



2018–2019 POCC Lecture Series

May 23, 2019, 7:30 PM

6:30 reception in the Nobel Hall

The POCC Student Choice Lecture

Sponsored by Johnson & Johnson

Prof. Tomislav Rovis

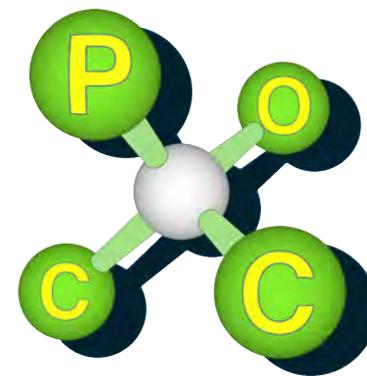
Columbia University

Controlling Catalysis with Visible Light

Carolyn Hoff Lynch Lecture Hall

Chemistry Building, University of Pennsylvania

The Philadelphia
Organic Chemist's
Club



POCClub.org

Tomislav Rovis was born in Zagreb in the former Yugoslavia but was largely raised in Southern Ontario, Canada. Following his undergraduate studies at the University of Toronto, he earned his Ph.D. degree at the same institution in 1998 under the direction of Professor Mark Lautens. From 1998–2000, he was an NSERC postdoctoral fellow at Harvard University with Professor David A. Evans. In 2000, he began his independent career at Colorado State University and was promoted in 2005 to Associate Professor and in 2008 to Professor and John K. Stille Chair in Chemistry. His group's accomplishments have been recognized by a number of awards including an NSF CAREER and a Roche Excellence in Chemistry award. He has been named a GlaxoSmithKline Scholar, Amgen Young Investigator, Eli Lilly Grantee, Alfred P. Sloan Fellow, Monfort Professor at Colorado State University, Fellow of the American Association for the Advancement of Science, Katritzky Young Investigator in Heterocyclic Chemistry, and an Arthur C. Cope Scholar. In 2016, he moved to Columbia University where he is currently Professor of Chemistry.

Abstract: Visible light is an abundant energy source that can also be delivered on demand. Harnessing the energy in visible light has recently been accomplished through the use of photoredox catalysis, which can generate radical intermediates by an oxidation or reduction step to initiate a bond formation followed by a return of the electron or hole to close the catalytic cycle. We have been engaged in expanding the versatility of visible light photoredox catalysis and have uncovered strategies to effect C–H activation in unactivated positions of alkanes as well as controlling catalysis spatially and temporally. Reaction development, mechanistic investigations and synthetic applications will be the subject of this lecture.