Due to the enthusiastic response to the organic/bioorganic lectures, the Chemistry Committee decided to introduce a corresponding lectureship in inorganic/organometallic chemistry for the spring semester. Thus, as is presently the case, the organic/bioorganic lecture will be offered in the fall semester and the spring lectureship will focus on inorganic/organometallic chemistry.

BINGHAMTON UNIVERSITY
DEPARTMENT OF CHEMISTRY

THE 14TH BIANNUAL

Eisch Lectureship in Inorganic/Organometallic Chemistry

Friday April 29, 2022, 4 p.m.
Smart Energy Building,
Fountain Room

BINGHAMTON
UNIVERSITY
STATE UNIVERSITY OF NEW YORK

22-061

Professor John J. Eisch

A native of Milwaukee, Wis., John J. Eisch received a BS from Marquette University (*summa cum laude*, 1952), and a PhD from Iowa State University in chemistry (1956). He won a Union Carbide Postdoctoral Fellowship to work with Karl Ziegler at the Max Planck Institute in Mulheim, Germany (1956), and at European Research Associates in Brussels (1957). In his early career, Eisch was a faculty member at St. Louis University, University of Michigan and Catholic University. Eisch was hired at Binghamton University (then called SUNY Binghamton) in 1972 as chairman of the Chemistry Department, and became distinguished professor in 1983. Over his 40+ -year career, he graduated 50 PhD students, trained scores of other students, published 400 scientific articles, and also served as expert witness in patent litigations and as an industrial consultant. Eisch was a demanding teacher but took pride in students who performed well. In his personal life, he was extremely sharp-witted and humorous, much to the delight of his close family members. He enjoyed reading, languages (particularly German) and, earlier in life, walking and travel. Until his death at age 88, he remained an active supporter of the Chemistry Department at Binghamton University. He is survived by his wife, Joan, four children and two grandchildren.

Professor John J. Eisch (1930–2019)

THE 14TH BIANNUAL

Eisch Lectureship in Inorganic/Organometallic Chemistry

Friday April 29, 2022, 4 p.m.
Smart Energy Building,
Fountain Room

Professor Karen Goldberg

Department of Chemistry
University of Pennsylvania

Molecular Oxygen as a Reagent in Late Transition Metal Organometallic Chemistry

From environmental and economic standpoints, molecular oxygen represents the ideal oxidant for chemical transformations. It is readily available, inexpensive particularly if used without separation from air) and environmentally benign. However, more expensive and/or hazardous oxidants are often employed in homogeneous metal-catalyzed oxidation reactions. An insufficient knowledge of how transition metal complexes react with molecular oxygen has inhibited catalyst design of effective aerobic systems. Kinetic and mechanistic studies of the reactions of oxygen with various late metal complexes, including metal alkyls and hydrides, will be presented along with our nascent mechanistic understanding of these reactions. The generality of these aerobic oxidation reactions and the potential for incorporation into hydrocarbon functionalization strategies will be discussed.

Karen Goldberg, Vagelos Professor in Energy Research and inaugural director of the Vagelos Institute for Energy Science and Technology at the University of Pennsylvania (Penn), earned her AB from Barnard College and her PhD in chemistry from the University of California, Berkeley. Following postdoctoral study at The Ohio State University, she joined the faculty at Illinois State University in 1989. In 1995, she moved to the University of Washington in Seattle and in 2010, became the Nicole A. Boand Endowed Professor in Chemistry there. From 2007-2017, Goldberg also served as director of the first NSF Phase II Center for Chemical Innovation, the Center for Enabling New Technologies through Catalysis (CENTC). (www.nsfcentc.org). In 2017, she moved to her current position at Penn.

Goldberg is best known for her work developing mechanistic understanding of fundamental organometallic reactions, and for application of that knowledge to the creation and optimization of new catalytic systems. Her lab has made significant contributions to our understanding of the mechanisms of C-H, C-C and C-X reductive elimination and oxidative addition reactions, b-hydride elimination reactions and the insertion of molecular oxygen into metal-hydride and metal-carbon bonds.

She has served in numberous capacities for the American Chemical Society (ACS), including on advisory boards, selection committees, as subdivision chair and councilor. She currently serves on the board of Chemical Sciences and Technology (BCST), the International Advisory Committee of the International Solvay Institutes, the scientific advisory boards of the NSF Center for Sustainable Nanotechnology (CSN) and the NSF Center for Innovative and Strategic Transformation of Alkane Resources (CISTAR), the technical review panel for the Materials and Chemical Science and Technology Directorate at the National Renewable Energy Laboratory (NREL), and the advisory boards of two Royal Society of Chemistry journals. She is an elected Fellow of the American Association for the Advancement of Science and a member of the Washington State Academy of Science. In 2015, she received the Carol Tyler Award from the International Precious Metal Institute and in 2016, the ACS Award for Organometallic Chemistry. She was elected to the American Academy of Arts and Sciences in 2017 and to the National Academy of Sciences in 2018.

Previous Lectureship Recipients

2012
Stephen L. Buchwald
MIT

2013
David W. C. MacMillan
Princeton University

2014
Brian M. Stoltz
California Institute of Technology

2015
Eric N. Jacobsen
Harvard University

2016
Bob Crabtree
Yale University
Phil Baran
Scripps Research Institute

2017
Stephen J. Lippard
MIT
Daniel A. Singleton
Texas A&M

2018
Clifford P. Kubiak
University of California, San Diego
Scott E. Denmark
Univ. of Illinois, Urbana-Champaign

2019
John F. Hartwig
University of California, Berkeley
Gregory C. Fu
California Institute of Technology

2020
Vern L. Schramm
Albert Einstein College of Medicine