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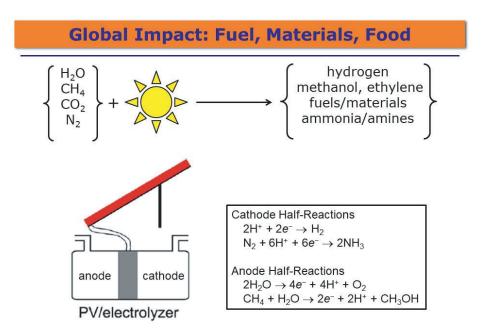
## Metal oxos in chemistry and biology



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## Abstract:

The dianionic oxo ligand occupies a very special place in coordination chemistry, owing to its ability to donate pi electrons to stabilize high oxidation states of metals. The ligand field theory of multiple bonding in metal-oxos predicts that there must be an "oxo wall" between Fe-Ru-Os and Co-Rh-Ir in the periodic table. There have been many attempts to break down the wall, but in my seminar I will report that it is still standing! I will discuss the roles metal-oxos play in two of the most important chemical reactions on planet Earth, water oxidation to oxygen in photosystem II, and hydrocarbon oxygenation catalyzed by cytochrome P450.



November 4, 2019, Kavli Auditorium, refreshments start at 3:15 and colloquium at 3:30 pm