University Coalition for Fossil Energy Research

2022 Virtual Annual Technical Review Meeting

Host: National Energy Technology Laboratory
3610 Collins Ferry Rd, Morgantown, WV 26505
Webinar Registration: https://attendee.gotowebinar.com/register/3954763428920338190
NETL Registration: https://netl.doe.gov/events/22UCFER

AGENDA
October 5th, 2022

	Introduction
11:00 – 11:15 am	**Welcome Remarks and Administrative Update** Dr. Brian Anderson, *Director, National Energy Technology Laboratory* Omer Bakshi, *DOE Project Officer, University Coalition for Fossil Energy Research*
11:15 – 11:45 am	**State of the Coalition** Bruce Miller, *Director, University Coalition for Fossil Energy Research*
	Integrated Carbon Management
11:45 – 12:05 pm	**Wire Arc Additive Manufacturing of Advanced Steam Cycle Components Using Location Specific Design Enhanced by High-Throughput Experiments and Machine Learning (06-UPitt-W2-19: Integrated Carbon Management-AUSC)** Wei Xiong, *University of Pittsburgh*
12:05 – 12:25 pm	**Adaptive Depth Neural Networks for Scale-Bridging Modeling of Multiphase Reacting Flows (06-PrU-W1-01: Integrated Carbon Management)** Michael Mueller, *Princeton University*
12:25 – 12:35 pm	**Integrated Carbon Management Q&A & Discussion**
12:35 – 1:05 pm	**LUNCH BREAK**
	Point Source Carbon Capture
1:05 – 1:25 pm	**Development of Novel Process Intensification Device, Acoustic Driven Packing Material (06-Uky-Z1-05: Point Source Carbon Capture)** Bradley Irvin, *University of Kentucky Research Foundation*
1:25 – 1:45 pm	**Crosslinked Microspherical Adsorbents from Lignite-derived Humic Acid for CO_2 Capture (06-UND-Z1-13: Point Source Carbon Capture)** Xiaodong Hou, *University of North Dakota*
1:45 – 2:05 pm	**A Novel Reactive Separation Method for Carbon Dioxide Capture from Flue Gas (06-USC-Z1-10: Point Source Carbon Capture)** Theodore Tsotsis, *University of Southern California*

2:05 – 2:25 pm	**Use of a Novel Process for Revolutionizing CO_2 Capture (06-Uwy-Z1-35: Point Source Carbon Capture)** Maohong Fan, *University of Wyoming*
2:25 – 2:45 pm	**Point Source Carbon Capture Q&A & Discussion**
2:45 – 2:55 pm	**BREAK**
	Hydrogen Fuel Production and Delivery
2:55 – 3:15 pm	**Development of a Novel Supersonic Hybrid Non-Equilibrium Plasma Reactor for Efficient and Tunable Co-Production of Hydrogen and Value-Added Solid Carbons (04-PrU-R1-10: Hydrogen Fuel Production and Delivery)** Andrey Starikovsky, *Princeton University*
3:15 – 3:20 pm	**Hydrogen Fuel Production and Delivery Q&A & Discussion**
	Emissions Quantification
3:20 – 3:40 pm	**Quantification of Methane Emissions from the Natural Gas Gathering System using Distributed Sensors (05-CMU-U1-12: Emissions Quantification)** Albert Presto, *Carnegie Mellon University*
3:40 – 3:45 pm	**Emissions Quantification Q&A & Discussion**
	Feasibility of Recovering Rare Earth Elements
3:45 – 4:05 pm	**Current Uses and Future Opportunities for US Industry in REE and CM Technologies and Markets: Knowledge-Base Tool Development (05-PSU-V1-04: Feasibility of Recovering Rare Earth Elements)** Francis Kuklis, *Pennsylvania State University*
4:05 – 4:10 pm	**Feasibility of Recovering Rare Earth Elements Q&A & Discussion**
4:10 – 4:20 pm	**Closing Remarks & Adjourn**