

DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE
SEMINAR SERIES
FALL 2019

DATE: WEDNESDAY, OCTOBER 23, 2019

LOCATION: TIERNAN HALL LECTURE 1

TIME: 1:00-2:20PM

GUEST SPEAKER

Dr. Jeehiun Katherine Lee
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Rutgers University
New Brunswick, NJ

TOPIC

Gas Phase Studies of *N*-Heterocyclic Carbene Catalysts

ABSTRACT

N-Heterocyclic-stabilized carbenes (NHCs) have become widespread in chemistry in recent years, due to their versatility. They are efficient ligands for organometallic catalysts; they are organocatalysts in their own right; and in protonated form, they comprise a class of ionic liquids, which have potential as environmentally friendly, nonvolatile solvents. Despite the widespread use of these carbenes as novel ligands and of the dialkylimidazolium salts as ionic liquids, very few fundamental reactivity studies have been conducted. Understanding the fundamental properties will aid in the continued development, design, application and mechanistic understanding of these intriguing species. In this talk, our recent work in understanding the intrinsic properties and reactivity of NHCs, through computational and experimental studies, will be discussed.

BIO

Dr. Jeehiun Katherine Lee received a B.A. in Chemistry from Cornell University (1990, summa cum laude), and her doctorate in Organic Chemistry from Harvard University (1994). Following a stint as a National Institutes of Health Postdoctoral Fellow at the University of California, Los Angeles, with Professor Ken Houk, Dr. Lee moved on to her current position, as a Professor of Chemistry at Rutgers University. Professor Lee is the recipient of the NSF CAREER Award, the Alfred P. Sloan Foundation Fellowship, and the ACS PROGRESS/Dreyfus Lectureship Award. She is active in the organic chemistry community, serving on both the Reaction Mechanisms Conference board, and the Reactive Intermediate Coordinating Committee, which together oversee several international conferences in the physical organic chemistry field. She is also an Associate Editor for the journal *ACS Omega*. Professor Lee's current research interests focus on the study of reactivity and mechanisms in organic and bioorganic catalysis.

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