



## Stanford Center for Carbon Storage Annual Meeting

May 25-26, 2017

Room 365, Green Earth Sciences Building  
367 Panama Street, Stanford CA 94305

### Thursday, May 25 Research Review

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<b>8:30 a.m.</b>	<b><i>Continental Breakfast</i></b>	
<b>9:15 – 9:30 a.m.</b>	<b>Welcome and Overview</b>	Tony Kavscek
<b>9:30 – 11:45 a.m.</b>	<b>Session I: CO<sub>2</sub> Transport in Porous Media &amp; Storage</b>	
9:30 – 9:55	Positron Emission Tomography (PET) for Sub-core Permeability and Relative Permeability Characterization of Heterogenous Sandstone	Chris Zahasky
9:55 – 10:20	Characterizing CO <sub>2</sub> Capillary Heterogeneity Trapping through Macroscopic Percolation Simulation	Hailun (Cindy) Ni
10:20 – 10:45	Pore-scale Investigations into the Stability of Residual CO <sub>2</sub>	Charlotte Garing
	<b><i>10:45 – 10:55 a.m. Coffee Break</i></b>	
10:55 – 11:20	Examining the Potential of Immiscible CO <sub>2</sub> for Gravity-Assisted Enhanced Oil Recovery and Storage	Daniel Hatchell
11:20 – 11:45	Wettability in Transport through Carbonates	Wen Song
<b>11:45 – 12:35 p.m.</b>	<b>Session II : Geochemical Modeling &amp; Pore Scale</b>	
11:45 – 12:10	Storing CO <sub>2</sub> in Volcanic Rocks: Insights from Reactive Flow-through Experiments Coupled with Multi-scale Imaging Techniques	Kate Maher
12:10 – 12:35	Mineral Dissolution and Wormholing from a Pore-scale Perspective	Cyprien Soulaire
<b>12:35 – 1:35 p.m.</b>	<b><i>Lunch</i></b>	Arco Courtyard



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<b>1:40 – 3:05 p.m.</b>	<b>Session III : Shale Oil Recovery</b>	
1:40 – 2:05	Impact of Carbonate Mineral Dissolution on Hydrocarbon Transport in Shales	Youssef Elkady
2:05 – 2:30	Multi-Scale Imaging of Gas Adsorption in Shales	Hamza Aljamaan
2:30 – 2:45	Predicting Fault Slip Potential in the South-central United States using New Maps of Tectonic Stress	Jens Lund Sneek
2:45 – 2:55	Limiting Slip on Basement Faults: The Rocks Matter	Mark Zoback
	<b>2:55 – 3:05 p.m. Coffee Break</b>	

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<b>3:05 – 4:55 p.m.</b>	<b>Session IV: Permeability Evolution &amp; Rock Physics</b>	
3:05 – 3:30	Porosity and Permeability Alteration of Shale Matrices by Geochemical Reactions	Qingyun Li
3:30 – 3:55	Evolution of Permeability and Microstructure of Tight Carbonates due to Numerical Simulation of Calcite Dissolution	Kevin Miller
3:55 – 4:20	Permeability Evolution in Simulated Clay-rich Faults: The Role of Pore Fluid Chemistry	Harry Lisabeth
	<b>4:20 – 4:30 p.m. Coffee Break</b>	
4:30 – 4:55	Mechanical Trapping of Particles in Granular Media	Abdulla Kerimov

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<b>4:55 – 5:20 p.m.</b>	<b>Session V: Carbon Capture &amp; Process Modeling</b>	
4:55 – 5:20	Carbon Dioxide Dynamics in Room Temperature Ionic Liquids and Supported Ionic Liquid Membranes	Jaeyoon Shin
5:20 – 5:45	Application of Reduced-Order Models for Optimization in CO <sub>2</sub> Storage	Larry Jin

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<b>5:45 – 6:05 p.m.</b>	<b>General Discussion, Feedback and Future Priorities</b>	Sally Benson
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<b>6:15 – 7:30 p.m.</b>	<b>Poster Session &amp; Reception</b>	Arco Courtyard
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**Thursday, May 25 Poster Session 6:15 – 7:30 p.m. Arco Courtyard Hallway**

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Two-stage upscaling of CO <sub>2</sub> injection with capillary heterogeneity effects	Sophie Trastour
Examining the potential of immiscible CO <sub>2</sub> for gravity-assisted enhanced oil recovery and storage	Daniel Hatchell
Simulation of long term evolution of residually trapped CO <sub>2</sub> by diffusion	Yaxin Li
Estimating front velocity of CO <sub>2</sub> plume in heterogeneous reservoirs through the study of anisotropic properties	Gege Wen
Characterizing CO <sub>2</sub> capillary heterogeneity trapping through macroscopic percolation simulation	Hailun (Cindy) Ni
Geospatial analysis of BECCS deployment potential in the U.S.	EJ Baik
Pressure monitoring at the Illinois Decatur Basin Project	Dave Cameron
Relative permeability and saturation variations in a fractured basalt core	Meritxell Gran
Wettability in transport through carbonates	Wen Song
Impact of carbonate mineral dissolution on hydrocarbon transport in shales	Youssef Elkady
Evolution of permeability and microstructure of tight carbonates due to numerical simulation of calcite dissolution	Kevin Miller
Mechanical trapping of particles in granular media	Abdulla Kerimov
Modeling CO <sub>2</sub> Storage in Ultramafic Rock	Srinikaeth Thirugnana Sambandam
Mapping Relative Principal Stresses in the South-Central United States with Application to Predicting Fault Slip Potential	Jens Lund Snee
Carbon Dioxide Dynamics in Room Temperature Ionic Liquids and Supported Ionic Liquid Membranes	Jaeyoon Shin
Effect of Absorber and Desorber Unit Interactions on <i>N</i> -Nitrosamine Formation during Amine-Based Carbon Capture	Zhong Zhang

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