Yellow Highlight - Presents with Group 1, 3:30 PM - 4:30 PM; all others present with Group 2, 4:30 PM - 5:30 PM

#	POSTER TITLE	PRESENTER	PI(S)
	THRUST 4 - PROCESS SYNTHESIS AND DESIGN, LIFE CYCLE ANALYSIS AND ENVIRONMENTAL IMPACT		
	T4P1: Process Synthesis, Economic Evaluation and Modeling of the Components for the Entire CISTAR Process		
1	Co-Storage of H_2 and Battery for Decarbonized Liquid Fuel Production Processes with On-Site Renewable Power Plants	Shuaikang (Will) Du (PU)	Agrawal
	T4P8: Multi-scale Modeling for Reactor Design and Optimization		
2	Process Modeling and Technoeconomic Assessment of Biogas Reforming Pathways For Low-Carbon Ammonia Production	Damian Agi (UND)	Dowling
	T4P10: Decarbonization of Alkane Dehydrogenation Reactors through Renewable Electric Heating		
3	Simulation of Electrified Steam Methane Reformer (E-SMR) through Induction Heating	Yufei Zhao (PU)	Masuku
	T4P12: Shale Gas Field Development Planning Under Production Profile Uncertainty		
4	Shale Gas Field Development under Production Profile Uncertainty	Hamta Bardool (PU)	Bernal
	THRUST 7 - SYSTEMS-LEVEL DECARBONIZATION AND ANALYSIS FOR FUELS AND CHEMICALS		
	T7P2: CISTAR Fuel in an Evolving Energy Landscape		
5	Redefining the Future of Natural Gas: Potential Pathways for Methane Utilization in a Decarbonized Future	Jenesis Cochrane (NU)	Dunn, Notestein
	T7P5: Distributed Manufacturing of Electrochemical Processes in Microgrids		
6	Distributed Manufacturing for Electrified Chemical Processes in a Microgrid	Asha Ramanujam (PU)	Can Li
	THRUST 1 - DEHYDROGENATION		
	T1P3: Regenerable, Thermally Stable Alkane Dehydrogenation Catalysts		
7	Exploring Mechanisms of Coke Formation through Pt3M Catalysts	Joanna Rosenberger (PU)	Christina Li
8	Structure Sensitivity of Coke Formation on Pt-based Catalysts for Propane Dehydrogenation	Yu-Hsiang Cheng (PU)	Greeley
9	The Role of Natural Convection and Gas Phase Reaction on PDH Catalyst Testing	Ryan Alcala (UNM)	Datye
	T1P4: Non-Catalytic Alkane Cracking and Coupling		
*45	Decarbonizing Ethylene Production Using Concentrating Solar Power	Name	Datye
	T1P5: Non-Thermal Plasma-Assisted Alkane Dehydrogenation and Coupling		
10	Use of Kinetic Modeling to Probe the Chemical Opportunities in an Ethane Nonthermal Plasma	Denver Haycock (UND)	Schneider
11	Olefin/Liquid Production from Ethane Feeds using Nanosecond Pulsed Plasma	Russell Clarke (UND)	Hicks
	T1P6: Decarbonizing Ethylene Production with Low-Temperature Electrolysis		
12	Electrification of Ethylene Production by Ethane Dehydrogenation in Protonic Ceramic Electrochemical Cells Integrated with Heterogeneous Catalysts	Po-Chun (Casper) Huang (PU)	Tackett
	THRUST 2 - OLIGOMERIZATION		
	T2P1: Brønsted Acid-Catalyzed Olefin Oligomerization		
13	Kinetic Modeling of Ethylene Oligomerization on H-BEA Catalyst	Sai Praneet Batchu (NU)	Broadbelt
14	Assessing the Influence of Brønsted Acid Site Location in MFI Zeolites on Propene Oligomerization Rates and Selectivity	Diamarys Salome Rivera (PU)	Gounder

15	Understanding the Role of Extra-Framework Aluminum Species in Acidic Chabazite Zeolites Using Protolytic Alkane Activation Kinetics	Bereket Tassew Bekele (PU)	Gounder
16	Investigating the Influence of Structure-Directing Agents on Aluminum Distribution in MFI Zeolite Catalysts	Sarah Gustafson Wagers (PU)	Gounder
T2P4: Oligomerization Catalyzed by Transition Metals Based on Non-Zeolites			
17	Understanding the Effects of Non-polar Intrapore Liquids on Ethene Oligomerization Rates over Ni Mesoporous Catalysts	Christian Borrero Villabol (PU)	Gounder
18	Single Nickel Sites Isolated on Polyoxometalates for Light Olefin Oligomerization	Alba Scotto d'Apollonia (UND)	Hicks
19	Computational Exploration of the Catalytic Activity of Single Site Polyoxometalates for Oligomerization Reactions	Michael Appoh (UND)	Schneider
T2P5: Non-Thermal C-C Bond Coupling to Various Products			
20	Expanding the Product Profile of CO_2 Reduction with Electrocarboxylation	Andrew Weidner (NU)	Seitz
21	Spectroscopic Assessment of Enhancement Effects from Pulsed CO_2 Electrolysis at High Current Density	Xiao Kun Lu (NU)	Seitz
22	Kinetic and Mechanistic Analysis of Direct Olefin Oxidation on Cobalt Oxide Electrocatalysts	Matthew Hayes (NU)	Seitz, Broadbelt

THRUST 3 - C1 ACTIVATION

T3P6: Methane Dehydroaromatization			
23	Characterization of Molybdenum Supported on Pure Silica Zeolite Catalysts for Methane Dehydroaromatization	Angel Santiago-Colón (PU)	Gounder
24	Identification and Evolution of Active Sites in Isomorphously Substituted Fe-ZSM-5 Catalysts for Methane Dehydroaromatization (MDA)	Xinrui Zhang (NU)	Notetstein, Marks
T3P9: Carbon-Based Catalysts for Non-Oxidative Coupling of Methane			
25	Thermodynamics & Kinetics of NOCM on Carbon Catalyst Models	Luke Nunzio Pretzie (PU)	Greeley
26	Quantifying Rates of Carbon-catalyzed Non-oxidative Coupling of Methane	Justin Rosa-Rojas (PU)	Gounder

THRUST 6 - MEMBRANE SEPARATIONS

T6P1: Supported Ionic Liquid Membranes (SILMs) for Olefin/Paraffin Separations			
27	Spectroscopic Evaluation of Cation Solvation and Ion Pairing in Ag+ Facilitated Transport Membranes	Lucas Jabara (UTA)	Brennecke, Freeman
T6P2: Ceramic/Metal Hybrid Membranes for High Temperature H_2 Separations			
28	Equilibrium Conversion Shift and Coking Effects in a Propane Dehydrogenation Ceramic Membrane Reactor	Isabel Ibarra (UNM) & Ayrton Jordan (UNM)	Brinker
T6P3: Light Paraffin Separations with Reverse Selective Membranes			
29	Ionic Liquid/Poly(1,3-dioxolane) Membranes for the Fractionation of Light Paraffins	Justin J. Rosenthal (UTA)	Brennecke, Freeman
T6P4: Microporous Polymer Membranes for CISTAR Gas Separations			
30	Iptycene-based Polybenzoxazoles for High-Temperature Hydrogen Separation	Agboola Suleiman (UND)	Guo
31	Organosoluble Pentiptycene-based Polybenzoxazoles for High Temperature Gas Separation	Sandra Weber (UND)	Guo
T6P6: Ligand Protected Clusters Embedded in Polymer Membranes for Olefin-Paraffin Separation			

32	Aging Mitigation of Amine Modified PIM-1 for Highly Selective Propylene/Propane Separation	Bo Wei Cynthia (UND)	O'Brien
T6P7: Engineering Tough Polymer Membranes via Sacrificial Bonds			
33	Simultaneous Enhancement of Mechanical and Transport Properties in Facilitated Transport Membranes	Tiffany Jeng (UTA)	Sanoja

C2C PROJECTS

C2C-1: Electrochemical Conversion of Methane			
34	Probing of Novel Barium Niobate Perovkskite for Chemical Stability under Electrochemically-Simulated Low Oxygen Partial Pressures	Luke Denoyer (UNM)	Garzon
C2C-3: Computational Materials Science to Enhance Stability and Reactivity of Alkane Conversion			
35	Exploring Surface Structures of Pt3Sn and Pt3Mn Catalysts for the Propane Dehydrogenation Reaction	Anik Biswas (PU)	Greeley
36	Investigation of Ga and Zn Catalysts Supported on ZSM-5 for the CO_2-assisted Ethane Dehydroaromatization	Heloisa Ruschel Bortolini (NU/USP)	Notestein/ Assaf (USP)
C2C-7: Conversion of Greenhouse Gases Using Single Atom Catalysts			
37	Versatile and Robust Ni Single Atom Catalysts on Ceria	Brandon Burnside (UNM) Juliana Bertoldi (UNM/USP)	Datye

REU SUMMER PROGRAM POSTERS & ASSOCIATED PROJECTS

38	RET: High Entropy Alloys for Propane Dehydrogenation	Violet Hobbs	Datye, Alcala
39	REU: Barium Niobate Perovskites Thin Film Anode Synthesized via Polymer Assisted Deposition	Samantha Benner (UNM)	Garzon, Ramaiyan, Denoyer
40	RET: X-ray Tomography for Imaging Pd Membranes for H_2 Separation	Utahna Denetclaw (Shiprock Central School)	Thompson, Datye
41	RET: Solar Heating of an Endothermic Ethylene Reactor	William Kennedy	DeLaRiva,
42	Associated Project: Thermally Stable Single Atom Cu catalysts	Jesse Larence (UNM)	Datye

TECHNOLOGY MODULES

Reactor Oligomerization Technology Module			
43	High-Conversion Propylene Oligomerization on CISTAR-Developed Catalyst	Evan Sowinski (PU)	Ribeiro
Reactor Dehydrogenation Technology Module			
44	Propane Dehydrogenation: Comparison of CISTAR Catalysts	Evan Sowinski (PU)	Ribeiro