

J.K.N. JONES

John Kenyon Netherton Jones, Ph.D. Birmingham University. Assistant lecturer and then lecturer at Bristol University 1936-1944, he was engaged in munitions research and training during the Second World War. He resigned at the end of the war with the rank of captain, and returned to academic work as senior lecturer at Manchester University 1945-1948 and then as reader in chemistry at Bristol University 1948-1953. He came to Queen's in 1953 as Chown Research Professor of Chemistry, a position he held until his death in 1977.

Professor Jones' outstanding achievements in carbohydrate chemistry were recognized by his election as Fellow of the Royal Society of London in 1957 and of the Royal Society of Canada in 1959. The Division of Carbohydrate Chemistry of the American Chemical Society presented him with the Claude S. Hudson Award in 1969, and in 1975 he received the Anselme Payen Award from the Cellulose, Paper and Textile Division. In March 1975 he was awarded the third Sir Norman Haworth Memorial Medal of The Chemical Society (London).

Professor Jones was, at all times, an educator of the highest rank and an inspiration to a large number of graduate students, from whom he evoked, as a result of his enthusiasm, sincerity, and gentle character, tremendous respect and affection. All of his students, former research associates, colleagues, and friends will long remember this truly fine and outstanding gentleman.

The J.K.N. Jones Visitorship was established in memory of Professor Jones, and is funded by the income from the bequests made in his name by his friends, colleagues and former students.

PREVIOUS JONES LECTURERS

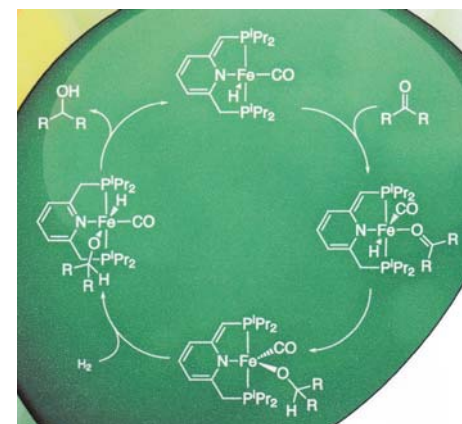
- 2012 • *J.F. Stoddard*
- 2011 • *J.A. Caruso*
- 2010 • *T. Marks*
- 2010 • *G. van Koten*
- 2009 • *P.B. Corkum*
- 2008 • *M. Gruebele*
- 2005 • *W. Klemperer*
- 2001 • *G. Ozin*
- 1997 • *M.S. Brookhart*
- 1993 • *B.O. Fraser-Reid*
- 1990 • *S. Hanessian*
- 1982 • *R. U. Lemieux*



Department of Chemistry Queen's University

is honoured to host the
2013 Jones Lecturer:

Prof. David Milstein
Department of Organic Chemistry,
Weizmann Institute of Science
Israel



Departmental Lecture

"Design and Application of Metal-Catalyzed Reactions for Sustainable Chemistry "

Friday, April 26, 2013
11:30 am

Room 117, Chernoff Hall

PROF. DAVID MILSTEIN



Professor David Milstein

The Israel Matz Professorial Chair of Organic Chemistry
Department of Organic Chemistry
Weizmann Institute of Science
76100 Rehovot, Israel

David Milstein received his PhD degree at the Hebrew University of Jerusalem in 1976 with Prof O. Blum. He carried out postdoctoral research at Colorado State University, where, together with his advisor John Stille, he discovered the Stille Reaction. In 1979 he joined the DuPont Company in Wilmington, Delaware, where he became a Group Leader in the homogeneous catalysis area. In 1987 he accepted a professorial appointment at the Weizmann Institute of Science, becoming Head of the Department of Organic Chemistry in 1996-2005. In 2000 he became Head of the Kimmel Center for Molecular Design, and he has been the Israel Matz Professor of Organic Chemistry since 1996. His research interests focus on the development of fundamental organometallic chemistry and applications to the design and implementation of new environmentally benign processes catalyzed by transition metal complexes.

More specifically, Professor Milstein's research includes the insertion of transition metal complexes into chemical bonds to activate them towards uncommon transformations and to form the basis for the design of new catalytic reactions and new synthetic methodology. This work has resulted in the first demonstration and mechanistic evaluation of metal insertion into strong C-C bonds and to catalytic C-F activation. In recent years, his group has developed a new approach to bond activation by metal complexes, involving metal-ligand cooperation by aromatization-de-aromatization processes of pincer-type complexes, and they have designed several environmentally benign catalytic reactions based such as (a) ruthenium-catalyzed dehydrogenative coupling of alcohols to form esters and H₂ (b) hydrogenation of esters to alcohols under mild conditions (c) coupling of amines with alcohols to form amides with liberation of H₂ (d) selective synthesis of primary amines directly from alcohols and ammonia (e) direct formation of acetals by dehydrogenative coupling of alcohols (f) generation of imines and hydrogen by coupling of alcohols with amines (g) dehydrogenative amidation of esters (h) dehydrogenative acylation of alcohols with esters (i) hydrogenation of amides to amines and alcohols (j) mild iron-catalyzed hydrogenation of ketones to alcohols (k) iron catalyzed CO₂ hydrogenation to formate salts (l) hydrogenation of CO₂-derived organic carbonates, carbamates, ureas and formates as alternative routes for the conversion of CO₂ to methanol (m) catalytic transformation of alcohols to carboxylic acid salts using water as the terminal oxidant. These reactions are efficient, proceed under neutral conditions and produce no waste.

More about Professor Milstein may be found at <http://www.weizmann.ac.il/weizsites/milstein/> and http://en.wikipedia.org/wiki/David_Milstein.

SELECTED HONOURS & AWARDS

- Kolthoff Prize by the Technion (2002)
- The Israel Chemical Society Prize (2006)
- Elected to the German National Academy of Sciences-Leopoldina (2006)
- The Miller Professorship, UC Berkeley (2006)
- The ACS Award in Organometallic Chemistry (2007)
- Inaugural Novartis Lectureship, Harvard Univ, (2009)
- Arthur D. Little lectureship, MIT, (2009)
- The RSC Sir Geoffrey Wilkinson Award (2010)
- The Novartis Lectureship, Scripps, (2010)
- The Lord Lewis Lectureship, Cambridge Univ, (2011)
- The Ernest Swift Lectureship, Caltech, (2011)
- The Meitner-Humboldt Senior Award (2011)
- The EuCheMs Lecturer (2012)
- Elected to the Israel National Academy of Sciences and Humanities (2012)
- The Israel Prize (2012, Israel's highest honor)