

JEFFREY I. ZINK INORGANIC CHEMISTRY SEMINAR SERIES



Prof. Suresh Bhargava

Centre for Advanced Materials and Industrial Chemistry, RMIT University

“Transformational Discoveries in Gold Chemistry: From Molecular Design to Nanoengineering”

Abstract: Gold, has emerged beyond jewelry metal, as one of the most fascinating and versatile materials in modern science. Advances in molecular chemistry and nanotechnology have transformed gold into a powerful platform for catalysis, biomedicine, sensing, energy conversion, and sustainable technologies. This lecture will explore the remarkable evolution of gold chemistry across multiple length scales — from molecularly engineered gold complexes to sophisticated nanoengineered architectures with unprecedented functional properties. By controlling gold at the atomic and nanoscale, it is now possible to tailor its electronic, catalytic, optical, and biological behaviour for highly targeted applications. Drawing on pioneering research from Professor Bhargava's laboratory at RMIT University, the presentation will highlight how fundamental discoveries in gold chemistry are being translated into transformative technologies. Selected examples will include gold-based catalytic systems, intelligent nano sensors, targeted therapeutic platforms, environmentally sustainable processes, and emerging applications at the interface of chemistry, materials science, and medicine. Beyond showcasing scientific advances, the lecture will illustrate how the convergence of molecular design, nanoscience, and translational innovation is redefining the role of noble metals in the twenty-first century. The talk aims to provide a broad perspective on how gold chemistry is shaping future technologies while addressing major global challenges in health, sustainability, energy, and advanced manufacturing.

Meet the Speaker

TBD | YH 3096

Friday, June 5th, 2026

12:00 p.m. | YH4222 - Collaboratory

Dongwon Yoo Seminar & Conference Hall

UCLA College | Physical Sciences
Chemistry & Biochemistry

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