As we move to decarbonize our energy landscape, we must not only develop viable liquid fuels for the future but we must also re-envision our chemical industry and economy. The carbon-based chemicals from which we make our medicines, detergents, plastics, fibers and almost everything we use on a daily basis, are derived today from petroleum. Fundamentally new pathways from new sources to the chemicals and liquid fuels that we depend on must be developed to successfully transition to a sustainable future. This talk will present strategies and reactions under investigation in the Goldberg group to make better use of natural gas reserves and carbon dioxide as potential sources for our chemicals and liquid fuels. We are designing organometallic catalysts to promote the selective partial oxidation of light alkanes to alcohols and olefins and the reduction of carbon dioxide to methanol.

ABOUT THE ANABELLE LEE MEMORIAL LECTURESHP

The Annabelle Lee Memorial Lectureship was established to honor the memory of Annabelle Lee Dessy. During the 1966-67 academic year, she suggested a name for a newly formed research seminar series, "Highlands in Chemistry", reflecting the geographic location of Virginia Tech and the wish that the program would reach out to the very best scientists. Created at the urging of the new Department Head at that time, Alan Clifford, the series has now been continuously offered for over 50 years.