

GEOFFREY WESCOTT HARRIS

ACADEMIC QUALIFICATIONS

Royal Grammar School		Newcastle upon Tyne, UK
B.A.	1973	Natural Science (Chemistry) Oxford University, UK
M.A. and D. Phil.	1975	Chemistry, Oxford University, UK

CURRENT RESEARCH INTERESTS

Development and application of spectroscopic equipment for the study of the chemistry of the atmosphere. Study of the exchange of trace gases between the atmosphere and the biosphere. Tunable diode laser spectroscopy. Fourier transform infrared spectroscopy. Tropospheric ozone and the chemistry of the background atmosphere in connection with climate change processes.

PROFESSIONAL CAREER

- 1975-1977 Post-Doctoral Scientist, University of Cambridge, Cambridge UK with Prof. B.A. Thrush, F.R.S.
- 1977-1978 Post-Doctoral Scientist SAPRC, University of California, Riverside, CA.
- 1978-1982 Assistant - Associate Research Chemist, Leader of the Basic Chemistry Research Group, Statewide Air Pollution Research Center, (Director Prof. J.N. Pitts, Jr.), University of California Riverside, Riverside, CA.
- 1982-1983 Consultant to Ford Motor Co. Ltd., Dearborn, Michigan, USA and to Dept. of Chemistry, York University, Toronto, Canada on tunable diode laser applications.
- 1983-1986 Senior Scientist and (from 1985), Director of Environmental Research, Unisearch Associates Inc., Toronto, Canada. Development and application of laser and chemiluminescence based environmental research and monitoring instruments.
- 1986-1993 Max Planck Institute for Chemistry, Mainz, Germany. Air Chemistry Department, (Director, Prof. Dr. Dr.h.c. P.J. Crutzen). Leader, Optical Instrumentation and Measurements Group. May, 1991, promoted to C3-Professor position within the MPI, 1992 Acting Director (Stellvertretende Abteilungsdirektor) during Prof. Crutzen's 12 month sabbatical leave.
- Aug. 1993 – June 2008: Director of the Centre for Atmospheric Chemistry, York University
- Aug. 1993 - present: York University, Chemistry Department
Guy Warwick Rogers Chair in Atmospheric Chemistry
Professor of Chemistry
- July – Dec. 2008: Sabbatical. Visiting Professor, Max Planck Institute for Chemistry, Mainz, Germany

UNIVERSITY SERVICE

Departmental, Faculty, University Committee, Assignments, with dates

Faculty of Graduate Studies (Graduate Programme in Chemistry) Member, July 1994 to June 2007

Vice President's Committee on Urban and Sustainability Research, 2003-

Faculty of Graduate Studies, Physics and Astronomy, member, July 2005 to June 2012.

Search Committee for Chemistry Department Chair, 2007 (Chair)

NATIONAL AND INTERNATIONAL RESPONSIBILITIES

National & international committees

ETech Environmental Technology Committee, 2003-

Advisory Committee on Transboundary Science (ACTS), MOE, April 1, 2006-

NSERC Analytical and Physical Chemistry Grant Selection Committee, 2007-2010

Member, External Review Committee, International Max Planck Research /Schools (IMPRS) Evaluation of the IMPRS "Atmospheric Chemistry and Physics", in Mainz 2008

STATEMENT OF CURRENT EXTERNAL ACTIVITIES

In compliance with Professor Harris's agreement with York University, two months of each year is spent at the Max Planck Institute, Germany. This on-going research/collaboration is an extension of research done at York.

PUBLICATION HISTORY

Refereed Journal Publications: 76

Other Refereed Publications: 16

Conference presentations (Since 1993): 30

Recent Publications in Referred Journals

70. J. Williams, H. Fischer, G.W. Harris, P.J. Crutzen, P. Hoor, A. Hansel, R. Holzinger, C. Warneke, W. Lindinger, B. Scheeren, J. Lelieveld, 2000, Variability-lifetime relationship for organic trace gases: A novel aid to compound identification and estimation of HO concentrations, *J. Geophys. Res., Atmospheres*, 105, 20,473-20,486.
71. C. L. Schiller, S. Locquiao, Timothy J. Johnson and G.W. Harris, 2001, Atmospheric measurements of HONO by tunable diode laser absorption spectroscopy, *Journal of Atmospheric Chemistry*, 40, 275-293.
72. H. Fischer, D. Brunner, G.W. Harris, P. Hoor, J. Lelieveld, D.S. McKenna, J. Rudolph, H.A. Scheeren, P. Siegmund, H. Wernli, J. Williams, and S. Wong, 2002, Synoptic tracer gradients in the upper troposphere over central Canada during the Stratosphere-Troposphere Experiments by Aircraft Measurements 1998 summer campaign, *J. Geophys. Res.*, 107, 10.1029/2000JD000312.
73. L. Lange, H. Fischer, U. Parchatka, C. Gurk, T. Zenker, and G.W. Harris, 2002, Characterization and application of an externally mounted catalytic converter for aircraft measurements of NO_y, *Review of Scientific Instruments*, 73, 3051-3057.
74. R.A. Salmon, C.L. Schiller, G.W. Harris, 2004, Evaluation of the salicylic acid – Liquid phase scrubbing technique to monitor atmospheric hydroxyl radicals, *Journal for Atmospheric Chemistry*, 48, 81-104.
75. K.J. Wall, C.L. Schiller and G.W. Harris, 2006, Measurements of the HONO photodissociation constant, *J. Atmospheric Chemistry*, 55, 31-54.

76. Schiller, C.L., H. Bozem, C. Gurk, U. Parchatka, R. Königstedt, G.W. Harris, and H. Fischer, 2008, Applications of quantum cascade lasers for sensitive trace gas measurements of CO, CH₄ and HHO, *Applied Physics B.*, 92, 419-430.