

## OS12: Complex Thermofluid System

November 9, 2022

EX-4-A

- OS12-1      **Arresting Effect on Interfacial Phase Separation by an Imposed Flow**  
14:10-14:30      *(Invited)*  
Ryuta X. Suzuki (Tokyo University of Agriculture and Technology, Japan),  
Takahiko Ban (Osaka University, Japan), Shoji Seya (Tokyo University of  
Agriculture and Technology, Japan), Manoranjan Mishra (Indian Institute  
of Technology Ropar, India), Yuichiro Nagatsu (Tokyo University of  
Agriculture and Technology, Japan)
- OS12-2      **Effect of Pe on Miscible Viscous Fingering with Effective Interfacial Tension**  
14:30-14:45      Yuka Deki, Yuichiro Nagatsu (Tokyo University of Agriculture and  
Technology, Japan), Manoranjan Mishra (Indian Institute of Technology  
Ropar, India), Ryuta X. Suzuki (Tokyo University of Agriculture and  
Technology, Japan)
- OS12-3      **Stabilization of Viscous Fingering in a Partially Miscible System** *(Invited)*  
14:45-15:00      Kaori Iwasaki, Ryuta X. Suzuki (Tokyo University of Agriculture and  
Technology, Japan), Takahiko Ban (Osaka University, Japan), Manoranjan  
Mishra (Indian Institute of Technology Ropar, India), Yuichiro Nagatsu  
(Tokyo University of Agriculture and Technology, Japan)
- OS12-4      **Experimental Study of Immiscible Viscous Fingering via Alternating**  
15:00-15:15      **Injection**  
Avdhesh Kumar, Chi-Chian Chou, Wei-Cheng Huang, Ching-Yao Chen  
(National Yang Ming Chiao Tung University, Taiwan)
- OS12-5      **Numerical Simulation of Density Driven Flow Field: Reactive and**  
15:15-15:30      **Non-Newtonian Effects**  
Yu-Shan Li, Tzu-Han Kuo, Ching-Yao Chen (National Yang Ming Chiao  
Tung University, Taiwan)
- OS12-6      **Understanding of Viscous Fingering with Gel Production Reaction via**  
15:50-16:05      **Interfacial Rheology Under Large Deformation**  
Harumi Yagi, Ryuta X. Suzuki, Yuichiro Nagatsu (Tokyo University of  
Agriculture and Technology, Japan)
- OS12-7      **Dual Displacement Fronts of Fluid Displacement in Porous Media:**  
16:05-16:20      **Numerical Simulations on Double Viscous Fingerings**  
Anindityo Patmonojai (Tokyo University of Agriculture and Technology /  
Tokyo Institute of Technology, Japan), Yuichiro Nagatsu (Tokyo University  
of Agriculture and Technology, Japan)
- OS12-8      **A Numerical Study of Linear Adsorption in Radial Miscible Flow in a Porous**  
16:20-16:35      **Matrix**  
Ajay Jangid, Priya Verma (Indian Institute of Technology Ropar, India),  
Ching-Yao Chen (National Yang Ming Chiao Tung University, Taiwan),  
Manoranjan Mishra (Indian Institute of Technology Ropar, India)

- OS12-9      **Non-linear Insights to Shear Instability in Two-Layer Flow**  
 16:35-16:50      Priyanka, Surya Narayan Maharana, Manoranjan Mishra (Indian Institute of Technology Ropar, India)
- OS12-10      **Microparticle Sorting in High Viscosity Flow**  
 16:50-17:05      Cheng-Po Teng, Hsiang-Yu Yang, Cheng-Yu Wang, Ya-Yu Chiang (National Chung Hsing University, Taiwan)
- OS12-11      **Predict Biphasic Separation Using Machine Learning Based Classifiers and Deep Neural Network**  
 17:05-17:20      Yi-Chieh Chang (National Chung Hsing University, Taiwan), Yu-Jen Chen, Tsung-Yi Ho (National Tsing Hua University, Taiwan), Ya-Yu Chiang (National Chung Hsing University, Taiwan)

**November 10, 2022**

**EX-4-A**

- OS12-12      **Experimental Study on the Strength and Reversibility of Plasma Bonding with a Micronozzle**      pp.  
 9:00-9:15      Yu-hsuan Liu, Chia-Hung Dylan Tsai (National Yang Ming Chiao Tung University, Taiwan)
- OS12-13      **Numerical Investigation of the Thermal Flow on Ozone Generation in an Atmospheric Pressure Air Dielectric Barrier Discharge Reactor**  
 9:15-9:30      Tzu Yi Liao, Kun Mo Lin, Yu Xuan Chen (National Chung Cheng University, Taiwan)
- OS12-14      **Numerical and Experimental Investigations of the Thermal Flow in an Atmospheric Pressure Helium Plasma Jet**  
 9:30-9:45      Yu Hsiang Wu, Kun Mo Lin, Kai Cheng Wang (National Chung Cheng University, Taiwan)
- OS12-15      **Effects of Pressure on Hydrogen Plasma Properties of MPCVD**  
 9:45-10:00      Bisheng Wang, Chenyang Wang, Haohui Li, Di Yang, Ming Zhai, Shuai Wang (Harbin Institute of Technology, China), Akram Avami (Sharif University of Technology, Iran)
- OS12-16      Cancelled
- OS12-17      **Microparticle Formation with Different Impact Speeds**  
 10:40-11:00      Chia-Hung Dylan Tsai, Hui-Zhen Lu, Jin-Jia Hu (National Yang Ming Chiao Tung University, Taiwan)
- OS12-18      **Visualization of Streaming Flow Patterns Near the Slits of Smart-Phone Speaker Module**  
 11:00-11:20      Wei-Hsin Tien (National Taiwan University of Science and Technology, Taiwan), Yih-Yan Lin, Lei Chen (Google Asia Pacific Pte Ltd., Singapore), Rong-Xian Lin, Yi-Yu Chen, Xiang-Hong Xu, Kai-Shuen Chang (National Taiwan University of Science and Technology, Taiwan)

- OS12-19  
11:20-11:35 **Bio-Satellite with Integrated Microfluidic Device for Deep-Space Biological Study**  
Pin-Ru Huang, Jun-Wei Chang, Shao-Yu Huang, Chieh-Chen Huang, Yu-Chieh Chen, Ya-Yu Chiang (National Chung Hsing University, Taiwan)
- OS12-20  
11:35-11:50 **Development of Two-color Pressure-sensitive Paint for Simultaneous Pressure and Temperature Measurements**  
Wei-Chieh Chen, Sheng-Jie Fu, Chih-Yung Huang (National Tsing Hua University, Taiwan)
- OS12-21  
11:50-12:05 **Experimental Heat Transfer Analysis Of Microchannel Flow With Inclined Flat Plate Obstruction And Sidewall Heating**  
Yu-Chia Fan, Po-Cheng Wang, Tong-Miin Liou, Chih-Yung Huang (National Tsing Hua University, Taiwan)
- OS12-22  
13:10-13:25 **Prediction of Axisymmetric Thermal Plasma Flow via a Non-orthogonal Grid Approach**  
Wei-You Huang, Shiu-Wu Chau (National Taiwan University, Taiwan)
- OS12-23  
13:25-13:40 **A Rotating Rod Model for the Viscosity of Ferrofluids**  
U Lei (National Taiwan University, Taiwan)
- OS12-24  
13:40-13:55 **Motion of a Micro-magnetic-particle Chain in a Rotating Field**  
Sung-Lien Liao, Cheng-Rung Li, Ching-Yao Chen (National Yang Ming Chiao Tung University, Taiwan)
- OS12-25  
13:55-14:10 **Effect of Reynolds Number Based on Lorentz Force to Flow Transition of Magnetohydrodynamic Jet**  
Jia-Hong Cheng, Li-Wei Cheng, Ching-Yao Chen (National Yang Ming Chiao Tung University, Taiwan)
- OS12-26  
14:10-14:25 **Experimental Study of Magnetohydrodynamic Jet**  
Yi-Hsuan Chen, Yi-Ru Wei, Jian-Sin Liou, Ching-Yao Chen (National Yang Ming Chiao Tung University, Taiwan)
- OS12-27  
14:25-14:40 **The Preliminary Research of Aeroacoustic Effects in Full-scale Hearing Aids by Computational Fluid Dynamics**  
Yu-Chien Chen, Tzu-Hua Wang, Wei-Hsiang Wang (National Chung Hsing University, Taiwan)
- OS12-28  
14:50-15:05 **Numerical Study of the Effects of Dilution Gas for the Formation of CJ Plane During the Oblique Detonation**  
Yi-Jhen Wu, Yang-Yao Niu (Tamkang University, Taiwan)
- OS12-29  
15:05-15:20 **Numerical Study on the Interaction of Compressible Gas-Liquid Reacting Flows**  
Pin-Han Chiu, Yang-Yao Niu (Tamkang University, Taiwan)
- OS12-30  
15:20-15:35 **The Hydrodynamic Characteristics of a Swimming Rhynchobatus Australiae by Immersed Boundary Method**  
Jomol K. Lewis, Hua-Ting Lin, Wei-Hsiang Wang (National Chung Hsing University, Taiwan)

- OS12-31      **An CFD Investigation of Natural Convection by Heating Plates with Multi-GPU Implementation**  
15:35-15:50      Hua-Ching Chang, Wei-Hsiang Wang (National Chung Hsing University, Taiwan)
- OS12-32      **A Short Note on Runge-Kutta Discontinuous Galerkin Method with WENO Limiter**  
15:50-16:05      San-Yih Lin (National Cheng Kung University, Taiwan)
- OS12-33      **Large-Eddy Simulation of Multi-Nozzle Powder Flow for the Laser Direct Deposition Process**  
16:05-16:20      Yu-Ting Lai, Jia-Wei Lin, Yi-Ju Chou (National Taiwan University, Taiwan), Chien-Chou Tseng (National Cheng Kung University, Taiwan)
- OS12-34      **Thermal Performance Analysis of the Multiple GaN Chips based Power Module**  
16:30-16:45      Stone Cheng, Surya Elangovan, Edward Yi Chang (National Yang Ming Chiao Tung University, Taiwan)
- OS12-35      **Numerical Simulation of a Converging-Diverging Nozzle for Trilateral Flash Cycle Application**  
16:45-17:00      Je-Wei Yeh, Chih-Hao Huang, Yao-Hsien Liu (National Yang Ming Chiao Tung University, Taiwan)
- OS12-36      **Measurement of Non-condensable Air Concentration in Refrigerant R-141b by the Method of Wavefront Sensing**  
17:00-17:15      Ming-Yen Chung, Hsing-Min Tu, An-Chi Wei, Chien-Yuh Yang (National Central University, Taiwan), Jyh-Rou Sze (National Applied Research Laboratories, Taiwan)
- OS12-37      **Characteristic of Transition between Oscillating and Pulsating-Circulating Flows for Pulsating Heat Pipes**  
17:15-17:30      Shota Ouchi, Kizuku Kurose (Tokyo University of Science, Japan), Kazushi Miyata (Fukuoka University, Japan)
- OS12-38      **Thermal Performance of Solid and Hollow Pin-fin Heat Sinks**  
17:30-17:45      Ayush Tiwari, Anil Kumar Patil, Manoj Kumar (DIT University, India)
- OS12-39      **Steady Flow of Power-law Fluids Over Two Rotating Cylinders in Side-by-side Arrangement**  
17:45-18:00      Lekhraj Malviya, Ram Prakash Bharti (Indian Institute of Technology Roorkee, India)