

OS17: Supercritical Fluid

November 7, 2023

CON-2

- OS17-1 **Fundamentals and Applications in Transcritical CO₂ Thermodynamical Cycles**
10:40-11:20 *(Invited)*
Yang Nie, Xin-Rong (Ron.) Zhang (Peking University, China)
- OS17-2 **Heat and Mass Transfer of Aggregate Contaminants in Porous Media Structures of a Soil Sample under Supercritical CO₂ Injection**
11:20-11:40 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)
- OS17-3 **Numerical Study of Rayleigh-Bénard-Type Convection of CO₂ Fluid in Porous Media under Supercritical Pressures**
11:40-12:00 Yongchang Feng (Chinese Academy of Sciences, China), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China)
- OS17-4 **Numerical Analysis of CO₂ Flows across Critical Region in Porous Media on a Microchip**
13:10-13:30 Mengshuai Chen, Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China), Yuki Kanda, Atsuki Komiya (Tohoku University, Japan)
- OS17-5 **System Analysis and Preliminary Results of Chromium Extraction from Soil Samples by Supercritical CO₂**
13:30-13:50 Wentao Wu (Chinese Academy of Sciences / Jiangsu University, China), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China), Deqing Mei (Jiangsu University, China)
- OS17-6 **Summary and Analysis of Complex Phase-Transitions in Critical Fluid by Phase Field Method**
13:50-14:10 Huan Liu, Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China)
- OS17-7 **Evaluation of Organic Solvent Diffusion in Pressurized CO₂ Gas Utilizing Dynamic Pendant Drop Volume Analysis**
14:10-14:30 Ryuhi Mukai, Yuki Kanda (Tohoku University, Japan), Yingxue Hu (Xi'an Jiaotong University, China), Lin Chen (Chinese Academy of Sciences / University of Chinese Academy of Sciences, China), Atsuki Komiya (Tohoku University, Japan)
- OS17-8 **A Comparative Kinetic Study of Ethanol Oxidation in Gas Phase and Supercritical Water**
14:50-15:10 Guoxing Li, Chuang Yang (Chang'an University, China)
- OS17-9 **Topology Optimization of TPMS-based Porous Structure in Fluid Heat Dissipation**
15:10-15:30 Tianyu Si, Zhilong Cheng, Qiuwang Wang (Xi'an Jiaotong University, China)

OS17-10 **Pore-scale Simulation of Two-phase Displacement and Mass Transfer in Porous Media**
15:30-15:50

Yingxue Hu (Xi'an Jiaotong University, China), Yuki Kanda, Ryuhi Mukai (Tohoku University, Japan), Junwei Su (Xi'an Jiaotong University, China), Atsuki Komiya (Tohoku University, Japan)