

## RANDY LEE APODACA

Geophysical Institute and Department of Chemistry  
University of Alaska Fairbanks  
Fairbanks, AK 99775-6160  
(907) 474-2436

PO Box 750562  
Fairbanks, AK 99775-0562  
(907) 978-4223

randy.apodaca@gmail.com

### Education

*Ph.D. Candidate*, Environmental Chemistry, *University of Alaska Fairbanks*, Fairbanks, AK  
*M.S.*, Environmental Toxicology, *Texas Tech University*, Lubbock, TX August 2003  
*B.S. with High Honors*, Occupational Therapy, *Texas Tech University Health Sciences Center*,  
Lubbock, TX May 1997

### Professional Certifications

Registered Occupational Therapist, *National Board for Certification in Occupational Therapy* March 1998  
Licensed Occupational Therapist, *The Executive Council of Physical Therapy and Occupational Therapy Examiners* March 1998

### Awards

Texas Tech University Health Sciences Center Endowed Academic  
and Leadership Excellence Scholarship 1996-1997

### Honorary and Professional Societies

Phi Kappa Phi honor society, Phi Theta Epsilon Occupational Therapy honor society, American Chemical Society, American Geophysical Union, Society of Environmental Toxicology and Chemistry, American Occupational Therapy Association, American Occupational Therapy Association Commission on Education.

### Current Position

RESEARCH ASSISTANT:, *University of Alaska Fairbanks Department of Chemistry and Biochemistry and Geophysical Institute*, Fairbanks, AK September 2003 – present

### Teaching Experience

Physical Chemistry Laboratory, Chem 434, Senior-level physical chemistry laboratory, Fall 2006.

General Chemistry Laboratory, Chem 105X, Freshman-level introductory chemistry laboratory for science majors, Fall 2003 and Spring 2004.

Human Anatomy and Dissection, HSci 50X, Human Gross Anatomy laboratory for Medical, Dental, and Allied Health students, Fall 1996.

## Community Service / Outreach

Environmental Chemistry Informal Seminar Coordinator, UAF	2005-2006
West Nile Virus in West Texas, Coordinated regional sample collection	2002-2003
Heavy Metal Contamination in Schoolyards, Project Volunteer	2001-2002
Texas Tech University Health Sciences Center Student Senator	1995-1997
American Occupational Therapy Association Commission on Education Commissioner	1995-1996

## Research Experience

RESEARCH ASSISTANT: *University of Alaska Fairbanks, Department of Chemistry and Biochemistry and Geophysical Institute, Fairbanks, AK* September 2003-current

- Developing nitrogen oxide sensors using novel technology. Investigating high-latitude nitrogen oxide oxidation pathways.

RESEARCH ASSISTANT: *Texas Tech University, Institute of Environmental and Human Health, Lubbock, TX* August 2001-August 2003

- Simulation modeling of the biological and environmental fate of the toxic perchlorate anion.

## Publications and Manuscripts in progress

1. James D. Ayers, Randy L. Apodaca, William R. Simpson, and Douglas S. Baer (2005), Off-axis cavity ring-down spectroscopy: application to atmospheric nitrate Radical detection, *Applied Optics*. 44, 7239-7242.
2. Randy L. Apodaca, *et al.* (In preparation for *Atmospheric Chemistry and Physics*), Intercomparison of N<sub>2</sub>O<sub>5</sub> measurement techniques at the atmosphere simulation chamber SAPHIR.
3. Randy L. Apodaca, Deanna M. Huff, William R. Simpson (In preparation), Observations on high-latitude NO<sub>x</sub> oxidation and the role of N<sub>2</sub>O<sub>5</sub> heterogeneous hydrolysis.
4. Randy L. Apodaca, Deanna M. Huff, William R. Simpson (In preparation), Nocturnal boundary layer N<sub>2</sub>O<sub>5</sub>: Measurement of vertical gradients and deposition fluxes to snow.

## Selected Conference Talks and Posters (presenter underlined)

“Observations of High Latitude NO<sub>x</sub> Removal Processes: The roles of N<sub>2</sub>O<sub>5</sub>, Aerosols, and Seasonal Snow Pack”, Randy L. Apodaca, Deanna M. Huff, Catherine F. Cahill, William R. Simpson, a talk presented at the Fall AGU meeting, San Francisco, CA, 2007.

“Investigating High Latitude NO<sub>x</sub> Oxidation with Off-Axis Cavity Ring-Down Spectroscopy”, Randy L. Apodaca, James D. Ayers, William R. Simpson, a talk for Environmental Chemistry Group Seminar, University of Alaska Fairbanks, Fairbanks, AK, 2006.

“Off-Axis Cavity Ring-Down Spectroscopy and Field Measurements of N<sub>2</sub>O<sub>5</sub> at High-latitudes”, Randy L. Apodaca, James D. Ayers, William R. Simpson, and Douglas S. Baer, a poster presented at the Fall AGU meeting, San Francisco, CA, 2005.

“Simulation Modeling of Perchlorate in Terrestrial and Aquatic Plants”, Randy L. Apodaca, Eric P. Albers, Kenneth R. Dixon, a talk for the Fall meeting of The Society of Environmental Toxicology and Chemistry, Salt Lake City, UT, 2002.

“Simulation Modeling of Perchlorate in Avian Species”, Randy L. Apodaca, Kenneth R. Dixon, a talk for The Wildlife Society Annual Meeting, Bismarck, ND, 2003.