

## OS17: Supercritical Fluid

October 28, 2021  
ROOM7

- OS17-1      **Physics of Fluids Near the Critical Point: Critical Phenomena under Gravity**  
13:30-14:10      *(Invited)*  
Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China)
- OS17-2      **Numerical Investigation of Convection Heat Transfer of Supercritical CO<sub>2</sub> in Porous Media: The Effect of Porous Structure**  
14:10-14:30      Yongchang Feng (Chinese Academy of Sciences, China), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China), Yuki Kanda, Atsuki Komiya (Tohoku University, Japan)
- OS17-3      **Investigation on High Temperature Thermal Storage System Based on Phase Change Material Using Supercritical CO<sub>2</sub> as Heat Transfer Fluid**  
14:30-14:50      Jiaxiang Chen (Chinese Academy of Sciences, China), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China)
- OS17-4      **Numerical Simulation of Turbulent Mixing Flow in Supercritical Hydrothermal Synthesis Reactors**  
15:20-15:40      Kenta Matsui, Shuto Yatsuyanagi, Takashi Furusawa, Akira Yoko, Satoru Yamamoto, Tadafumi Adschiri (Tohoku University, Japan)
- OS17-5      **Concentration Gradient when the Liquid-like and Gas-like States Coexist under Supercritical Pressure**  
15:40-16:00      Zhan-Chao Hu (Sun Yat-sen University, China)
- OS17-6      **Experimental Visualization of Transient Heat Transfer under Supercritical Conditions Near and Far from Critical Point on  $p$ - $T$  diagram**  
16:00-16:20      Haruki Ito, Yuki Kanda (Tohoku University, Japan), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China), Atsuki Komiya (Tohoku University, Japan)
- OS17-7      **Analysis of sCO<sub>2</sub> Statistical Fluctuation Properties via Molecular Dynamics Simulation**  
16:20-16:40      Zi-Yu Liu (Chinese Academy of Sciences, China), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China)
- OS17-8      **Pore-Scale Modeling on Skin and Volume-Averaged Friction Factors in 3D Micromodel following Supercritical CO<sub>2</sub> Invasion Nature**  
17:10-17:30      Karim Ragui (Chinese Academy of Sciences, China), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China), Yuki Kanda, Atsuki Komiya (Tohoku University, Japan)

- OS17-9  
17:30-17:50 **Numerical Study on Supercritical N-Dodecane Flows with Endothermic Pyrolysis Reaction**  
Shuto Yatsuyanagi, Takashi Furusawa, Satoru Yamamoto (Tohoku University, Japan), Sadatake Tomioka, Takuo Onodera (Japan Aerospace Exploration Agency, Japan)
- OS17-10  
17:50-18:10 **Optimization of SFE Based Remediation Conditions for Metal and Metalloids in Soil at Pilot Scales: A Brief Summary Study**  
Jahongir H. Hasanov (Academy of Sciences of Uzbekistan, Uzbekistan), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China)
- OS17-11  
18:10-18:30 **Preliminary Investigation on the Boundary Convection Structures of Fluid under Thermo/Magnetic Mechanical Effects in Critical Region**  
A. Al Mahdouri (Chinese Academy of Sciences, China / Sultan Qaboos University, Oman), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China), Yuhiro Iwamoto (Nagoya Institute of Technology, Japan)