UC RIVERSIDE UNIVERSITY OF CALIFORNIA | Materials Science and Engineering

FALL 2019 COLLOQUIUM SPEAKER

Probing Fast High Temperature Transformation in Nanoparticles for Energetics

The high temperature reactivity of metal/metal oxides are important in a wide variety of industrial applications including solar-thermal hydrogen generation, CO2 sequestering, chemical-looping combustion, and energetic materials, among others. In this seminar I will discuss the physical/chemical processes that occur between nanometals and nanometal oxides, towards developing a conceptual picture of rate limiting and phenomenological processes. This discussion will naturally lead to what makes nanoscale materials attractive for these applications, as well as some of their limitations.

OCT. 2, 2019 | **WINSTON CHUNG HALL 205/206** | **1 PM - 2 PM**

Michael Zachariah

Distinguished Professor of Chemical Engineering and Materials Science
University of California, Riverside

Michael Zachariah is primarily focused on synthesis of nanomaterials and characterization of their reactive properties. He has worked extensively on aerosol generated materials and the metrology of nanoparticles in both the liquid and gas phases. This includes the development of the new mass-spectrometry and ion-mobility methods to characterize nanoparticles and their reactivity. He is a recipient of the University of Maryland Outstanding Research Award, and the Sinclair Award for Sustained Excellence in Aerosol Research awarded by the American Associaition for Aerosol Research.

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