Eric W. Kaler became the 16th president of the University of Minnesota on July 1, 2011. His return to lead his alma mater (Ph.D. 1982), among the nation’s largest and most comprehensive universities, followed a distinguished career as a chemical engineering innovator and scholar. He has published more than 200 peer-reviewed papers and holds 10 U.S. patents.

Kaler, one of the nation’s leading experts on complex fluids, was elected in 2014 to the American Academy of Arts and Sciences in two categories: for his work as a chemical engineer and as a higher education administrator. In 2010, Kaler was elected to the National Academy of Engineering, based on his distinguished and continuing achievements in original research. In 2013, he was named a Charter Fellow of the National Academy of Inventors.

As University of Minnesota president, Kaler has focused on core priorities. These include: academic excellence, access for qualified students and a commitment to diversity; careful stewardship of tuition and public dollars; affordability; growing a world-class research enterprise that aligns with the needs of the state of Minnesota and its industries; and a deep commitment to public engagement and outreach, locally and globally.

From 2007 to 2011, Kaler served as provost and senior vice president for academic affairs at Stony Brook University in Stony Brook, New York. While at Stony Brook, he was also vice president for Brookhaven National Laboratory Affairs. Previously, he was dean of the University of Delaware’s College of Engineering and the Elizabeth Inez Kelley Professor of Chemical Engineering. He also taught at the University of Washington.

He received his undergraduate degree from the California Institute of Technology in 1978.

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**Lecture 1: Polymerization in Organized Fluids**

*Thursday, March 30, 2017:*
Reception: 11:00 am, CBEC Lobby
151 W. Woodruff Avenue
Lecture: 11:30 am - 12:30 pm, 130 CBE

Surfactant molecules aggregate in water to form organized structures of a variety of shapes and sizes. Under certain conditions the addition of a hydrophobic liquid leads to the creation of thermodynamically stable microemulsions, which can also have a range of structures and topologies. These surfactant microstructures are fluid, but the structures can be fixed by appropriate polymerization reactions. I will discuss three different polymerizations. First, a microemulsion of monomer in water will be polymerized to produce nanoparticles containing a high molecular weight polymer, then polymerizable monomers will be used to produce thin spherical shells from vesicles and long polymer rods from micelles. In situ small angle neutron scattering (SANS) during microemulsion polymerization helps elucidate the mechanism of polymerization, and both SANS and cryo-TEM show the structural evolution of vesicles and micelles during polymerization.

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**Lecture 2: The Changing Face of Public Higher Education and Its Impact on Chemical Engineers**

*Friday, March 31, 2017:*
Reception: 9:30 am, CBEC Lobby
151 W. Woodruff Avenue
Lecture: 10:00 am - 11:00 am, 110/120 CBEC

Public higher education is at a crossroads. The dramatic decisions made by states during and soon after the Great Recession drove extraordinary increases in tuition and, in many cases, a spike in student debt. The outcome of the 2016 elections and a rejection of scientific fact added another layer of challenges. The question before us is how to continue to deliver on our missions of teaching, research and public service in the presence of ongoing budget and political challenges. Options to be explored include public-private partnerships, educational efficiencies, the political role of a university president, and a refocusing of priorities, with an emphasis on the STEM fields.
WILLIAM G. LOWRIE AWARDS PROGRAM

~LOWRIE LECTURSHIP AWARD PRESENTATION~

Eric W. Kaler

~SPECIAL STUDENT AWARDS & RECOGNITIONS~

~Undergraduate~

- Kevin Ikeda: 2017 NSF Graduate Research Fellowship Honorable Mention.
  (Advisor: Fan).
- Michael Jindra: AIChE Best Poster Award, Sustainability Section, AIChE 2016 Annual Meeting.
  (Advisor: Fan).
- Lagnajit Pattanaik: 2017 NSF Graduate Research Fellowship Honorable Mention.
  (Advisor: Brunelli).

~Graduate~

- Gokhan Celik: 2017 AIChE Catalysis and Reaction Engineering Division Travel Award;
- Rebecca Hanes: 2016 AIChE Computing and Systems Technology Division W. David Smith
  Student Paper Award. (Advisor: Bakshi).

~AIChE Student Chapter Officers~

Co-Presidents: Lynn Bakes and Michael Jindra; Internal Vice President: Tori Krebs;
External Vice President: David D’Ilma; Secretary: Allison Brunner; Treasurer: Thomas
Menker; Marketing Chair: Stiphany Tieu; Event Coordinator: Courtney Prebul; Mentorship Chair: Nathan Randall; Intramural Chair: Thomas Menker; Sr. Class Representative: Kevin Ikeda; Jr. Class & E-Council Representative: Eric Collins; Sophomore Class Representative: Yara Mohammad; Freshman Class Representative: Thomas Porter; Webmaster: Lena Ta. (Advisor: Asthagiri)

~ChemE Car Officers~

President: A.J. Wahlstrom; Battery Team Leader: Shoyo Hakozaki; Chassis Team Leader:
Ryo Nakahata; Pressure Vessel Team Leader: Kapil Shankaran; Timing Mechanism Team Leader: Henry Karagory; Treasurer: Scott Kanta. (Advisor: Tomasko)

~CEGC Officers~

Academic Officer: Kai Chen; Business Officer: Dhruba Deka; Facilities Officer: Saurabh
Ailawar; Graduate Research Symposium Officer: Abhilaash Dehankar; Recruitment Officer: Kihlo Lee; Social Officer: Tapajyoti Ghosh.

~Graduate Research Symposium Officers~

Chairs: Abhilaash Dehankar and Aamena Parulkar; Committee Members: Saurabh
Ailawar, Deven Baser, Nilish Deshpande, Tapajyoti Ghosh, Varsha Gopalakrishnan,
Deeksha Jain, Rutuja Joshi, Dhruba Deka Jyoti, Jenny Park, Sumant Patankar, Mariah Whitaker.

~AIChE (American Institute of Chemists) FOUNDATION~

Outstanding Undergraduate Award: Sushmitha Ravikumar. (Advisor: Ozkan)
Outstanding Graduate Student Award: Varsha Gopalakrishnan. (Advisor: Bakshi)
Outstanding Postdoctoral Student Award: Zhuo (Joe) Cheng. (Advisor: Fan)

~AIChE STUDENT AWARDS~

AIChE Central Ohio Section Outstanding Student Award: Michael Jindra
Donald F. Othmer AIChE Sophomore Academic Excellence Award: Emily Fox

~CBE DEPARTMENT AWARDS~

Undergraduate Patents/Publishing Award:
Charles Fryer
(Advisor: Fan)

Outstanding Undergraduate Award for Research Excellence:
William Drees
(Advisor: Fan)
Kevin Ikeda
(Advisor: Fan)
Michael Jindra
(Advisor: Fan)
Jenna Lutkman
(Advisor: Ozkan)
Peter Sandvik
(Advisor: Fan)
Nick Singstock
(Advisor: Fan)
Ivan Susin-Pires
(Advisor: Palmer)
Lucas Watson
(Advisor: Zolin)
Trevor Wendt
(Advisor: Ozkan)

Outstanding Graduate Award for Academic Achievement:
Donald Belcher
(Advisor: Palmer)
Gokhan Celik
(Advisor: Ozkan)
Chin Cheng
(Advisor: Yang)
Cheng Chung
(Advisor: Fan)
Paul Garman
(Advisor: Lee)
Yang Han
(Advisor: Ho)
Tien-Lin Hsieh
(Advisor: Fan)
Minkyu Kim
(Advisor: Asthagiri)
Andrew Maxson
(Advisor: Zolin)
Katja Meyer
(Advisor: Ozkan)
Gauri Nabar
(Advisor: Winter)
Kristopher Richardson
(Advisor: Palmer)
Witopo Salim
(Advisor: Ho)
Zi Tong
(Advisor: Ho)
Dongzhu Wu
(Advisor: Fan)
Dikai Xu
(Advisor: Fan)
Qiang Zhang
(Advisor: Asthagiri)

Outstanding Post-Doc Award for Research Excellence:
Doruk Dogu
(Advisor: Ozkan)
Zhaogang Yang
(Advisor: Lee)

Chemical Hygiene Committee (CHYCOMM) Awards:
Outstanding Lab Safety Award - Department Wide: Dr. Ozkan's Group
Outstanding Lab Safety Award - Bio: Dr. Palmer's Group
Outstanding Lab Safety Award - Traditional: Dr. Brunelli's Group
Previous Recipients of the Lowrie Lectureship:

- 1996 Lecturer: John F. Davidson, University of Cambridge
- 1997 Lecturer: William R. Schowalter, University of Illinois at Urbana-Champaign
- 1998 Lecturer: James Wel, Princeton University
- 1999 Lecturer: Judson King, University of California, Berkeley
- 2000 Lecturer: Robert Langer, MIT
- 2001 Lecturer: Roy Jackson, Princeton University
- 2002 Lecturer: Alexis T. Bell, University of California, Berkeley
- 2004 Lecturer: John H. Seinfeld, California Institute of Technology
- 2005 Lecturer: Charles A. Eckert, Georgia Tech
- 2006 Lecturer: Alice P. Gast, Massachusetts Institute of Technology
- 2007 Lecturer: Greg Stephanopoulos, Massachusetts Institute of Technology
- 2008 Lecturer: Carol K. Hall, North Carolina State University
- 2009 Lecturer: Gabor A. Somorjai, University of California, Berkeley
- 2010 Lecturer: Rakesh K. Jain, Harvard Medical School
- 2011 Lecturer: Frank S. Bates, University of Minnesota
- 2012 Lecturer: Pablo G. DeBenedetti, Princeton University
- 2013 Lecturer: Mark E. Davis, California Institute of Technology
- 2014 Lecturer: William F. Banholzer, University of Wisconsin-Madison
- 2015 Lecturer: Enrique Iglesias, University of California, Berkeley
- 2016 Lecturer: Nicholas Peppas, University of Texas at Austin

The William G. Lowrie Lectureship was established in the department of chemical engineering at The Ohio State University on October 1, 1995 to honor distinguished alumnus William G. Lowrie. The lectureship is awarded annually to an individual who has made outstanding contributions to fundamental or applied research in the field of chemical engineering.

Thank you for attending!