Michael A. Everest

Department of Chemistry
Westmont College
955 La Paz Rd
Santa Barbara, CA, 93108
805-565-6850
e-mail: meverest@westmont.edu

TEACHING EXPERIENCE

Professor Westmont College, Santa Barbara, CA, Fall 2011–present
Courses taught: Physical Chemistry

Professor George Fox University, Newberg, Oregon, Fall 2010–Spring 2011
Courses taught: Physical Chemistry, Analytical Chemistry, Instrumental Analysis, etc.

Associate Professor, George Fox University, Newberg, Oregon, Fall 2005–Spring 2010

Assistant Professor, George Fox University, Newberg, Oregon, Fall 2001–Spring 2005

Visiting Assistant Professor, Trinity University, San Antonio, Texas, 2000–2001
Courses taught: Physical Chemistry I and II, Physical Chemistry Laboratory, Introduction to Analytical Methods Laboratory

Head Teaching Assistant, Stanford University, Stanford, California, Spring 1996
Course: Physical Chemistry Laboratory

Teaching Assistant, Stanford University, 1994–1998
Courses included: Physical Chemistry, Physical Chemistry Laboratory, Physical Chemical Principles, Chemical Principles

Research Program Assistant, Wheaton College, Wheaton, Illinois, Summer 1993.
Pew Scholarship Program

Teaching Assistant, Wheaton College, 1991–1994
Courses included: Physical Chemistry, General Chemistry, Organic Chemistry Laboratory, Analytical Chemistry Laboratory, Advanced Analytical Chemistry Laboratory, Biochemistry Laboratory, Methods of Physical Chemistry

EDUCATION AND RESEARCH EXPERIENCE

Foundation for Research and Technology Hellas, Heraklion, Greece,
Jul. 2009–Jun. 2010

Position: Visiting Researcher

Research: Interaction of Polarized Light with Matter

Collaborators: Peter Rakitzis, Stelios Tzortzakis, and Benoit Loppinet

Trinity University, San Antonio, Texas, Aug. 1999–Aug. 2001

Position: Post-Doctoral Research Associate

Research: Chemical Kinetics on Thin Ice Films

Principal Investigator: Professor Christopher J Pursell

Stanford University, Stanford, California, 1994–1999

Degree: Doctor of Philosophy in Chemistry, September 1999

Dissertation: *Reaction Dynamics of State-Selected Ammonia Ions*

Advisor: Professor Richard N. Zare

Wheaton College, Wheaton, Illinois, 1990–1994

Degree: Bachelor of Science in Chemistry, ACS Accredited Track

Independent Research: Mass Spectrometry of Aromatic Tetracarboxylic Acids

GRANTS, FELLOWSHIPS, AND AWARDS

ACS PRF Type B, "Interaction of Polyoxometallates with Organically-Modified Silica", 2007–2010.

Faculty Research Grant, George Fox University, "Adsorption of Polyoxometallates to Organically Modified Silica", 2007.

NSF CCLI, "Using NMR Spectroscopy To Enhance The Stem Knowledge Base In Undergraduate Education At George Fox University And Nearby Institutions", 2007–2010.

Faculty Research Grant, George Fox University, "Is Hemoglobin Mobile When Adsorbed to Fused Silica?", 2006.

Faculty Research Grant, George Fox University, "Adsorption of Hemoglobin to Silica", 2004.

Faculty Research Grant, George Fox University, "Cavity Ring-down Spectroscopy of Aqueous Samples", 2003.

Faculty Research Grant, George Fox University, "Construction of a Cavity Ring-Down Spectrometer", 2002.

Research Corporation Cottrell College Science Award, "Interfacial chemical kinetics studied in situ with evanescent-wave cavity ring-down spectroscopy", George Fox University, 2001

Elf Atochem Fellowship, Stanford University, 1998

Paul M. Wright Prize and Medal, Wheaton College, 1994

PUBLICATIONS

1. **Evanescent-Wave Cavity Ring-Down Ellipsometry**, Michael A. Everest, Vassilis M. Papadakis, Katerina Stamataki, Stelios Tzortzakis, Benoit Loppinet, and T. Peter Rakitzis, *J. Phys. Chem. Lett.*, **2**, 1324 (2011).
2. **(2+1) Laser-Induced Fluorescence of Spin-Polarized Hydrogen Atoms**, Lykourgos Bougas, Dimitris Sofikitis, Michael A. Everest, Andrew J. Alexander, and T. Peter Rakitzis, *J. Chem. Phys.* **133**, 174308 (2010).

3. **A Mechanical Apparatus for Hands-on Experience with the Morse Potential**, Michael A. Everest, *J. Chem. Ed.*, **87**, 1071 (2010).
4. **Discrete sums for the rapid determination of exponential decay constants**, Michael A. Everest and Dean B. Atkinson, *Rev. Sci. Inst.*, **79**, 023108 (2008).
5. **Hemoglobin Adsorption to Silica Monitored with Polarization-Dependent Evanescent-Wave Cavity Ring-Down Spectroscopy**, M.A. Everest, V.M. Black, A.S. Haehlen, G.A. Haveman, C.J. Kliewer, and H.A. Neill *J. Phys. Chem. B*, **110**, 19461 (2006).
6. **Why does ID get (nearly) all the Christian press?**, Michael A. Everest *Perspectives on Science and Christian Faith*, **58**, 235 (2006).
7. **Ionization of Nitric Acid on Ice**, C.J. Pursell, M.A. Everest, M.E. Falgout, and D.D. Sanchez *J. Phys. Chem. A*, **106**, 7764 (2002).
8. **Isotope Exchange of D_2O on H_2O Ice: Surface Versus Bulk Reactivity**, Michael. A. Everest and Christopher J. Pursell *J. Chem. Phys.* **115**, 9843 (2001).
9. **Vibrational and Collisional Energy Effects in the Reaction of Ammonia Ions with Methylamine**, Jonathan E. Flad, Michael A. Everest, John C. Poutsma, and Richard N. Zare *J. Chem. Phys.* **115**, 124 (2001).
10. **Mode Selectivity in Ion-Molecule Reactions of NH_3^+**, J. C. Poutsma, M. A. Everest, J. E. Flad, and R. N. Zare *Appl. Phys. B* **71**, 623 (2000).
11. **State-Selected Studies of the Reaction of $NH_3^+(\nu_1, \nu_2)$ with D_2**, J. C. Poutsma, M. A. Everest, J. E. Flad, G. C. Jones, Jr., and R. N. Zare *Chem. Phys. Lett.* **305**, 343 (1999).
12. **Reaction of State-Selected Ammonia Ions with Methane**, M. A. Everest, J. C. Poutsma, J. E. Flad, and R. N. Zare *J. Chem. Phys.* **111**, 2507 (1999).
13. **Vibrational and Translational Energy Effects in the Reaction of Ammonia Ions with Water Molecules**, M. A. Everest, J. C. Poutsma, and R. N. Zare *J. Phys. Chem. A* **102**, 9593 (1998).

PROFESSIONAL TALKS AND PRESENTATIONS

In addition to being a co-author on 19 undergraduate student talks and poster presentations, I have made the following presentations myself:

"How does atomic structure affect the electron cloud on a near-by atom?"; A POGIL Laboratory Exercise Michael A. Everest and Jeffrey M. Vargason, Northwest Regional POGIL Meeting, Seattle, WA, July 2010 (poster)

Hemoglobin Adsorption to Silica Monitored with Cavity Ring-Down Spectroscopy Michael A. Everest, Chemistry at Interfaces Gordon Research Conference, Biddeford, ME July 2006 (poster)

Super-Sensitive Spectroscopy of Some Sticky Substances Michael A. Everest, Newberg Rotary, Newberg, OR, October 21, 2004 (talk)

Adsorption of Hemoglobin to Silica Studied with Cavity Ringdown Laser Spectroscopy University of Portland, Portland, OR, November 1, 2004 (talk)

Super-Sensitive Spectroscopy of Some Sticky Substances Michael A. Everest, Faculty Research Forum, George Fox University, Newberg, OR, April 22, 2004 (talk)

Chemistry on Ice, University of California, Berkeley, Department of Chemistry, Group Meeting of Prof. Richard Saykally, Berkeley, CA, May 22, 2003 (talk)

Laser Chemistry, Surface Chemistry, and Laser Surface Chemistry, Linfield College, Department of Chemistry, McMinnville, OR, April 4, 2002 (talk)

Laser Chemistry, Surface Chemistry, and Laser Surface Chemistry, Portland State University, Department of Chemistry, Portland, OR, February 22, 2002 (talk)

The Influence of Vibration and Collision Energy on the Reaction of Ammonia Ions with Water Molecules, Conference on Ion Chemistry and Mass Spectrometry, Lake Arrowhead, CA, January 1998 (talk)

State-Selected Studies of the Reaction of $NH_3^+(\nu_1, \nu_2)$ with D_2O, Conference on the Dynamics of Molecular Collisions, Gull Lake, MN, July 1997 (poster)

A Vibrational-Mode-Selective Study of the Reaction $NH_3^+(\nu_1, \nu_2) + D_2O$, Air Force Office of Scientific Research Contractors Meeting, Boulder, CO, June 1996 (poster)

Product Velocity Distributions for the Reaction of $NH_3^+(\nu_1, \nu_2)$ with ND_3, Conference on Ion Chemistry and Mass Spectrometry, Lake Arrowhead, CA, January 1996 (poster)

Branching Ratios and Product Velocity Distributions for the Reaction of $NH_3^+(\nu_1, \nu_2)$ with ND_3 and D_2, Conference on the Dynamics of Molecular Collisions, Asilomar, CA, July 1995 (poster)

UNIVERSITY AND PROFESSIONAL SERVICE

POGIL NW Region, Steering Committee Member 2010–present

Local Arrangements Chair, American Scientific Affiliation National Meeting 2008

Various Service at George Fox University **General Education Committee Chairperson** Fall 2007–9, Fall 2010–Spring 2011

Oregon Academy of Sciences, Chemistry Section Co-Chairperson 2008–2009

Presidential Search Committee 2006–2007

Faculty Representative to the Board of Trustees 2005–2006

Dean of Arts and Sciences Search Committee Member 2003–2004

Reviewer of Scholarly Articles and Grant Proposals Department of Energy, Petroleum Research Fund, *Langmuir*, *Analytical Chemistry* , *Review of Scientific Instruments*, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, *Sensors and Actuators B: Chemical*

PROFESSIONAL AFFILIATIONS

American Physical Society, Member August 1998–Present

American Chemical Society, Member March 1996–Present

American Scientific Affiliation, Member May 1994–Present

Electrochemical Society, Member July 2001–2003