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

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

Use of a Novel Process for Revolutionizing CO\textsubscript{2} Capture (FE0026825-06-35)
Maohong Fan, University of Wyoming

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

Flue CO\textsubscript{2} Membranes for Modular, Point Source Carbon Capture (SC0017124)
Jesse Kelly, Luna Labs USA, LLC

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\textsubscript{2}-Philic Block Copolymers with Intrinsic Microporosity (BCPIMs) for Post Combustion CO\textsubscript{2} Capture (SC0020730)
Ravi Prasad and Haiqing Lin, Helios-NRG, LLC

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\textsubscript{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

Bench-scale Development of a Transformational Switchable-hydrophilicity Solvent-enabled Absorption Process for Energy-efficient CO\textsubscript{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

Techno-Economic Analysis for MOF-based CO₂ Capture from NGCC Applications  
Ryan Hughes, National Energy Technology Laboratory

Framework for Optimization and Uncertainty Quantification and Surrogates: Updated Capabilities  
Brandon Paul, Anuja Deshpande, Miguel Zamarripa-Perez, Ryan Hughes, Michael Matuszewski, and Benjamin Omell, National Energy Technology Laboratory; Josh Boverhof, Lawrence Berkeley National Laboratory; Pedro Sotorrio and Brian Bartoldson, Lawrence Livermore National Laboratory

Techno-Economic Analysis and Optimization of Integrated NGCC-MEA System at High CO₂ Capture Levels  
Joshua Morgan, Anuja Deshpande, Brandon Paul, Miguel Zamarripa-Perez, Michael Matuszewski, and Benjamin Omell, National Energy Technology Laboratory

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

Characterizing the solvent/packing interactions with Wilhelmy plate for industrial packings and advanced solvents  
Yucheng Fu, Pacific Northwest National Laboratory

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

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 CO₂ into Renewable Natural Gas (SC0020795)  
Jonathan Peters, Susteon, Inc.

Novel, Efficient, Contactor Technology to Substantially Lower the Cost of Direct Air Capture of CO₂ (SC0020860)  
Mansour Masoudi, Emissol, LLC

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

Direct CO₂ Air Capture Using Acid-Base Ion-Exchange and Low-Grade Heat  
Joshua Charles, Advanced Cooling Technologies, Inc.
Efficient, Low-Energy Capture of Atmospheric CO$_2$
Codruta Zoican-Loebick, Precision Combustion, Inc.

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

NETL Direct Air Capture Center
Ronald Breault and Nate Weiland, National Energy Technology Laboratory

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

Computational Design of Alkylamine-Functionalized Polymer Sorbents
Surya Prakash Tiwari, National Energy Technology Laboratory

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 Yancy Caballero, National Energy Technology Laboratory

Directly-Spun Epoxy-Crosslinked PEI Chemisorption Fiber Sorbents (CHEFS) for Direct Air Capture of CO$_2$
Qiuming Wang and McMahan Gray, National Energy Technology Laboratory