

INORGANIC CHEMISTRY SEMINAR



Dr. Rebecca Sherbo

Harvard University, Chemistry and Chemical Biology & Harvard Medical School
System Biology

“Creating Sustainable Chemicals and Foods from Water, Air and Electricity”

Abstract: The production of common chemicals like fuels, fertilizers and food products is often energy intensive and requires fossil fuel-derived starting materials. Electrochemical and biological systems can enable the production of these chemicals in a more sustainable way. In the first half of my talk, I will discuss how a palladium membrane reactor enables hydrogenation reactions to be performed with electricity and water instead of with fossil fuel-derived hydrogen at high temperatures and pressures. I will then detail some of the shortcomings of pure electrocatalysis, and discuss how a hybrid electrochemical-biological system can enable the overproduction of more complex products like vitamins from only gases, electricity and water.

Wednesday, November 10th 2021

College | Physical Sciences
UCLA Chemistry & Biochemistry

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4:00 p.m. | Via Zoom