



UNIVERSITY OF SOUTHERN CALIFORNIA

DEPARTMENT OF CHEMISTRY

Organic / Materials Chemistry Seminar

"Student Hosted Colloquium"

Sponsored by Organic Syntheses, Inc.

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Student Host – Ivan Demianets

"Versatile Iridium Catalysts for a Broad Range of Asymmetric Transformations"

The ability to readily access small-molecule building blocks at will has important consequences for the discovery and development of novel medicines and materials. It is particularly beneficial when the chemical methods are convenient while at the same time economically and environmentally tenable and sustainable. A focus of our research program at ETH-Zurich is the identification, study, and development of novel reactions and methods for preparation of functionalized structures. We are especially interested in catalytic processes that are easily executed and utilize readily available starting materials. We will discuss several new reaction processes that provide ready access to a host of fundamentally versatile building blocks for synthesis. The presentation will focus in part on the unique reactivity of Ir-complexes with a novel phosphoramidite-olefin ligand. We have found that these can activate allylic alcohols towards a wide range of direct displacement reactions, giving rise to optically active products; this has led to the development of fully stereodivergent processes. We will discuss the concept of stereodivergency and implications in drug discovery and manufacturing.

Professor Dr. Erick M. Carreira

Laboratorium fuer Organische Chemie
Eidgenössische Technische Hochschule
Zürich, Switzerland

Friday, April 7, 2017

12:00 PM

Olah Library

Scientific Community is Invited