

## Curriculum vitae for Matthew S. Johnson, Associate Professor

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Born 14 December 1966 in Crookston Minnesota, married to Karin Elisabet Hedqvist Johnson, 2 children

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### Education

B.A., 1989, Macalester College, St. Paul Minnesota, *Cum Laude, Highest Honors in Chemistry*  
Thesis title: *Linkage isomerism in the cyanate anion*, advisor Wayne Wolsey  
Ph.D., 1995, California Institute of Technology (Caltech), Division of Chemistry; Ph.D. candidacy exam 1991  
Thesis title: *Spectroscopy of Reactive Molecules and Clusters*, advisor Mitchio Okumura

### Employment History

05/86-12/87 Computer Programmer, Honeywell Inc., Minneapolis Minnesota, Laser Gyroscopes  
09/86-12/88 Teaching Assistant, Macalester College; General Biology, General and Physical Chemistry  
05/89-09/89 Research Intern, Medtronic Inc., Fridley Minnesota, Bioactive Surfaces  
09/89-06/95 Doctoral Candidate, Caltech; Teaching Physical, Inorganic, and General Chemistry  
07/95-05/96 Fulbright Fellow, MAX-Lab Electron Accelerator, Lund Sweden, U. S. State Department  
06/96-01/98 Research Engineer, MAX-Lab Electron Accelerator Laboratory, Lund Sweden, EU funded  
02/98-05/02 Assistant Professor, Dept. of Chem., Uni. Copenhagen, Spectroscopy and Atmos. Chem.  
05/02- Associate Professor, Dept. of Chem., Uni. Copenhagen, Atmos. Chem. and Spectroscopy

### Highlights

CRC Freshman Chemistry Award, 1986; Phi Beta Kappa and American Institute of Chemistry awards, 1989.  
Graduate fellowships: U. S. Dept. of Energy Scholar, 1991-92; Grace Fellow, 1993; Bray Fellow, 1994-95.  
Voted the best Teaching Assistant in General Chemistry by the Caltech freshman class, 1992.  
Teaching: Spectroscopic Identification (BSc, 98 – 03); Atmos. Chem. for Geophysicists (BSc, 98 – 04); Atmos. Env. Chem. (MSc, 99 – present); Env. Chem. I (BSc, 00 – present); Reaction Kinetics (BSc, 01 – present); Air Pollution and Health (elite MSc, 09-present), Scientific Writing and Presentation (MSc, PhD, 07 – present).  
Initiation, planning and teaching of new courses: The Physics of Molecules (BSc, 05 - present), Scientific Writing and Presentation (MSc, PhD, 07 – present).  
Currently supervisor for 2 postdocs, 4 PhD students, 8 MSc students and one BSc student.  
Organizer for the First through the Ninth Informal Conferences on Atmospheric and Molecular Science, (editor, secretary, many times as chair), 2000 to 2008  
Advisory committee for the Second, Third and Fourth International Symposia on Isotopomers; co-organizer of the Fifth International Symposium on Isotopomers to be held in 2010  
Guest Editor for *Adv. in Quantum Chem.* **55**, "Applications of Theoretical Methods to Atmospheric Science", 2008.  
Secretary of the Danish Chemical Society 2003 - 06  
Member of the Board of the Department of Chemistry, University of Copenhagen, 2008 – present  
Elected Member of the Natural Sciences Faculty Board for Bachelor Studies, 07 – present  
Steering Committee of the Copenhagen Center for Atmospheric Research (CCAR), 2006 – present  
EU project INTRAMIF, member of Executive Board; Training Coordinator, 2009 – 2012.  
58 publications in international refereed journals, these publications are cited by 575 other articles (ISI Web of Knowledge), H-index of 14.

### Research interests

1. Indoor air purification. Research prototype installed in cleantech showcase building during fall of 2009. Patent rights owned by the University of Copenhagen: A method and device for cleaning air by M. S. Johnson and J. Arlemark, European Patent Agency 08388017.9, International Patent Cooperation Treaty PCT/EP2009/055849
2. Isotope effects in atmospheric chemistry. See for example Y. Ueno, M. S. Johnson et al., Geological Sulfur Isotopes Indicate Elevated OCS in the Archean Atmosphere, Solving the Faint Young Sun Paradox, *Proceedings of the National Academy of Sciences*, 106(35), 14784 – 14789, 2009.
3. Atmospheric photochemistry, climate change, air pollution, atmospheric chemistry of biofuels, spectroscopy and kinetics, chemical microscopy of levitated particles