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 17TH BIANNUAL

Eisch Lectureship in Inorganic/ Organometallic Chemistry

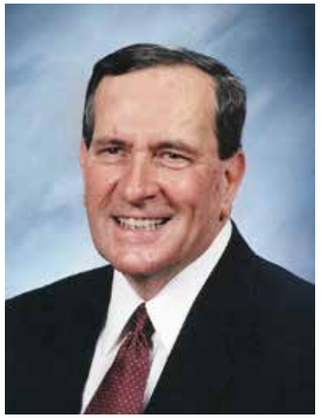
Friday, April 5, 2024, 4 p.m.
Smart Energy Building, Fountain Room

BINGHAMTON
UNIVERSITY
STATE UNIVERSITY OF NEW YORK

24-025

Professor John J. Eisch

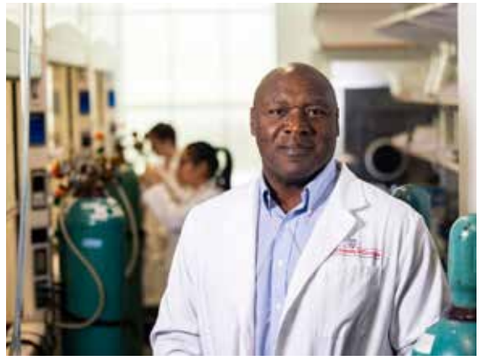
A native of Milwaukee, Wis., John J. Eisch received a BS from Marquette University (*summa cum laude*, 1952), and a PhD from Iowa State University in chemistry (1956). He won a Union Carbide Postdoctoral Fellowship to work with Karl Ziegler at the Max Planck Institute in Mulheim, Germany (1956), and 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)

Gregory H. Robinson

UGA Foundation Distinguished Professor of Chemistry
Department of Chemistry
The University of Georgia



THE 17TH BIANNUAL

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Gregory H. Robinson is a native of Anniston, Alabama. As both a gifted athlete and honor student in high school, he earned a football scholarship to Jacksonville State University (Alabama). A four-year letterman on the Gamecock football team while earning All-Gulf South Conference and Gulf South Conference Defensive Player of the Year honors, Robinson earned his BS in chemistry from JSU (1980). He received his PhD (1984) from the University of Alabama, where he studied synthetic inorganic main group chemistry in the laboratory of Professor Jerry L. Atwood. After spending a decade on the faculty of Clemson University (South Carolina), Professor Robinson joined the faculty of the University of Georgia (1995) and presently holds the title of Foundation Distinguished Professor of Chemistry. Robinson's research, concerning the synthesis, structure, and reactivity of unusual molecules of the main group (earth abundant) elements, has been described as "provocatively innovative and strikingly creative." Research highlights include: *(a)* experimental realization of the concept of *metalloaromaticity* — proof that molecules containing properly constrained metallic ring systems can exhibit traditional aromatic behavior; *(b)* synthesis and molecular structure of the first compound containing a metal-metal triple bond between two main group metals — the first "digallyne" — the gallium analog of acetylene; *(c)* synthesis and molecular structure of the first compound containing a boron-boron double bond — the first "diborene" — the boron analog of ethylene; and *(d)* carbene-stabilization of highly reactive diatomic allotropes such as silicon, phosphorus, and arsenic. Robinson has published more than 170 peer-reviewed research articles in journals such as *Science*, *Nature Chemistry*, *Angewandte Chemie* and the *Journal of the American Chemical Society*. Notably, he has received numerous honors including the Southern Chemist Award (1998), the Humboldt Research Prize (2012), the F. Albert Cotton Award in Synthetic Inorganic Chemistry (2013), and the Southeastern Conference (SEC) Faculty Achievement Award (2014). Robinson is a fellow of the Royal Society of Chemistry (2017) and was recently elected to the National Academy of Sciences (2021).

N-Heterocyclic Carbenes and Dithiolene Radicals: Counter-intuitive Main Group Chemistry

Our laboratory has long pursued the synthesis, structure and reactivity of unusual molecules that prominently feature main group elements. These efforts resulted in several discoveries, including the experimental realization of "metalloaromaticity" (the concept that metallic rings may also display traditional aromatic behavior as exhibited by benzene), the first example of a molecule containing a triple bond between two main group metals (the gallium analog of acetylene), and the first compound containing a boron-boron double bond — the first "diborene". Recent research efforts have concerned N-heterocyclic carbene stabilization of highly reactive main group molecules such diphosphorus (P2), diarsenic (As2), and disilicon (Si2). Furthermore, we have utilized carbene-stabilization to trap elusive main group oxides such as Si2O4 and P2O4. This presentation will prominently feature our recent efforts to augment the molecular template of N-heterocyclic carbenes and their unexpected conversion to stable dithiolene-based chemical radicals. These novel radicals have shown promise in the activation of small molecules, such as ammonia.

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

2022
Karen Goldberg
University of Pennsylvania

2023
Kendall N. Houk
University of California, Los Angeles

Polly L. Arnold
University of California, Berkeley