

CLUSTER 6: BIODIESEL FROM RENEWABLE SOURCES

“Cluster 6 has gotten underway rapidly, making Biodiesel and starting projects. We look forward to a full, informative, and fun summer.” Mr. Towler

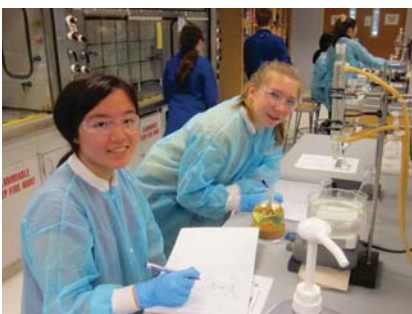
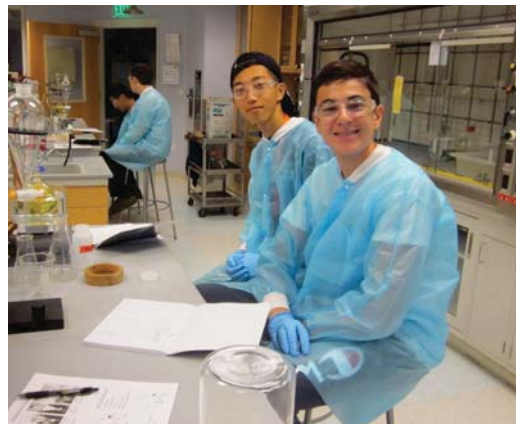
“On Sunday I arrived at COSMOS with a warm welcome. After settling into my dorm I walked around the campus’s with my cluster. Then after many icebreakers and a fun play fair program the day was over.” Adam Kazden

“Our First day of COSMOS began with lab safety presented by the UCSD Safety Office. Cluster 6 then went to the lab and made Biodiesel which will be cleaned, dried and tested over the next three weeks. We wrapped up the day with a lecture from Dr. Pomeroy about what fuels are.” Mr. Towler

“Today Prof. Nicole Steinmetz gave us our first discovery lecture on the applications of nanotechnology in medicine. In the afternoon, we chose our groups and the topics we will be exploring throughout the next four weeks for our final project.” Aileen Mi

“On Wednesday, Cluster 6 began the process of purifying biodiesel. They learned to use a separatory funnel and a hot plate to wash and dry biodiesel. In the afternoon, they listened to a lecture by Dr. Pomeroy about intermolecular forces and how fuels work.” Anakha Ganesh

“ On Thursday we learned how to access the library sources at UCSD. On our way to our lab, we found the art installations of the three metal trees. Unfortunately, though we were promised they would sing and talk, the trees did not make any noise. In the afternoon, we continued to work on our projects.” Angela Kou



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"Friday, we watched several recorded lectures and a documentary, Merchants of Doubt. After that, we went to the lab in York Hall and measured the water content in our biodiesel. Since all of us passed the test, we finished early and were able to visit the UCSD bookstore." Austin Yang

"On Monday, we continued our analysis of biodiesel. Every lab group was assigned a station to work in, and my partner and I worked with Dr. Watson in finding the cloud point and viscosity of our biodiesel. In the afternoon, we listened to Dr. Pomeroy's lecture of fossil fuels and diesel engines, which was an interesting experience." Cassidy Cheng

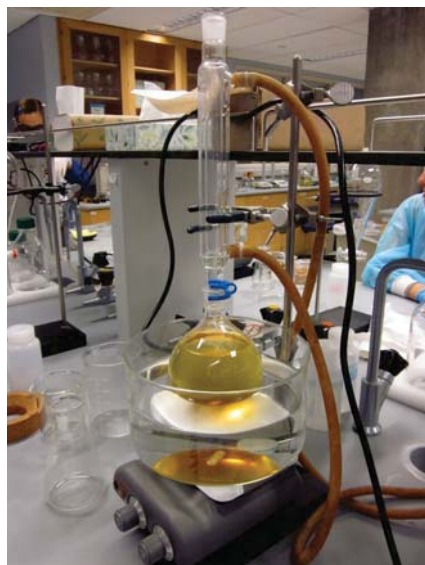
"Since it was a Tuesday, we had a Discovery Lecture by Dr. Rob Knight on the topic of microbes, such as the importance these microorganisms have on our health. Afterward, Cluster 6 went to the lab in order to resume our work on

the individual group projects we had chosen. We were also given a presentation about the UCSD Application System and were given the opportunity to speak to the admissions officers about any questions we had." Daniel Kim

"On Wednesday, July 17, we traveled to four places on a day-long field trip alongside cluster 3: an on-campus algae farm, the wave flume at the Scripps Institute of Oceanography, the Hubbs Research White Sea Bass hatchery, and Carlsbad Aquafarm. During the trip, various professors and researchers explained their equipment and processes to us- we were even able to interact with graduate students and a news crew at the wave flume. We ate lunch with stunning ocean-side views and concluded the day by watching Black Panther in Warren Lecture Hall." Ella Nghiem

"Thursday started out with a cluster discovery session in which profes-

sors from 6 of the 11 clusters gave presentations to the entire COSMOS body to give a sneak peak into their projects. The discovery session will conclude next week where the remaining 5 of 11 clusters will present. The rest of the day was dedicated to project groups in which students returned to the York lab to continue analyzing their respective chemical reactions." Evan Bian





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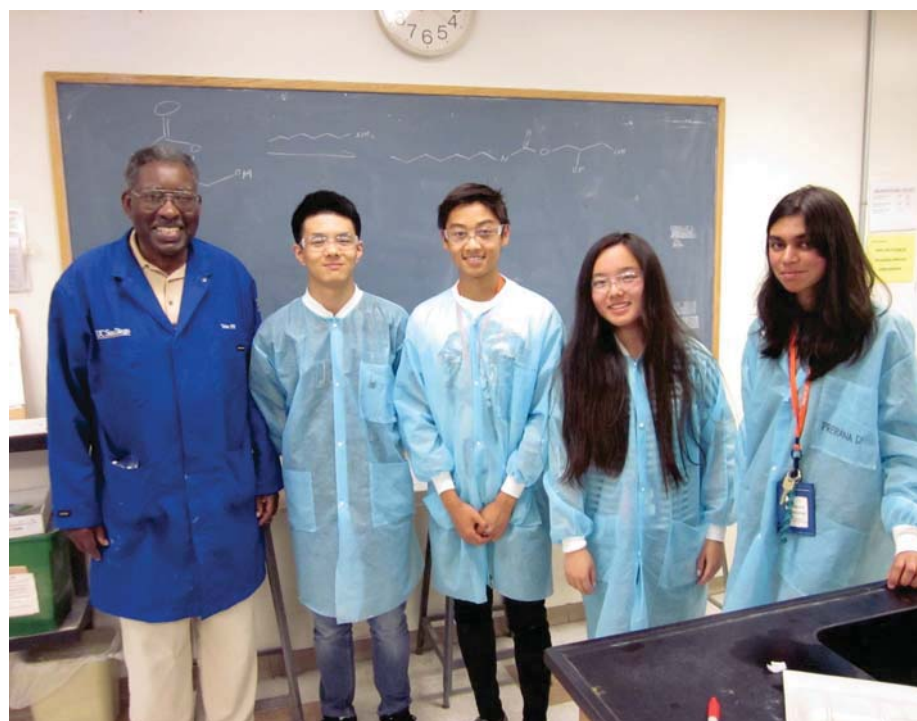
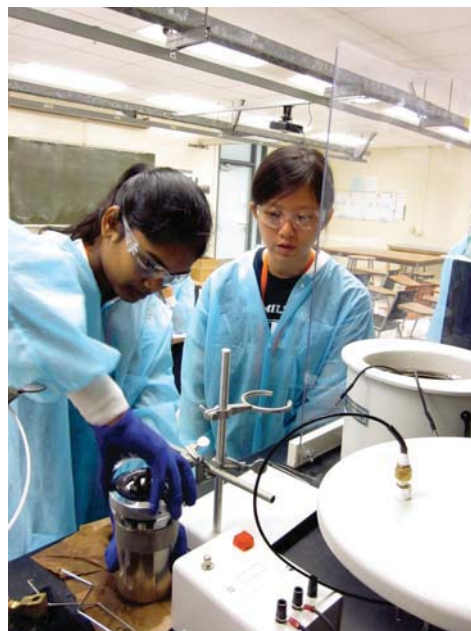
"On Friday we joined cluster 3 for guest lectures by Dr. Prather about aerosols impact on climate change and Dr. Mayfield about the uses of bio plastics. In the afternoon we continued to test our biodiesel for impurities. In the evening students who were leaving for family weekend got ready to leave." Iraa Kalambur

"Monday, we had a lab rotation in which we tested our biodiesel samples. My lab group did the viscosity and cloud point tests with Dr. Watson. Afterwards, our entire cluster went to get frozen yogurt and bonded." Jessica Liu

"On Tuesday, we had our third discovery lecture on climate change and the possible solutions to combat it. In the afternoon, we worked in our project groups and began planning our presentations. We also had a lecture on Women in STEM." Kinsey Clark

"On Wednesday, we started the day in the lab, performing various tests on our biodiesel to contribute to our certificate of analysis. In the afternoon, we had a lecture on the chemical analysis of our biodiesel by Professor Pomeroy. After classes were over, some of us headed over to Glider port with the Ra's to watch the Oceanside sunset." Michael Wu

"Thursday we attended a presentation where we learned about what the other clusters have been doing in the last three weeks. After that, we went to the lab where we continued to work on our projects and presentations for next week." Nicole Lazovsky





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"In the morning Friday, Dr. Ryan Simkovsky gave us a lecture on his research on algae and some of the problems with scaling up algae production from a lab to a large farm. May Linn Paulsen then gave us a lecture on ocean geobiochemistry and her work in measuring ocean alkalinity. After lunch, we cleaned up the lab that we first made biodiesel in and continued working on our final projects." Phillip Jeong

"On Monday, July 29, we opened the week with our first time organizing our thoughts from our projects into a presentation. Our guides for each of our projects clarified the requirements for the presentation. Shortly thereafter, we began our slideshows and posters, considering every aspect of our presentations along the way, from our scientific findings to visuals and speaking style. Later that afternoon, we continued our initial take at the presentation, gathering all data of which had had collected throughout the length of the project." Prerana Devadhar

"On Tuesday, we had our last discovery lecture from Dr. Margaret Roberts about censorship in China. Afterwards, we worked in our project groups to complete our posters and presentations." Shriya Araveeti

"On Wednesday morning, we went down to York Hall to clean our lab stations, as well as our glassware from the biodiesel production. Then, we spent the rest of the morning and afternoon finishing our posters and polishing our final presentations for Friday." Rocky Versace

"On Thursday, we went to NSB for our final science communications meeting. Afterwards, we put the finishing touches on our presentations, and completed our project posters. Afterwards, we were able to watch the sunset at gliderport." Xiuyuan Qiu

Friday was our last day to meet as a Cluster for activities. We spent the morning doing final revisions on presentation PowerPoints and practicing the presentations. After lunch, Clusters 3 and 6 met in NSB 2303 and all 10 project groups presented their projects to their peers and instructors. We look forward to Saturday, when we will present all of the projects from Cluster 6 to our guests before the awards ceremony. It's been a packed and fun four weeks, and we've all learned from our experiences here at UCSD COS-MOS and had a great time learning from each other. Mr. Towler

