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# **CBE Senior Design Presentations**



## **Sustainable Chemical Manufacturing**

**MTTC Auditorium • South Campus  
Manufacturing Training & Technology Center  
800 Bradbury SE**

**RSVP for Parking Instructions and Lunch**

**[cbrozena@unm.edu](mailto:cbrozena@unm.edu)**

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### **Wednesday, May 1**

8:00 am • Manufacturing of Bio-Polyethylene from the Fermentation of Sugar Beets in North Dakota

Annie Burns, Jose Monclova, Charles Montoya, Jennifer Mussell, Nuria Ortiz, Antonio Perez Herreros

8:50 am • Catalytic Conversion of Steel Mill Exhaust to Fuel Grade Ethanol Using Rh/Mn-Supported on Mesoporous Silica Molecular Sieves

Fayidh Al Rashdi, John Alison, Zane Armijo, Kimberly Denman, Alexander Mings, Megan Senn

9:40 am • Production of genetically modified acellular pertussis components in DTaP vaccine manufacturing

Leyla Akhadov, Taylor Gabaldon, Jason James, Michael Stager, Edward Strach, Kyle Wrasman

10:30 am • Salmon-Derived Hemostatic Agents for the Treatment of Hemorrhaging in Trauma Victims

Roxanne Awais, Samuel Garcia, Jacob Lopez Ruvalcaba, Daniella Martinez, Esmeralda Martinez, Minh Pham

11:10 am • Methanol Synthesis Through Direct Hydrogenation of Captured Exhaust CO<sub>2</sub>

Joshua Allers, Eric Amdahl, Jacob Flack, Spencer McDonald, Sterling Saltz, Ryan Alcala

12:00 am • Lunch

12:30 pm • Transforming Barley Spent Grain from New Mexico Breweries into Furfural and Xylitol using Vacuum Distillation and Fermentation

Abdullah Alshehri, Sultan Alsuwaidi, Joe Bou Eid, Michael Lanctot, Adnan Mohammad

1:20 pm • Using Municipal Solid Waste from Landfills to Produce Electricity in Jamaica

Faris Alzahrani, Jessica Satterfield, Angel Villa, Homero Romero

2:10 pm • A completely bio-based production of adipic acid using a genetically modified E. coli bacterium

Aaron Kupper, Aidira Macias Gonzalez, Angelea Maestas- Olguin, Marissa Perez, Anyssa Romero, Joshua Trujillo,

3:00 pm • Hydrogen Production from Potato Waste Using Cell-Free Synthetic Pathway Biotransformation

Christopher Brock, Forrest Cheek, Ryan Hill, Derek Nelson, Serafina Lopez, Ruben Trujillo

3:50 pm • Manufacturing facility for High Density Polyethylene in Washington State, USA

Israel Angel, Chelsea Draper, Christian Pattyn, Brandon Pompeo