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Department of Chemistry

Special Seminar

1 p.m. Wednesday, September 25 • 117/119 Smith Hall

Joe Allison, Ph.D., & Kristi Fjare, Ph.D.

Phillips 66, Phillips 66 Research Center

Catalytic Partial Oxidation of Methane: The Phillips 66 COPox Synthesis Gas Process

Abstract

At the turn of the century Conoco, now Phillips 66, began a significant effort on converting natural gas to diesel fuel via a synthesis gas, or syngas, through the Fischer-Tropsch route (Gas-To-Liquids or GTL). The syngas route that was studied in the GTL program was via an ultra-fast contact time catalytic partial oxidation of methane with oxygen. Process and catalyst development began in several ambient pressure laboratory reactors to an ultimate demonstration size plant that was designed to use up to 2 MMSCF/d of methane at pressures as high as 15 atm. This syngas process was termed the COPox Synthesis Gas Process and is now a part of the Phillips 66 technology portfolio. An overview of the process, including early catalyst development, will be presented.

Refreshments will be served.