, Hyeokjun Kang (Jeju National University, Korea), Tae-Hee Kim (Wonkwang University, Korea), Hidemasa Takana (Tohoku University, Japan), Sooseok Choi (Jeju National University, Korea)
- OS5-7 **Numerical Modelling of Wood Gasification in Thermal Plasma Reactor at Higher Plasma Flow Rates**
11:50-12:10 Ivan Hirka, Oldřich Živný, Jiří Jeništa (Institute of Plasma Physics AS CR, Czech Republic)
- OS5-8 **Experimental and Numerical Investigation of Hollow Electrode Plasma Torch with Reversed Polarity Discharge Structure and Cylindrical Exit Nozzle**
12:10-12:30 Darian Figuera-Michal, Sang-Min Jeong, Dong-Hyun Lee, Min-Gyu Choi, Shi-Young Yang, Jun-Ho Seo (Jeonbuk National University, Korea)

- OS5-9 **Development of a Backdrivable High-Torque Robot Arm with Magnetorheological Fluid Vane Motors**
 13:30-13:50 Peizhi Zhang, Mitsuhiro Kamezaki, Ryuichiro Tsunoda, Shigeki Sugano (Waseda University, Japan)
- OS5-10 **Torque Properties of a Rotary Elastomer Particle Damper Based on Spherical and Ellipsoidal Elastomer Particles**
 13:50-14:10 Allah Rakhio, Yasushi Ido, Yuhiro Iwamoto (Nagoya Institute of Technology, Japan), Atsushi Toyouchi (KYB Corporation, Japan)
- OS5-11 **Numerical Investigation on Morphology of Magnetic Particles in Homogeneous Magnetic Fields**
 14:10-14:30 Yuhiro Iwamoto, Takuya Inden, Yasushi Ido (Nagoya Institute of Technology, Japan), Yoshitomo Nakahara, Eiri Nagata (AISIN Corporation, Japan)
- OS5-12 **Numerical Analysis of Self-driven Temperature-sensitive Magnetic Fluid between Partially Heated Parallel Plates under a Solenoidal Magnetic Field**
 14:30-14:50 Zhongwu Rong, Yuhiro Iwamoto, Yasushi Ido (Nagoya Institute of Technology, Japan)
- OS5-13 **Experimental Investigation of Thermo-Magnetic Pumps with Serial Connection**
 15:20-15:40 Yan-Jyun Li, Jiun-Yang Ji, Chih-Yung Huang (National Tsing Hua University, Taiwan)
- OS5-14 **Manipulation of Water Droplets by Dielectrophoresis**
 15:40-16:00 Xiaoman Guo, Sina Alavi, Javad Mostaghimi (University of Toronto, Canada)
- OS5-15 **Electroactive Polymers as Actuators: Why Do They Deform? (*Invited*)**
 16:00-16:30 Gildas Coativy (Université de Lyon, France), Kaori Yuse (Université de Lyon / Lyon Center, IFS-Tohoku University, Université de Lyon, France), Gildas Diguët (ELyTMaX UMI 3757, CNRS – Université de Lyon – Tohoku University, International Joint Unit, Tohoku University, Japan and France), Laurence Seveyrat, Véronique Perrin, Florent Dalmas, Sébastien Livi, Joël Courbon (Université de Lyon, France), Hidemasa Takana (Lyon Center, IFS-Tohoku University, Université de Lyon, France / Tohoku University, Japan), Jean Yves Cavallé (ELyTMaX UMI 3757, CNRS – Université de Lyon – Tohoku University, International Joint Unit, Tohoku University, Japan and France / Lyon Center, IFS-Tohoku University, Université de Lyon, France)
- OS5-16 **Multifunctional Hybrid Filaments Comprising Aligned Nanocellulose and Carbon Nanotubes Synthesized by a Field-assisted Flow Focusing Method**
 17:10-17:30 Heather Wise (University of Washington, USA), Hidemasa Takana (Tohoku University, Japan), Anthony Dichiara (University of Washington, USA)
- OS5-17 **Theoretical and Experimental Approaches to Ionic Diode Characteristics of Nanochannels**
 17:30-17:50 Kentaro Doi, Tatsunori Kishimoto (Toyohashi University of Technology, Japan)