

A message from one of your fellow students:

Hello Fellow Orgos!

I belong to a student group called SEAA (Students for Environmental Awareness and Action), this Thursday, we will be having a guest speaker who is an Organic Chemist and UMass alum.

Robert Byrnes is the owner of Nebraska Renewable Energy Systems, the president of the Nebraska Renewable Energy Association, and was the first registered producer of Biodiesel in the state of Nebraska. After receiving his B.S. in Organic Chemistry from UMass, Robert worked in the military doing water purification. After leaving the military, Robert became interested in sustainable agriculture and renewable energies. He has been living off the grid for over four years now, and is able to produce all of his own fuel, that he uses in vehicles and machinery for farming.

The Biochemical process of producing biodiesel is fascinating, and given our current energy crisis, is very applicable to today's problems. Climate change and energy security pervade contemporary scientific thought as well as modern political discourse, and as Organic Chemists, I think its important that we become aware of how to use our skills in a way that is beneficial and meaningful not just to the scientific community, but to our local community as well. By coming to this lecture, I hope you all will become aware of the significance of alternative fuels, and realize that Organic Chemistry plays a vital role in understanding these alternative energies.

-Why will oils from unsaturated fats work in "Grease cars" while oils from saturated fats will not (well, they kind of work, just not very well...think about what happens to greasy foods when you put them in the fridge, or think about the difference between butter and canola oil...)

-How does one go about producing Ethyl Stearate from Soybeans, and why is this a good fuel?

-What is Transesterification, and what role does it play in producing Biodiesel?

-What is the difference between transesterified lipids and hydrogenated alkane diesel? Which makes a better fuel? Which one is easier to produce?

Something to think about; while the process of producing biodiesel uses copious amounts of methanol, which can be dangerous to handle, it is a relatively simple process, and very PROFITABLE.

It would be really awesome if everyone could come and hear what Robert has to say. Keep in mind, he'll be speaking to a general audience, so the chemistry portion of the lecture will be pretty simple, however, Robert has agreed to stay afterwards for a Q & A session, and if anyone wants to take advantage of his science background, this would be the time to do it. I have told Robert to be expecting some Organic Chemistry students with some hard science questions, so he'll be prepared.

The lecture will be at 6:00 pm on Thursday night in Holdsworth 203.

Hope to see you there!

-Brett