Department of
Chemical and Environmental Engineering

2016—2017 Seminar Series

Friday, October 7th, 2016
9:30-10:30 AM
WCH 205/206

Charles Musgrave

Professor and Chair
Chemical and Biological Engineering
University of Colorado, Boulder

Organic Photocatalysts - Powerful Photoredox Reducing Agents Driven by Visible Light

Charles Musgrave is professor and chair of the Department of Chemical and Biological Engineering and Fellow of the Renewable and Sustainable Energy Institute and Materials Science Program at the University of Colorado at Boulder. His research focuses on using quantum mechanical simulations to predict the properties of materials and molecules and the mechanisms of chemical processes to accelerate the discovery of new materials, molecules and chemical processes. The Musgrave group is currently working on developing robust and rapid methods for high throughput computational screening of materials and catalysts. His group was the first to develop detailed mechanisms for various semiconductor surface reactions, atomic layer deposition processes and chemistries for the organic functionalization of semiconductors. His group has also published extensively on metal oxides and nitrides, catalysis, photocatalysis, and solar thermal water splitting.

Charles earned his BS in Materials Science and Engineering at the University of California at Berkeley and his M.S. and Ph.D. in Materials Science at Caltech with Prof. William A. Goddard. He performed his postdoctoral work with Prof. Klavs Jensen at MIT. He was a professor in the Department of Chemical Engineering at Stanford University from 1996 to 2008, a visiting professor in the Department of Chemistry and Biochemistry at Harvard University in 2004-2005. Prof. Musgrave won the First Feynman Prize in Nanotechnology in 1992, was a Powell Fellow at Stanford University, and was awarded the American Institute of Chemical Engineers Norcal Division Outstanding Teacher award in 2003. In 2003 he was selected for the NSF US-Japan Nanoscience and Technology Young Scientist Exchange Program.

UC RIVERSIDE | UNIVERSITY OF CALIFORNIA | Bourns College of Engineering