Poster Presentations (Invited)

Point Source Carbon Capture

Development of Acoustic Driven Packing Material (FE0026825-06-05)
Bradley Irvin, University of Kentucky Center for Applied Energy Research *(confirmed)*

A Novel Reactive Separation Method for Carbon Dioxide Capture from Flue Gas (FE0026825-06-10)
Jingwen Gong, University of Southern California *(confirmed)*

Use of a Novel Process for Revolutionizing CO_2 Capture (FE0026825-06-35)
Maohong Fan, University of Wyoming

Process Intensification for Carbon Capture (SC0013823)
Kenneth Lux, Altex Technologies Corporation

Flue CO_2 Membranes for Modular, Point Source Carbon Capture (SC0017124)
Jesse Kelly, Luna Labs USA, LLC *(confirmed)*

High-Efficiency Post Combustion Carbon Capture System (SC0017221)
Codruta Zoican-Loebick, Precision Combustion, Inc.

A New Sorbent Process for Transformational Carbon Capture Process (SC0018682)
Gokhan Alptekin, TDA Research, Inc.

CO_2-Philic Block Copolymers with Intrinsic Microporosity (BCPIMs) for Post Combustion CO_2 Capture (SC0020730)
Ravi Prasad and Haiqing Lin, Helios-NRG, LLC *(confirmed)*

Enhanced Biomimetic Three-Dimensional Nanoporous Gyroid Membrane for High Efficiency Carbon Dioxide Absorption (TCF-21-24965)
Juergen Biener, Lawrence Livermore National Laboratory

Low Temperature CO_2 Capture from an NGCC Flue Gas Using a Magnetically Stabilized, Inductively Heated Fluidized Bed Reactor
Andrew Tong, Susteon, Inc.

A Novel Sorbent-assisted Steam Methane Reforming Process for Production of Blue Hydrogen
Gokhan Alptekin, TDA Research, Inc.

Quantification of Ancillary Environmental Benefits of Transformational Water-lean Solvent Technology
Hunaid Nulwala, Liquid Ion Solutions LLC *(confirmed)*

Point Source Carbon Capture

Bench-scale Development of a Transformational Switchable-hydrophilicity Solvent-enabled Absorption Process for Energy-efficient CO_2 Capture and Fixation
Xiansen Li, Thermisoln LLC

Transformational Cryogenic Process for Carbon Dioxide Capture (SC0021774)
Ravi Jain, InnoSepra LLC

Cost Analysis of Carbon Capture from Cement Plants
Eric Grol, National Energy Technology Laboratory *(confirmed)*

Techno-Economic Analysis for MOF-based CO_2 Capture from NGCC Applications
Ryan Hughes, National Energy Technology Laboratory *(confirmed)*

Framework for Optimization, Quantification of Uncertainty, and Surrogates - Updated Capabilities
Daison Manuel Yancy Caballero, National Energy Technology Laboratory *(confirmed)*

Techno-Economic Analysis and Optimization of Integrated NGCC-MEA System at High CO_2 Capture Levels
Anuja Deshpande, National Energy Technology Laboratory *(confirmed)*

Sequential Design of Experiments for Non-Aqueous Solvent System at Large-Pilot Scale
Joshua Morgan, National Energy Technology Laboratory *(confirmed)*

Characterizing the Solvent/Packing Interactions with Wilhelmy Plate for Industrial Packings and Advanced Solvents
Yucheng Fu, Pacific Northwest National Laboratory *(confirmed)*

Neural Network Surrogates for Efficient Design Optimization
Yeping Hu, Brian Bartoldson, Jose Cadena, Amar Saini, Brenda Ng, and Phan Nguyen, Lawrence Livermore National Laboratory; Yucheng Fu, Jie Bao, and Zhijie Xu, Pacific Northwest National Laboratory

CCSI[2] Process Modeling and Optimization Highlights
Joshua Morgan, National energy Technology Laboratory *(confirmed)*

Carbon Dioxide Removal

Transformational Sorbent-Based Process for Direct Air Capture (SC0020740)
Ravi Jain, InnoSepra, LLC

Dual Function Materials for Direct Air Capture and Catalytic Conversion of CO_2 into Renewable Natural Gas (SC0020795)
Jonathan Peters, Susteon, Inc. *(confirmed)*

Novel, Efficient Contactor Technology to Substantially Lower the Cost of Direct Air Capture of CO_2 (SC0020860)
Mansour Masoudi, Emissol, LLC *(confirmed)*

Integrated Process for Direct Air Capture and Electrochemical Conversion to Ethanol (TCF-20-20118)
Radu Custelcean, Oak Ridge National Laboratory *(confirmed)*

Efficient, Low-Energy Capture of Atmospheric CO_2
Codruta Zoican-Loebick, Precision Combustion, Inc. *(confirmed)*

A New Direct Air Capture System Operating on Low Grade Heat Generated from Geothermal Plants
Gokhan Alptekin, TDA Research, Inc.

Case Study of Sorbent Based Direct Air Capture
Timothy Fout, National Energy Technology Laboratory*(confirmed)*

NETL Direct Air Capture Center
Ronald Breault and Nate Weiland, National Energy Technology Laboratory *(confirmed)*

Processible Porous Polymeric Fiber Adsorbents for Low-Concentrated Carbon Dioxide Capture
Ali Sekizkardes, Victor Kusuma, Patrick Muldoon, Jeffrey Culp, James Hoffman, David Hopkinson, and Janice A. Steckel, National Energy Technology Laboratory

Computationally-Aided Design of Amine-Functionalized MOFs for Direct Air Capture
Patrick Muldoon, Leidos *(confirmed)*

Computational Design of Alkylamine-Functionalized Polymer Sorbents
Surya Prakash Tiwari, Battelle Memorial Institute, LRST, NETL *(confirmed)*

Computational Fluid Dynamics for Direct Air Capture Reactor Design and Optimization
Bryan Hughes, Avinash Vaidheeswaran, Mingming Ge, and William Rogers, National Energy Technology Laboratory

Process Modeling and Optimization of DAC Systems and Novel Sorbent Materials
Daison Manuel Yancy Caballero, National Energy Technology Laboratory *(confirmed)*

Directly-Spun Epoxy-Crosslinked PEI Chemisorption Fiber Sorbents (CHEFS) for Direct Air Capture of CO_2
Qiuming Wang, National Energy Technology Laboratory *(confirmed)*

Pore Space Optimization
J. Fred McLaughlin, Zunshen Jiao, Geoffrey Thyne, UW SER and ESal LLC *(confirmed)*

Carbon Storage

Economic Analysis of Potential for Carbon Capture, Utilization, and Storage in the Gulf of Mexico (FWP-1022464)
Tim Grant, National Energy Technology Laboratory *(confirmed)*

NRAP Phase III T5: Understanding the Evolution of Financial Risk and Liability (NRAP)
Burt Thomas, National Energy Technology Laboratory *(confirmed)*

Adaptive, Risk-Based Monitoring Design for Risk Management (NRAP)
Erika Gasperikova, Lawrence Berkeley National Laboratory *(confirmed)*

Class II to Class VI Transition: Opportunities, Risks, and Benefits (NRAP)
J. William Carey, Los Alamos National Laboratory *(confirmed)*

Integrating Risk Assessment Methods for Carbon Storage: a Case Study for the Quest Carbon Capture and Storage Facility (NRAP)
Greg Lackey, National Energy Technology Laboratory *(confirmed)*

Strategies for Machine Learning-Based Segmentation of Geologic Computed Tomography (SMART)
Paul Holcomb, National Energy Technology Laboratory

Convolutional Long Short-Term Memory (convLSTM) for Spatio-Temporal Forecastings of Saturations and Pressure in the SACROC Field (SMART)
Brian McPherson, University of Utah *(confirmed)*

Using Deep Learning-Enabled Seismology to Illuminate Structure and Stress during Injection-Induced Seismicity in Decatur, IL (SMART)
Vivian Tang, Sherilyn Williams-Stroud, and Ahmed Elbanna, University of Illinois, ISGS

SACROC Machine Learning Model Development and Testing for SMART-CS Virtual Learning Environment (SMART)
Diana Bacon, Pacific Northwest National Laboratory *(confirmed)*

Non-Destructive Core Characterization of Potential Geologic Carbon Storage Formations (FWP-1022403)
Dustin Crandall, National Energy Technology Laboratory *(confirmed)*

The Role of Time-domain Electromagnetics in CO_2 Monitoring (FWP-1022403)
Rick Hammack, National Energy Technology Laboratory *(confirmed)*

The Energy Data Exchange - DOE Fossil Energy Carbon Management's (FECM) Trusted Data Curation Platform (EDX)
Chad Rowan, National Energy Technology Laboratory *(confirmed)*

Economic Analysis of Geologic Carbon Sequestration (FE0031837)
Shruti Khadka Mishra, Sandia National Laboratories

Leveraging CCS Research, Datasets, and Legacy Seismic to Support CCS Applications in the Midwest Regional Carbon Initiative (FE0031836)
Joel Sminchak, Battelle *(confirmed)*

Development of Geologic Information and Tools to Facility CCUS Deployment in the MRCI Region (FE0031836)
Mark Kelley, Battelle *(confirmed)*

Carbon Storage

Evaluating Infrastructure Requirements and Opportunities in the Midwest Regional Carbon Initiative (MRCI) Region (FE0031836)
Jared Hawkins, Battelle

Investigation of CO_2 Leakage to Drinking Water Formations During Carbon Sequestration (FE-0031837)
Yanrui (Daisy) Ning, Colorado School of Mines *(confirmed)*

A Summary of the Southwest Regional Partnership on Carbon Sequestration (SWP)
Brian McPherson, University of Utah *(confirmed)*

Characterizing the Subsurface 3-D Geological Heterogeneity of Stacked CO_2 Storage Reservoirs for the Wyoming Dry Fork CarbonSAFE Phase III Project (FE0031891)
Zunsheng Jiao, University of Wyoming *(confirmed)*

Geologic Characterization of the San Juan Basin CarbonSAFE Site (FE0031890)
William Ampomah, New Mexico Institute of Mining and Technology *(confirmed)*

Improving Subsurface Stress Characterization Using Machine Learning Workflow (FE0031684)
William Ampomah, New Mexico Institute of Mining and Technology *(confirmed)*

Portrait of a Depleted Field, Offshore Gulf of Mexico and its Potential for CCS (FE0031558)
Alex Bump, University of Texas at Austin *(confirmed)*

Environmental Justice Considerations for CCS Projects
Ramon Gil, Susan Hovorka and Katherine Romanak, Gulf Coast Carbon Center/BEG/UT *(confirmed)*

Data Needs for Estimating CO_2 Storage Capacity in Saline Aquifers with EasiTool: An Onshore Example from the SECARB Region
Carlos Uroza, University of Texas at Austin, Bureau of Economic Geology *(confirmed)*

Area of Review, Delineation Workflow for UIC Class VI Permitting: Marissa, IL Case Study
Carl Carman, University of Illinois *(confirmed)*

Lithofacies, Stratigraphy, and Reservoir Characteristics of the Galesville and Ironton Sandstones in OEE No. 1 and the Surrounding areas, North-central Illinois
Zohreh Askari, Illinois State Geological Survey, University of Illinois *(confirmed)*

CarbonWatch: Rock Physics-Based Machine Learning Solution for End-to-End Monitoring of CO_2 Storage Sites (SC0022499)
Qiuliang Yao, Petrolern LLC *(confirmed)*

An End-to-End Solution for In-Situ Stress Estimation Using Downhole Drilling Dynamics Data (SC0020469)
Hamed Soroush, Petrolern *(confirmed)*

Mineralization and Metamaterial Contrast Agent Monitoring in Geologic Carbon Storage Reservoirs
Jade Holliman, Pacific Northwesst National Laboratory *(confirmed)*

Derisk Basalt Reservoir via Regional Geologic Modeling and Simulation
Ruoshi Cao, Pacific Northwest National Laboratory *(confirmed)*

Brine Treatment Technology Testbed Facility
Ryan Klapperich, Energy & Environmental Research Center – UND *(confirmed)*

Carbon Storage

Laser-Based Sensing for Ensuring Carbon Capture Infrastructure Integrity
Shin-Juh Chen, Physical Sciences Inc. *(confirmed)*