

## J.K.N. JONES

John Kenyon Netherton Jones obtained his Ph.D. at Birmingham University. He was hired as an assistant lecturer and then lecturer at Bristol University 1936-1944, where he 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 University 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 these students 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

2016 • *F. Winnik*

2015 • *M. Pinto*

2015 • *T. Swager*

2014 • *W. Yang*

2013 • *D. Milstein*

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  
2017 Jones Lecturer:

#### **Professor Jeffrey Bode**

Department of Chemistry  
ETH Zürich



"Synthetic Methods for the Building  
Block Economy"

Friday, October 27, 2017  
11:30 am

Room 117, Chernoff Hall

## PROFESSOR JEFFREY BODE



### Professor Jeffrey Bode

ETH Zürich  
Lab. für Organische Chemie  
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8093 Zürich  
Switzerland

The Bode Group aims to develop new reactions and reagents for the synthesis of complex molecules and their applications to chemical biology and materials sciences. In the field of catalysis, the Bode group pioneered new reactions with chiral N-heterocyclic carbenes and the catalytic, kinetic resolution of amines. More recently, the Bode Group has developed SnAP and SLAP reagents for the one-step synthesis of chiral, saturated N-heterocycles from aldehydes and ketones. This chemistry is widely employed in the pharmaceutical industry and the SnAP and SLAP reagents are commercially available from several vendors.

A major focus of the Bode group is the chemical synthesis of biomolecules including peptides, proteins, and bioconjugations. In 2006, Prof. Bode developed the alpha-ketoacids–hydroxylamine (KAHA) ligation to form amide bonds without protecting groups or coupling reagents. This reaction allows unprotected peptides to be chemoselectively coupled, enabling the synthesis of proteins for chemical biology and therapeutic applications. The KAHA ligation has also been extended to a unique approach to producing large numbers of small, bioactive beta-peptides simply upon mixing the components in water. The simplicity and safety of this method forms the basis of a chemical outreach program in which high school students can prepare, screen, and optimize beta-peptide based antibiotics.

In order to access larger structure or to conduct conjugations on folded proteins, the Bode group is developing amide-forming ligations from potassium acyltrifluoroborates, (KAT). These unique functional groups undergo extremely rapid amide-forming reactions with amine derivatives. The Bode group is applying the KAT ligation to challenging synthetic problems including the formation of protein–protein conjugates, hydrogels, and new amide-based materials. Prof. Bode's efforts in new reaction development are characterized by elegant solutions to challenging synthetic problems and thorough mechanistic investigations. His reactions are easy to use and provide direct access to molecules that cannot be easily formed by other approaches. The reagents and catalysts are often commercially available, facilitating their adoption by other groups.

## SELECTED HONOURS & AWARDS

- 2018 Mukaiyama Award
- 2013 Fellow of the Royal Society of Chemistry, UK
- 2012 ERC Starting Grant
- 2011 Elias J. Corey Award (ACS)
- 2010 Hirata Gold Medal
- 2008 Arthur C. Cope Scholar Award (ACS)

## ACADEMIC BIOGRAPHY

- 1996 B.S.; Trinity University, Texas, USA (Chemistry),  
B.A.; Trinity University, Texas, USA (Philosophy)
- 1998 Candidacy for Ph.D; California Institute of Technology, Pasadena, USA
- 2001 Dok. Nat. Sci.; ETH Zürich, Switzerland
- 2001-2003 JSPS Postdoctoral Fellow; Tokyo Institute of Technology
- 2003-2007 Assistant Professor; University of California, Santa Barbara, USA
- 2007-2009 Associate Professor; University of Pennsylvania, USA
- 2009 Full Professor; University of Pennsylvania, USA
- 2010-present Full Professor; ETH–Zürich, Switzerland
- 2013-present Visiting Professor; WPI-ITbM, Nagoya University