

## **Seminar**

# **Value Added Chemicals from Acetylene, Ethylene and Isocyanides by Single to Multi-Cycle Catalytic Processes Using Late Transition Metal Heteroatom Stabilised Singlet Carbene Complexes**

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The catalytic conversion of the small molecule unsaturated substrates like acetylene, ethylene, and isocyanides to value-added targets is an important frontier in the domain of homogeneous catalysis. The talk will highlight our efforts towards this objective using the late transition metal-mediated reactions through iterative mechanistic understandings. Our journey across single-cycle catalyses like the alkyne hydroamination, and hydrohydrazination, to across various multi-component multi-cycle catalyses, namely, three-component amine-aldehyde-acetylene ( $A^3$ ), and azide-isocyanide couplings and the hydrazone-isocyanide-amine (HIA) coupling, will be narrated in keeping with the core theme of our research. Building superior catalysts through enhanced understanding of the catalyst mode of action lies at the heart of our endeavour.

***Friday, Dec 27<sup>th</sup> 2024***

***11:30 Hrs (Tea / Coffee 11:15 Hrs)***

***Auditorium, TIFRH***