#### The Max T. Rogers Lectureship Series in Chemistry Michigan State University

The Michigan State University Department of Chemistry has helped sponsor an annual lecture series that brings world-renowned scientists to the campus each year. The lecture series was co-sponsored by the Renaud Foundation for 39 years, and hence, traditionally became known as the Renaud Lecture Series. Although the philanthropic trust of the Renaud Foundation was liquidated, the Chemistry Department has continued this prestigious series of lectures.

An anonymous donor has helped spark widespread support for the Lecture Series in the name of Max T. Rogers. Dr. Rogers, a physical chemist who served as Professor of Chemistry at Michigan State University for over 40 years, was a special member of the Department of Chemistry and the University. His outstanding contributions in the area of magnetic resonance spectroscopy, and his enlightened view of science, added prestige and distinction to the Department of Chemistry and the University community. It is a privilege for the MSU Department of Chemistry to continue the lecture series in the name of Professor Max T. Rogers.



#### Previous Max T. Rogers Distinguished Lecturers

1949	M. A. Lauffer	1981	Henry Taube*
1950	Milton Burton	1982	R. A. Marcus*
1951	Melvin S. Newman	1983	Berni J. Alder
1952	Harvey Diehl	1984	K. Neil Bartlett
1953	Melvin Calvin*	1985	Jean-Marie Lehn*
1954	Richard Dodson	1986	J. Calvin Giddings
1955	Leon Marion	1987	Harry B. Gray
1956	Joseph J. Katz	1988	Thomas C. Bruice
1957	I. M. Klotz	1989	Richard N. Zare
1958	John D. Roberts	1990	Ahmed H. Zewail*
1959	Henry Eyring	1991	John A. Pople*
1960	Herbert A. Laitinen	1992	Gerhard L. Closs
1961	George Watt	1993	John Bercaw
1962	Derek H. R. Barton*	1994	Jerrold Meinwald
1963	Peter J. W. Debye*	1995	Martin Karplus
1964	Charles Tanford	1996	Paul C. Lauterbur*
1965	E. J. Corey*	1997	Graham R. Fleming
1966	Manfred Eigen*	1998	Alexander Pines
1967	Ronald S. Nyholm	1999	Dudley R. Herschbach*
1968	Herbert C. Brown*	2000	Keith U. Ingold
1969	Harden M. McConnell	2001	Peter B. Moore
1970	F. Albert Cotton	2002	Michael J. Sailor
1971	Carl Djerassi	2003	Robert Tycko
1972	Linus Pauling*	2004	John C. Polanyi*
1973	Paul D. Bartlett	2005	A. Paul Alivisatos
1974	Gerhard Herzberg*	2006	R. Graham Cooks
1975	William N. Lipscomb*	2007	Sir John Meurig Thomas
1976	Leslie E. Orgel	2008	Donald G. Truhlar
1977	Roald Hoffmann*	2009	Chad A. Mirkin
1978	William P. Jencks	2010	Ann E. McDermott
1979	Ilya Prigogine*	2011	Nathan S. Lewis
1980	Ronald Breslow	2012	Raymond C. Stevens

\* Nobel Laureates

MICHIGAN STATE

Department of Chemistry



Presents

# Professor Louis E. Brus

Samuel Latham Mitchill Professor of Chemistry

Department of Chemistry, Columbia University

4:10 pm Thurs., Oct. 3, 2013

3:10 pm Fri., Oct. 4, 2013

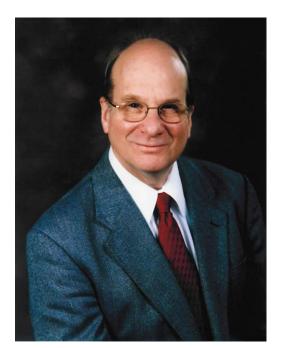
### **Lecture Topics**

## "Nanoscience: Quantum Dots, Carbon Nanotubes, and Graphene"

Thursday, Oct. 3, 2013 4:10 pm, Room 1200 Cyclotron Building - MSU

#### "Dimensionality and Strong Electron Correlation in Nanoscience"

Friday, Oct. 4, 2013 3:10 pm, Room 136 Chemistry Building – MSU



ouis E. Brus, the son of an insurance salesman, had to juggle his early passion for physical chemistry with learning the basics of warfare at sea as he entered Rice University in Houston, Texas, on a Naval ROTC scholarship. Upon graduating in 1965, he was commissioned as an ensign in the Navy, but received a special dispensation to take a fouryear leave of absence to allow him to enter graduate school at Columbia University, New York, where he worked with his mentor Richard Bersohn on the photodissociation of sodium iodide vapor.

After receiving his doctorate in chemical physics in 1969, Brus returned to the Navy as a lieutenant and served as a scientific staff officer at the US Naval Research Laboratory in Washington, DC. There, he and his colleagues worked on surface chemistry and infrared chemical lasers. After leaving to work at AT&T Bell Laboratories, Brus' focus shifted to gaining a fundamental understanding of energy flow in solids, specifically, how excited electronic energy becomes vibrational and heat energy over time.

It was his work on colloidal semiconductor nanocrystals, or quantum dots, that led to his being recognized as one of the leading researchers in the field of nanoscience, which began in the early 1980s by studying redox reactions involving the surface states of photoexcited semiconductor materials. A key discovery came in 1983 when he noticed how electronic properties changed with the particle size of materials. Brus returned to Columbia University as a Professor in 1996 where he currently holds the Samuel Latham Mitchill Chair.

His fundamental research contributions have been recognized in recent years with the Irving Langmuir Prize in Chemical Physics from the American Physical Society in 2001, election to the US National Academy of Sciences in 2004, the 2005 Chemistry of Materials Prize from the American Chemical Society. and the OSA Wood Prize in 2006. In 2008 he received the first Kavli Prize in Nanoscience (shared with Sumio liima). in 2010 the National Academy of Sciences Award in Chemical Sciences, followed in 2011 by the Peter Debye Award in Physical Chemistry from the ACS and in 2012, the Bower Award for Achievement in Science from the Franklin Institute. His present interests include carbon nanotubes and graphene, transition metal oxide nanocrystals, and chemical applications of local electromagnetic fields.