

Abbreviated CV of Russell Boyd

Position Alexander McLeod Professor Emeritus, Dalhousie University

Education B.Sc. (First-Class Honours in Chemistry), UBC, 1967
Ph.D., Theoretical Chemistry, McGill University, 1971
NRC Postdoctoral Fellow, University of Oxford, 1971-73
Killam Postdoctoral Fellow, University of British Columbia, 1973-75

Honours and Awards

Lefevre Gold Medal and Scholarship for the Highest Standing in Honours Chemistry at UBC
Society of Chemical Industry Merit Award, 1967
Chemical Institute of Canada Book Prize, 1966
1967 Science Scholarship of the National Research Council of Canada, 1967-71
National Research Council of Canada Postdoctoral Fellowship, 1971-73
Killam Postdoctoral Fellowship, 1973-75
Fellow of The Chemical Institute of Canada, 1983
1983 APICS/Fraser Medal
1986 CNC-IUPAC Award
Fellow of the World Association of Theoretical Chemists, 1986
Dalhousie University Senior Killam Fellow, 1989-90
Faculty of Science Killam Professor, 1997-02
Alexander McLeod Professor of Chemistry, 2001-13
Dalhousie Innovation Award, 2008
Montreal Medal, The Chemical Institute of Canada, 2009
Inaugural Honorary Lecturer of the Canadian Association of Theoretical Chemists, 2010
Charles A. Coulson Lecture, University of Georgia, 2011
Science Atlantic Hall of Fame, 2012
Distinguished Service Award, Dalhousie University, 2013
Alexander McLeod Professor Emeritus, 2013-

Positions at Dalhousie University

Assistant Professor, Department of Chemistry, Dalhousie University, 1975-80
Associate Professor, Department of Chemistry, Dalhousie University, 1980-85
Professor, Department of Chemistry, Dalhousie University, 1985-2013
Chair, Department of Chemistry, Dalhousie University, 1992-2005
Associate Vice-President Research, Dalhousie University, 2006-11
Acting Director, Institute for Research in Materials, Dalhousie University, 2008

Selected Activities

First President of the Canadian Association of Theoretical Chemists, 1983-86
Chair, 8th Canadian Symposium on Theoretical Chemistry, 1983
Chair of the Education Committee, Atlantic Provinces Council on the Sciences, 1987-90
Editor for Theoretical Chemistry, Canadian Journal of Chemistry, 1988-98
Chair, CSC Division of Physical and Theoretical Chemistry, 1990-92
Chair, NSERC Strategic Grant Selection Panel on New Directions, 1993-95
Director of Accreditation, Canadian Society for Chemistry, 1996-99
Selection Committee for NSERC Chairs for Women in Science and Engineering, 1997
Executive Member, Atlantic Provinces Council on the Sciences, 1988-90

Member of Selection Committee, CNC-IUPAC Awards, 1991-94
Member of the College of Reviewers, Canada Research Chairs Program, 2000-
Member, NSERC Grant Selection Committee for Physical and Analytical Chemistry, 2001-04
Scientific Board, World Association of Theoretical and Computational Chemists, 2002-
Member, Long-Range Planning Panel for High-Performance Computing in Canada, 2002-05
Member, NSERC Atlantic Advisory Board, 2006-10
President, Canadian Society for Chemistry, 2007-08
Leader of the Chemical Institute of Canada delegation to China, 2008
Adjudication Committee, Canada-US Fulbright Program, 2008-11
Selection Panel, S and T Centers, National Science Foundation of the USA, 2009
Chair, 7th Canadian Computational Chemistry Conference, 2009
Member, NSERC Chemistry Scholarships and Fellowships Committee, 2009-12
Member, National Initiatives Committee, Compute Canada, 2010-2014
Research Director, Atlantic Canada Computational Excellence Network, 2010-2014
Member, Canadian National Committee of IUPAC, 2011-
Chair, Chemical Institute of Canada, 2012-13
Elected Member of the Bureau of IUPAC, 2013-2021
Member of the IUPAC Project Committee, 2013-2021
Member of the IUPAC Executive Committee, 2019-2021
Member, Killam Selection Committee, Canada Council for the Arts, 2014-17

Supervision of Co-Workers

Supervised more than 25 postdoctoral researchers, 25 completed PhD theses, 6 completed MSc theses and 22 completed BSc theses at Dalhousie University.

Invited Seminars, Special Lectures and Publications

More than 150 presentations at universities in Canada, USA, Europe, Australia, Japan, etc.
More than 160 conference presentations, including about 80 by invitation.

About 290 papers in leading international journals, including two in *Nature*, and twelve book chapters written by invitation. Co-edited with Chérif F. Matta *The Quantum Theory of Atoms in Molecules*, published by Wiley-VCH in 2007. One of 25 authors of *Concepts in Chemistry*, an innovative textbook specifically written for the first-year Chemistry classes at Dalhousie University. One of eight authors of *Engines of Discovery: The 21st Century Revolution (The Long-Range Plan for High Performance Computing in Canada, 2005)*.

Experience Relevant to the Position of Treasurer of IUPAC

As Chair of the Department of Chemistry, Prof. Boyd oversaw a multimillion-dollar budget and a payroll of about 120 individuals. Day-to-day accounting was provided by clerical staff and the management of the accounts was handled by an administrative officer. He oversaw a tenfold increase in the endowment funds of the Department of Chemistry. He gained valuable experience with endowed funds while serving on the Dalhousie University Planned Giving Advisory Board.

He worked closely with the Chief Financial Officer of the Chemical Institute in Canada (CIC), a professional organization with 6,000 members, in several capacities: Chair of the Chemical Institute of Canada, President of the Canadian Society for Chemistry, Chair of the 99th Canadian Chemistry Conference and Exhibition, Chair of the Scientific Program of the 89th Canadian Chemistry Conference and Exhibition, Member of the Board of the CIC Chemical Education Fund.

Biography of Russell Boyd

Russell Boyd is Alexander McLeod Professor Emeritus at Dalhousie University. He graduated in 1967 from the University of British Columbia with First-Class Honours in Chemistry and the Lefevre Gold Medal. Upon receiving his PhD in 1971 in Theoretical Chemistry from McGill University, he went to Oxford University as an NRC Postdoctoral Fellow with Charles Coulson at the Mathematical Institute. He returned to Canada as a Killam Postdoctoral Fellow in Chemistry at UBC from 1973 to 1975. He joined Dalhousie University in 1975 and rose through the ranks to become a Professor in 1985. He was named a Killam Professor in 1997 and in 2001 he became the seventh Alexander McLeod Professor of Chemistry. The McLeod Chair, one of the oldest named professorships in Canada, was created in 1884. His administrative roles at Dalhousie University include serving as Chair of the Department of Chemistry from 1992 to 2005 and Associate Vice-President of Research from 2006 to 2011.

He has published about 300 peer-reviewed papers and review chapters in computational and theoretical chemistry and co-edited in 2007 *The Quantum Theory of Atoms in Molecules*. He has supervised the research of 25 PhD students, more than 25 postdoctoral fellows and senior visitors, and a comparable number of undergraduate students. He is Editor-in-Chief of a forthcoming major reference work entitled *Comprehensive Computational Chemistry*.

Professor Boyd is a member of the Scientific Board of the World Association of Theoretical and Computational Chemists (WATOC) and Chair of the 12th Triennial Congress WATOC. His many professional activities include serving as Editor for Theoretical Chemistry of the Canadian Journal of Chemistry from 1988 to 1998, President of the Canadian Society for Chemistry for 2007-2008, and Chair of The Chemical Institute of Canada for 2012-2013. He was elected to the Bureau of the International Union of Pure and Applied Chemistry (IUPAC) in 2013, and he was elected to the Executive Committee of IUPAC in 2019.

He has served on five committees (two as Chair) of the Natural Sciences and Engineering Research Council of Canada and numerous national selection committees including the Steacie Prize for Natural Sciences, the Adjudication Committee of the Canada-Fulbright Program, the Canadian Science and Engineering Hall of Fame, the Killam Selection Committee of the Canada Council, and the NSF (USA) Science and Technology Centers Selection Panel.

He received the 2009 Montreal Medal of the Chemical Institute of Canada in recognition of his distinguished contributions to the profession of chemistry in Canada.

Resumé

Name: Wolfram Koch
Date and Place of Birth: 18 July 1959 in Darmstadt, Germany
Nationality: German
Marital Status: Married to Christina Heck-Koch, 2 daughters

Work Experience:

since 2002 Executive Director & CEO at Gesellschaft Deutscher Chemiker (German Chemical Society, GDCh)
1998 – 2002 Senior management positions at GDCh
1992 – 1998 Professor of Theoretical Organic Chemistry at Technical University of Berlin
1988 – 1991 Senior Scientist at IBM Germany's Scientific Center in Heidelberg
1987 – 1988 IBM Postdoctoral Fellow at IBM Almaden Research Center, San Jose, CA., U.S.A.

Education:

1986 Dr. rer. nat. at Institute of Organic Chemistry at TU Berlin with Helmut Schwarz.
1978 – 1984 Study of Chemistry at Technical Universities of Darmstadt and Berlin, Degree: Dipl.-Chem.

Awards:

2019 Goldene Ehrennadel (badge of honor) of the German Association of Managers in the Chemical Industry (VAA)
2017 Honorary Membership of the Israel Chemical Society
2015 Honorary Fellow of Chemistry Europe
2008 Honorary Membership of the Czech Chemical Society
2003 Fellow of the Royal Society of Chemistry
2002 Gold Medal of the Slovak Chemical Society
1987 – 1988 IBM Postdoctoral Fellowship
1987 Schering-Award for best dissertation in chemistry
1986 End-of-study award of Fonds der Chemischen Industrie
1984 – 1985 PhD Fellowship of Fonds der Chemischen Industrie

Scientific Achievements:

Author and co-author of some 190 papers in peer-reviewed journals, including ca. ten contributions to books (e.g., in *Encyclopedia of Computational Chemistry*).

Senior author of a textbook on density functional theory: W. Koch, M. C. Holthausen: "A Chemist's Guide to Density Functional Theory", Wiley-VCH, Weinheim. 1st Edition 02/2000, updated 2nd Edition 05/2001, reprinted 02/2002, 08/2003, 07/2004, 03/2007, and 03/2008). More than 5000 copies sold.

Co-editor of special issues of *International Journal of Mass Spectrometry* and of *Molecular Physics*.

IUPAC Activities:

2014 - 2021	Titular Member, Committee on Publications and Cheminformatics Data Standards (CPCDS)
2002 – 2020	Executive Director/Secretary General of Deutscher Zentralausschuss für Chemie (German NAO to IUPAC)
2008 – 2015	Member of the Finance Committee
2009 – 2012	Member of the Management Committee for the International Year of Chemistry
2006	IUPAC Fellow

Selected Other Activities:

since 2021	Member of the Project DEAL Advisory Board
since 2012	Member of the Board of Trustees of the VAA Foundation
since 2010	Member of Wiley-VCH/GDCh Advisory Board
since 2003	Member of Council of Administration of the German Collecting Society (VG Wort)
since 2000	Member of the Executive Board of the European Chemical Society (EuChemS)
2016 – 2020	Member of the High-Level Advisory Group “Open Science Policy Platform” of the European Commission
2003 – 2020	Member of Scientific Advisory Board of German National Library of Science and Technology, since 2009 chairman
2002 – 2012	Member of Supervisory Board and of Owners Board of Chemistry Information Center Berlin (FIZ Chemie)
2003 – 2011	Member of Scientific Advisory Board of the North-German Supercomputing Alliance
2002 – 2008	Member of Scientific Advisory Board of Leibniz Institute for Information Infrastructure (FIZ Karlsruhe)

Wolfram Koch studied chemistry at the Technical Universities in Darmstadt and Berlin. He obtained his PhD in computational organic chemistry at TU Berlin in 1986. From 1987 until 1991 he worked for IBM, first as a Postdoc at the Almaden Research Center in San Jose, CA (USA), then as a Senior Scientist at IBM Germany's Scientific Center in Heidelberg (Germany). In 1992 Koch was appointed Professor of Theoretical Organic Chemistry at TU Berlin. In November 1998 he joined the Gesellschaft Deutscher Chemiker (GDCh, German Chemical Society) in Frankfurt. Since November 2002 he is GDCh's Executive Director.

Wolfram Koch authored and co-authored some 190 papers in peer reviewed journals and a textbook on density functional theory. He is a member of several advisory and governing boards including the Executive Board of the European Chemical Society (EuChemS), the Administrative Council of the Verwertungsgesellschaft Wort (German Copyright Collective) and the Open Science Policy Platform of the European Commission. For many years he chaired the Scientific Advisory Board of the German National Library of Science and Technology. Wolfram Koch is a Fellow of the Royal Society of Chemistry and an IUPAC Fellow and holds honorary memberships of the Czech and Israel Chemical Societies as well as an Honorary Fellowship of Chemistry Europe, the organization of 16 European chemical societies which publishes almost 20 scientific journals. In 2019 he received the "Goldene Ehrennadel" (badge of honor) of the VAA, the German association of managers in the chemical industry.

His activities within IUPAC include being a member of the Management Team for the International Year of Chemistry, serving two terms on the Finance Committee (2008-2015) and the Committee on Publications and Cheminformatics Data Standards (2014-2021). In addition he was Executive Director and General Secretary of the German NAO to IUPAC from 2002 until the end of last year.

Statement on Background in Financial Matters

For almost 20 years I am the Executive Director of the German Chemical Society (GDCh). In this capacity I am also ultimately responsible for the budget and other financial decisions of the society. That includes the budget of the GDCh and in particular its investments. The GDCh relies to a significant part on the performance of its investment portfolio of more than 90 M USD at the Financial Markets. The day-to-day work including many strategic decisions is prepared and managed by the GDCh Finance Director and his team who has already agreed to support me in all financial IUPAC matters.

Since I served on the IUPAC Finance Committee for two full terms (2008-2015) I do of course know about the internal role of the Finance Committee and the external audit process. I am familiar with the latter also due to my GDCh experience since we are audited externally as well (currently KPMG). My time on the Finance Committee also allowed me to get first-hand insight into IUPAC's financial situation including the challenges the Union is facing.

Based on this prior experience I am confident to fulfill the requirements for Treasurer of the Union.

Wolfram Koch, May 20, 2021