WOLFGANG JAEGER

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UNIVERSITY EDUCATION

1985 - 1989	PhD Thesis in Physical Chemistry at the University of Kiel, Germany: "Two-Dimensional Fourier Transform Spectroscopy in the Microwave Radio Frequency Range and Spectroscopic Studies of Methyl Thiazoles"; Minors: Astronomy, Organic Chemistry, Standing: "magna cum laude".
1984 - 1985	Diploma Thesis at the University of Kiel: "Microwave Spectroscopic Studies on 4-Methyl Isoxazole: ^{14}N Nuclear Quadrupole Hyperfine Structure, Dipole Moment, and Barrier to Internal Rotation".
1977 - 1985	Studies in Chemistry, University of Kiel, Germany

PROFESSIONAL POSITIONS

2009 - 2010	Visiting Scientist, Fritz-Haber Institute of the MPS, Berlin, Germany
2003 - present	Professor, Department of Chemistry, University of Alberta
2001 - 2003	Associate Professor, Department of Chemistry, University of Alberta
1995 - 2001	Assistant Professor, Department of Chemistry, University of Alberta

AWARDS

2012	International Dr. Barbara Metz-Stark Prize, Germany
2011	Morino Lecture Award, Japan
2011	Renewal of Tier I Canada Research Chair in Cluster Science
2009	Humboldt Research Award, Humboldt Foundation, Germany
2008	Fellow of the Royal Society of Canada
2004 - 2018	Canada Research Chair in Cluster Science (Tier I, Senior Chair)
2004	Canada Foundation for Innovation, CRC Award
2002 - 2004	Natural Sciences and Engineering Research Council Steacie Fellowship
2003	Noranda Award, Canadian Society for Chemistry
2002	Canada Foundation for Innovation, Career Award
2002	Canada Foundation for Innovation, Innovation Fund Award
2001	Faculty of Science Research Award, University of Alberta

RESEARCH INTERESTS

My research group focuses on the study of intermolecular interactions using spectroscopic and theoretical computational tools. Weakly bound complexes and clusters can be generated in a pulsed molecular expansion and interrogated using microwave radiation. The analyses and interpretations, together with high quality ab initio calculations, yield the corresponding interaction potential energy surfaces. We utilize the method of helium nanodroplet spectroscopy to isolate, stabilize, and characterize transient species and to study barrier-less or low-barrier chemical reactions. A third aspect is the development of sensitive methods for atmospheric trace gas sensing and for studies of aerosol formation, including the fabrication of MEMS based external cavity lasers.