UNIVERSITY OF CALIFORNIA, IRVINE

THE DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

Is Proud to Host a Seminar by:

PROFESSOR JAVIER READ DE ALANIZ

Dept. of Chemistry and Biochemistry

University of California, Santa Barbara

Thursday, March 9, 2023

2:00-3:20 PM

Zoom Meeting ID: 947 5627 7195, Passcode: 472700

EXPLORING LIGHT-RESPONSIVE MATERIALS

Abstract: Photons have multiple enabling advantages to control chemical reactions and stimuli-responsive materials. In this seminar, I will discuss our groups effort to design and develop a new class of negative photochromic molecules termed DASA, their incorporation into materials and subsequent effort to unlock their potential to convert light directly into mechanical work and control material properties. Additionally, a new Diels–Alder based photoclick platform to enable bio-orthogonal chemistry with spatial control for biomaterial applications will be discussed.

Bio: Javier Read de Alaniz joined the department of Chemistry and Biochemistry at UC, Santa Barbara in 2009. Born and raised in Las Vegas, New Mexico, he received his B.S. degree from Fort Lewis College (Durango, Colorado) in 1999 where he conducted undergraduate research under the direction of Professor William R. Bartlett. He obtained his Ph.D. under the supervision of Professor Tomislav Rovis at Colorado State University in 2006. His doctoral research focused on asymmetric catalysis. Javier then moved to California, where he worked in the area of total synthesis with Professor Larry E. Overman at the University of California, Irvine. During that time, he was the recipient of the University of California President's Postdoctoral Fellowship.

Our research group seeks creative, synthetic solutions to problems at the interface of chemistry and material science. Just as traditional organic chemist invents new reaction methodologies to access complex biologically active molecules, we develop new methods for the construction of stimuli-responsive molecules and materials. Our highly interdisciplinary work can be broken down into two key research areas: (1) development and application of a stimuli-responsive materials, (2) synthesis of well-defined and functional polymers and biomaterials.