



Stanford Center for Carbon Storage Annual Meeting

May 11-12, 2016

Room 365, Green Earth Sciences Building

367 Panama Street, Stanford CA 94305

Wednesday, May 11 Research Review

8:30 a.m.	<i>Continental Breakfast</i>	
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9:15 – 9:30 a.m.	Welcome and Overview	Tony Kavscek
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9:30 – 11:50 a.m.	Session I: CO₂ Transport in Porous Media & Storage	
9:30 – 9:55	Image Analysis to Improve Data Acquisition During Micromodel Experiments	Sophie Roman
9:55 – 10:20	Analytical Approximations for Effective Relative Permeability in Capillary Limit CO ₂ -Brine Flow	Avinoam Rabinovich
10:20 – 10:45	Characterizing CO ₂ Capillary Heterogeneity Trapping using Macroscopic Percolation Simulation	Cindy Ni
	<i>10:45 – 11:00 a.m. Coffee Break</i>	
11:00 – 11:25	Simulation of CO ₂ Exsolution for Enhanced Oil Recovery and CO ₂ Storage	Scott McLaughlin
11:25 – 11:50	Long term Stability of Carbon Storage: Assessing the Potential for Diffusion-driven Remobilization in Porous Media	Jacques de Chalendar

11:50 – 12:40 p.m.	Session II : Geochemical Modeling & Rock Physics	
11:50 – 12:15	Hydrologic and Geochemical Responses to CO ₂ Injection in Basalts Based on Flow-Through Experiments	Dana Thomas
12:15 – 12:40	Effective Elastic Properties of Composites with Micro-Anisotropy	Priyanka Dutta

12:40 – 1:45 p.m.	Lunch	Arco Courtyard
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1:45 – 3:25 p.m.	Session III: Shale Oil Recovery	
1:45 – 2:10	Characterization of Chemical and Morphological Changes in Shales Using Synchrotron-Based X-ray Imaging	Andy Kiss
2:10 – 2:35	The Effect of CO ₂ Adsorption on Matrix Permeability in Unconventional Shales	Wei Wu
2:35 – 3:00	Multiscale-Multicomponent Gas Sorption On Shale	Hamza Aljamaan
3:00 – 3:25	Oil Recovery from Bakken Shale by Miscible CO ₂ Injection	Cathy Zhang
	<i>3:25 – 3:40 p.m. Coffee Break</i>	
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3:40 – 5:20 p.m.	Session IV: Carbon Capture & Process Modeling	
3:40 – 4:05	Oxygen Integration in CO ₂ -Electrochemical-Reduction-Based Seasonal Storage System	Yuchi Sun
4:05 – 4:30	Nitrosamine and Nitramine Formation during Amine-based CO ₂ Capture	Bill Mitch
4:30 – 4:55	Supported Ionic Liquid Membranes for CO ₂ Capture, the Influence of Nanoconfinement on Ionic Liquid Dynamics	Jaeyoon Shin
4:55 – 5:20	Carbon Capture in the USA: Using GIS to find the Lowest Cost Opportunities	Praveen Kaur Bains
	<i>5:20 – 5:30 p.m. Coffee Break</i>	
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5:30 – 6:00 p.m.	General Discussion, Feedback and Future Priorities	Sally Benson
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6:15 – 7:30 p.m.	Poster Session & Reception	Arco Courtyard
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Wednesday, May 11 Poster Session 6:15 pm Arco Courtyard

Investigation of Two-Phase Flow Mechanisms at the Pore Scale	Sophie Roman
Positron Emission Tomography for Quantifying Multiphase Flow at the Sub-core Scale	Chris Zahasky
CO ₂ Enhanced Oil Recovery under Immiscible Conditions	Daniel Hatchell
Evolution of scCO ₂ Saturation due to Mass Transfer in a Multi-layered Aquifer	Yaxin Li
Simulation of CO ₂ Exsolution for Enhanced Oil Recovery and CO ₂ Storage	Scott McLaughlin
Using Pressure Data to Locate Caprock Leaks	Dave Cameron
Long term Stability of Carbon Storage: Assessing the Potential for Diffusion-driven Remobilization in Porous Media	Jacques de Chalendar
Hydrologic and Geochemical Responses to CO ₂ Injection in Basalts Based on Flow-Through Experiments	Dana Thomas
A Micro-tomography Transmission X-ray Microscope for in situ Geoscience Applications	Andy Kiss
Oxygen Integration in Carbon Dioxide Electrochemical Reduction	Yuchi Sun
Supported Ionic Liquid Membranes for CO ₂ Capture, the Influence of Nanoconfinement on Ionic Liquid Dynamics	Jaeyoon Shin
Carbon Capture in the USA: Using GIS to Locate the Lowest Capture Costs	Praveen Kaur Bains
Influence of Dissolved Metals on N-nitrosamine Formation under Amine-based CO ₂ Capture Conditions	Zimeng Wang
Multiscale-Multicomponent Gas Sorption On Shale	Hamza Aljamaan
