THE KENNETH RUSSELL ENDOWED LECTURE

Kenneth Russell came to Queen's in 1954. He had research experience in polymer chemistry at Cambridge and Princeton, in thermodynamics of rocket fuels at Penn State and in kinetics of atom recombination at Manchester. He was known particularly for his polymer research and first year and polymer lectures (dating back to 1956). He retired officially in 1990.

His interest in polymer chemistry arose through wartime work on butyl rubber. This led to a Ph.D. thesis on isobutene polymerization by Friedel Crafts catalysts, including kinetic studies of the effects of various co-initiators. His research at Queen's led to an understanding of the dual role of a wide range of co-initiators.

Free radical studies at Princeton led to determination of transfer constants for transfer agents and retarders (still quoted in the Polymer Handbook).

His other main research areas, inspired in large measure by parallel work at Du Pont, consisted of structural studies of polyethylene and grafting of vinyl monomers to polyethylene. These carried on for 12 years into his retirement and profited from cooperation with many members of staff. A main factor in the incorporation of this lecture series was Dr. Russell's work with Drs. Whitney and Parent.

SELECTED RECENT PUBLICATIONS

- "Printable, Degradable and Biocompatible Ion Gels From a Renewable ABA Triblock Polyester and a Low Toxicity Ionic Liquid", B. Tang, D. K. Schneiderman, F. Zare Bidoky, C. D. Frisbie, and T. P. Lodge, *ACS Macro Letters*, 6, 1083-1088, 2017.
- "Robust Polymer Electrolyte Membranes with High Ambient-temperature Lithium Ion Conductivity via Polymerization-Induced Microphase Separation", S. A. Chopade, J. G. Au, Z. Li, P. W. Schmidt, M. A. Hillmyer, and T. P. Lodge, ACS Appl. Mater. Interfaces, 9, 14561–14565, 2017.
- "Mechanically Tunable, Readily Processible Ion Gels by Self-Assembly of Block Copolymers in Ionic Liquids", T. P. Lodge and T. Ueki, Accts. Chem. Res. 49, 2107-2114, 2016.
- "Multicolored, Low Power, Flexible Electrochromic Devices Based on Ion Gels", H. C. Moon, C.-H. Kim, T. P. Lodge and C. D. Frisbie, ACS App. Mater. Int., 8, 6252-6260, 2016.
- "Permeability of Rubbery and Glassy Membranes of Ionic Liquid Filled Polymersome Nanoreactors in Water", S. So, L. J. Yao, T. P. Lodge, J. Phys. Chem B., 119, 15054-15062, 2015.
- "Synergistic Increase in Ionic Conductivity and Modulus of Triblock Copolymer Ion Gels", B. Tang, S. P. White, C. D. Frisbie, and T. P. Lodge, *Macromolecules*, 48, 4942-4950, 2015.
- "Photoreversible Gelation of a Triblock Copolymer in an Ionic Liquid", T. Ueki, Y. Nakamura, R. Usui, Y. Kitazawa, S. So, T. P. Lodge, and M. Watanabe, Angew. Chem. Intl. Ed., 54, 3018-3022, 2015.

Queen's Chemistry

Department of Chemistry
Queen's University

is honoured to host the
2018 Russell Lecturer:

Dr. Timothy Lodge
Department of Chemistry and
Department of Chemical
Engineering & Materials Science
University of Minnesota

"Ionic Liquid/Block Polymer Nanocomposites: Remarkably Versatile, Functional Materials"

Friday, April 6, 2018
11:30 AM
Room 117, Chernoff Hall

DR. TIMOTHY LODGE

Timothy Lodge
Department of Chemistry and Department of Chemical Engineering & Materials Science
University of Minnesota
117 Pleasant Street SE
Minneapolis, MN 55455

Professor Timothy Lodge is currently a Regents Professor in the Department of Chemistry and the Department of Chemical Engineering & Materials Science at the University of Minnesota. He received his B.A. and Ph.D. degrees from Harvard University and the University of Wisconsin, respectively. He has been on the faculty at Minnesota since 1982. His research is mainly concerned with multicomponent polymer systems such as block copolymers, which can undergo self-assembly to form interesting nanostructures in both solution and bulk. His program involves 1) synthesis of model polymers, 2) characterization of their molecular features, 3) assessment of the material structure by scattering and microscopy, and 4) exploring dynamic processes such as diffusion and the kinetics of structural re-arrangement. Between 2001 and 2017, he was the Editor-in-Chief of the ACS journal Macromolecules, and in 2011 he became the founding Editor for a new journal, ACS Macro Letters. He has won many awards for his distinguished contributions to polymer science. His publications have been cited more than 27,000 times.

SELECTED HONOURS & AWARDS

- Paul J. Flory Education Award, Polymer Chemistry Division of the American Chemical Society, 2018
- Fellow, American Academy of Arts and Sciences, 2016
- Fellow, Polymer Chemistry Division of the American Chemical Society, 2016
- Fellow, Neutron Scattering Society of America, 2016
- Herman F. Mark Polymer Chemistry Award from the Polymer Chemistry Division of the American Chemical Society, 2015
- Regents Professor, University of Minnesota, 2013
- Fellow, American Chemical Society, 2010
- Award in Polymer Chemistry, American Chemical Society, 2010
- Fellow, American Association for the Advancement of Science, 2009
- International Scientist Award from the Society of Polymer Science, Japan, 2009
- Paul Flory Polymer Research Award, POLYCHAR, 2004
- American Physical Society Polymer Physics Prize, 2004
- National Science Foundation Special Creativity Award, 2002
- Distinguished McKnight University Professor, University of Minnesota, 2001
- Arthur K. Doolittle Award, PMSE Division, American Chemical Society, 1998