



# InterPore2023

## Monday, May 22, 2023

### MS01: 1.1 (10:50 AM - 12:35 PM)

time	[id] title	presenter
10:50 AM	[509] Effect of rock heterogeneity on pore-scale fluid displacement in a layered sandstone for underground hydrogen storage	JANGDA, Zaid
11:05 AM	[1000] Ostwald Ripening Investigation using 3D Micro-CT Imaging	Mr DOKHON, Waleed
11:20 AM	[94] Energy Storage in Unconventional Formations	Ms SAMARA, Hanin
11:35 AM	[261] Impact of capillary pressure hysteresis on Underground Hydrogen Storage	NAZARI, Farzaneh
11:50 AM	[957] Visualizing the Effect of Gravity on Hydrogen Redistribution at Pore Scale	Dr SHAHROKHI, Omid
12:05 PM	[871] Trapping, Hysteresis and Ostwald Ripening in Hydrogen Storage: A Pore-Scale Imaging Study	Ms GOODARZI, Sepideh
12:20 PM	[751] Microfluidic hydrogen storage capacity and residual trapping during cyclic injections	LYSYY, Maksim

### MS01: 1.3 (5:00 PM - 6:00 PM)

time	[id] title	presenter
5:00 PM	[753] Underground hydrogen storage and in-situ gas conversion: macroscopic investigation on reactive transport mechanisms	STIEDL, Gerald
5:15 PM	[264] Geochemical reactions of iron oxides with hydrogen in the porespace of sandstones: Processes, kinetics & limitations of the extent of reaction.	OSTERTAG-HENNING, Christian
5:30 PM	[592] Impact of microbial activity on hydrogen transport in porous reservoirs across scales	Dr BOON, Maartje
5:45 PM	[896] Pore-scale observations of hydrogen trapping and migration in porous rock	Prof. ZHANG, Yihuai

## Tuesday, May 23, 2023

### MS01: 2.1 (9:30 AM - 10:30 AM)

time	[id] title	presenter
9:30 AM	[201] On the conceptual role of permeability contrasts within sandstone utilised for underground hydrogen storage	SMITH, Doug
9:45 AM	[280] Salinity gradients and salt precipitation due to hydrogen injection in saline aquifers and reservoirs	KALYONCU, Gulce
10:00 AM	[855] Caprock sealing capacity for underground hydrogen storage; Kimmeridge Clay	SLABON, Lubica
10:15 AM	[681] Impact of hydrogen trapping in underground porous formations on recovery efficiencies during interseasonal storage injection and withdrawal cycles	EDLMANN, Katriona

### MS01: 2.2 (12:00 PM - 1:00 PM)

time	[id] title	presenter
12:00 PM	[30] The Impact of Capillary Heterogeneity on CO <sub>2</sub> Plume Migration at the Endurance CCS Target Site in the UK – A Core To Field Scale Study	WENCK, Nele
12:15 PM	[67] Experimental study of the sealing properties of cement plug during the early age	NGOUAMBA, Elie
12:30 PM	[78] Mineral Dissolution on Geological Carbon Storage in Carbonates: A Microcalorimetric Study	Dr COBOS, Jacquelin
12:45 PM	[23] On the modelling of Joule-Thomson Effects: Analytical and Numerical Formulations	Dr GONCALVES MACHADO, Cintia

### MS01: 2.3 (2:15 PM - 3:30 PM)

time	[id] title	presenter
2:15 PM	[938] Experimental investigation of CO <sub>2</sub> dissolution in Ca <sup>2+</sup> rich aquifer with precipitation reaction	ZHENG, Shuai
2:30 PM	[385] Management of salt precipitation for large-scale CO <sub>2</sub> storage projects	GASDA, Sarah
2:45 PM	[547] Sensitivity Analysis of CO <sub>2</sub> Mineralization Trapping during CO <sub>2</sub> Sequestration	BELLO, Ayomikun
3:00 PM	[269] Gas trapping dynamics in heterogeneous sandstones imaged using synchrotron time-lapse tomography.	HARRIS, Catrin
3:15 PM	[147] 3D X-Ray Visualization of Rayleigh-Bénard Instability in a Porous Medium	Prof. SUEKANE, Tetsuya

## Wednesday, May 24, 2023

### MS01: 3.1 (9:30 AM - 10:30 AM)

time	[id] title	presenter
9:30 AM	[459] Understanding the impact of carbon mineralisation on the flow properties of basalts	Dr STAVROPOULOU, Eleni
9:45 AM	[467] Insights into safe CO <sub>2</sub> injection and storage scenarios in tight chalk reservoir samples	Dr FEILBERG, Karen
10:00 AM	[489] Effects of Thermal Shocks on Cement for CCS under Confined and Unconfined Conditions	Dr LI, Kai
10:15 AM	[505] Injectivity losses in sandstones during CO <sub>2</sub> hydrates formation	Mr MASCLE, Matthieu

### MS01: 3.2 (12:00 PM - 1:00 PM)

time	[id] title	presenter
12:00 PM	[514] Experimental measurements on caprock CO <sub>2</sub> -water wettability at reservoir pressure and temperature	Prof. ESPINOZA, D. Nicolas
12:15 PM	[1037] Insights into sandstone wettability alteration during cyclic scCO <sub>2</sub> -brine injections	HERRING, Anna
12:30 PM	[662] The effect of mixed convection and hydrodynamic dispersion on CO <sub>2</sub> dissolution in saline aquifers	ROSENZWEIG, Ravid
12:45 PM	[687] A robust and efficient deep-learning-based surrogate model for CO <sub>2</sub> storage in deep saline aquifers	Ms ZHAO, Mengjie

### MS01: 3.3 (2:15 PM - 3:30 PM)

time	[id] title	presenter
2:15 PM	[703] CT visualization of the CO <sub>2</sub> degassing process in porous media	BOEIJE, Chris
2:30 PM	[774] A micro-scale study of CO <sub>2</sub> mobility control characteristics of a green foam in porous media	ZHOU, Tongke
2:45 PM	[809] Calibration curve generation for the use of Xenon as a pressure indicator in porous media using micro computed tomography	Mr WILLEMSZ, Mark
3:00 PM	[833] Influence of Capillarity on Salt Precipitation during Primary CO <sub>2</sub> -Brine Displacement	JAMMERNEGG, Boris

# Thursday, May 25, 2023

## **MS01: 4.1 (9:15 AM - 10:45 AM)**

time	[id] title	presenter
9:15 AM	[608] Multi-scale and dynamic imaging of shales and mudstone: increasing understanding of sealing ability for sub-surface storage	MA, Lin
9:30 AM	[870] Microfluidic Study of CO2 Dissolution Dynamics under Geological Sequestration Conditions	Dr YU, Wei
9:45 AM	[887] In Situ Imaging of Dynamic Processes in Chalk	Mr RASMUSSEN, Peter Winkel
10:00 AM	[937] Mineral Carbonation Sensitivity to Hydrogeologic Heterogeneity of Basaltic Aquifers	AWOLAYO, Adedapo
10:15 AM	[946] Time-lapse imaging of fine particle movement in porous materials	Ms SHI, CHENZI
10:30 AM	[432] Properties of restructuring porous media for thermochemical energy storage	GOLLSCH, Marie

## **MS01: 4.2 (2:00 PM - 3:30 PM)**

time	[id] title	presenter
2:00 PM	[114] Water vapor transport in porous salt hydrate particles in view of energy storage	AARTS, Joey
2:15 PM	[356] he moisture and temperature evolution in a zeolite heat storage reactor during cycling: an NMR study	Dr PEL, Leo
2:30 PM	[289] Engineering ordered porous structure with direct additive-manufacturing approach for solar thermochemical fuel production	Dr XU, Da
2:45 PM	[579] An image-based sphere insertion method for porous media drainage simulations with gravity	Mr CHADWICK, Eric A.
3:00 PM	[701] Identification and understanding of colloidal destabilization mechanisms in geothermal processes	FLEURY, Marc
3:15 PM	[795] Fracture permeability evolution as a result of geochemical granite alteration in geothermal systems	HARPERS, Nick