

Michael A. Everest

Department of Chemistry
Westmont College
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TEACHING EXPERIENCE

- Professor** Westmont College, Santa Barbara, CA, Fall 2011–present
Department Chair Fall 2014–present
Courses taught: Physical Chemistry, Intro. to Physical Chemistry, General 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

W.M. Keck Foundation, “Turning Students into Practicing Scientists: Integrating Research Throughout the Science Curriculum,” 2017, Eileen McMahon McQuade (project lead), Michael A. Everest (secondary lead), \$225,000.

Outstanding Teaching Award, Division of Natural and Behavioral Sciences, Westmont College, 2016.

Professional Development Grant, Westmont College, “Spatially Dependent Evanescent Wave Cavity Ring-Down Ellipsometry,” 2012, Michael A. Everest, \$3,600.

ACS PRF Type B, “Interaction of Polyoxometallates with Organically-Modified Silica,” 2007–2010, Michael A. Everest, \$65,000 (\$74,000 with GFU match).

Faculty Research Grant, George Fox University, “Adsorption of Polyoxometallates to Organically Modified Silica,” 2007, Michael A. Everest, \$3,000.

NSF CCLI, George Fox University, “Using NMR Spectroscopy To Enhance The Stem Knowledge Base In Undergraduate Education At George Fox University And Nearby Institutions,” 2007–2010, Robert C. Chambers, Jeffrey Vargason, Michael A. Everest, and Paul H. Chamberlain, \$150,000 (\$300,000 with GFU match).

Faculty Research Grant, George Fox University, “Is Hemoglobin Mobile When Adsorbed to Fused Silica?” 2006, Michael A. Everest, \$3,000.

Faculty Research Grant, George Fox University, “Adsorption of Hemoglobin to Silica,” 2004, Michael A. Everest, \$3,000.

Faculty Research Grant, George Fox University, “Cavity Ring-down Spectroscopy of Aqueous Samples,” 2003, Michael A. Everest, \$3,000.

Faculty Research Grant, George Fox University, “Construction of a Cavity Ring-Down Spectrometer,” 2002, Michael A. Everest, \$3,000.

Research Corporation Cottrell College Science Award, “Interfacial chemical kinetics studied in situ with evanescent-wave cavity ring-down spectroscopy”, George Fox University, 2001, Michael A. Everest, \$35,500 (\$71,000 with GFU match).

Elf Atochem Fellowship, Stanford University, 1998

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

PUBLICATIONS

1. **Balanced polarimeter: A cost-effective approach for measuring the polarization of light**, Luke H.C. Patterson, Kenneth E. Kihlstrom, and Michael A. Everest, *Am. J. Phys.*, **83**, 91–94.
2. **Student's Guided Activity Workbook for Introductory Chemistry**, Michael A. Everest; Prentice Hall, Pearson Custom Library Content, 2014.
3. **How does atomic structure affect electron clouds? A guided-inquiry NMR lab for General Chemistry** (cover), Michael A. Everest and Jeffrey M. Vargason, *J. Chem. Ed.*, **90**, 926–929 (2013).
4. **Sensitivity enhancement for evanescent-wave cavity-ring-down ellipsometry**, Dimitris Sofikitis, Katerina Stamataki, Michael A. Everest, Vassilis Papadakis, Jean-Louis Stehle, Benoit Loppinet, and T. Peter Rakitzis, *Optics Letters*, **38**, 1224–1226 (2013).
5. **Monitoring Adsorption and Sedimentation using Evanescent-Wave Cavity Ring-Down Ellipsometry**, Katerina Stamataki, Vassilis Papadakis, Michael A. Everest, Stelios Tzortzakis, Benoit Loppinet, T. Peter Rakitzis, *Applied Optics*, **52**, 1086–1093 (2013).
6. **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).
7. **(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).
8. **A Mechanical Apparatus for Hands-on Experience with the Morse Potential**, Michael A. Everest, *J. Chem. Ed.*, **87**, 1071 (2010).
9. **Discrete sums for the rapid determination of exponential decay constants**, Michael A. Everest and Dean B. Atkinson, *Rev. Sci. Inst.*, **79**, 023108 (2008).
10. **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).
11. **Why does ID get (nearly) all the Christian press?**, Michael A. Everest *Perspectives on Science and Christian Faith*, **58**, 235 (2006).
12. **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).
13. **Isotope Exchange of D₂O on H₂O Ice: Surface Versus Bulk Reactivity**, Michael. A. Everest and Christopher J. Pursell *J. Chem. Phys.* **115**, 9843 (2001).

14. **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).
15. **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).
16. **State-Selected Studies of the Reaction of $\text{NH}_3^+(\nu_1, \nu_2)$ 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).
17. **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).
18. **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 numerous undergraduate student talks and poster presentations, I have made the following presentations myself:

Does the Second Law of Thermodynamics Contradict the Theory of Evolution?

Michael A. Everest, National Meeting of the American Scientific Affiliation, Golden, CO July 2017 (talk)

Adventures in Activity Development Michael A. Everest, POGIL National Meeting, St. Louis, MO, May 2015 (poster)

Worship Through the Lens of the Autocorrelation Function Michael A. Everest, Southern California Christians in Science Annual Day Conference, Riverside, CA January 2013 (talk)

Augustine, Radiometric Dating, and First-Year Chemistry: A Guided-Inquiry

Exercise Michael A. Everest, National Meeting of the American Scientific Affiliation, San Diego, CA July 2012 (talk)

“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 $\text{NH}_3^+(\nu_1, \nu_2)$ with D_2O , Conference on the Dynamics of Molecular Collisions, Gull Lake, MN, July 1997 (poster)

A Vibrational-Mode-Selective Study of the Reaction $\text{NH}_3^+(\nu_1, \nu_2) + \text{D}_2\text{O}$, Air Force Office of Scientific Research Contractors Meeting, Boulder, CO, June 1996 (poster)

Product Velocity Distributions for the Reaction of $\text{NH}_3^+(\nu_1, \nu_2)$ 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 $\text{NH}_3^+(\nu_1, \nu_2)$ with ND_3 and D_2 , Conference on the Dynamics of Molecular Collisions, Asilomar, CA, July 1995 (poster)

INSTITUTIONAL AND PROFESSIONAL SERVICE

Service at Westmont College

Academic Resources Committee Chair 2016–2017

Faculty Council Fall 2014–2016

Diversity Committee Member 2013–2014

Athletic Committee Member 2012–2013

Program Chair 2016 American Scientific Affiliation National Meeting

Vice Chair, Southern California Christians in Sciences June 2013–2016

Session Chair, American Scientific Affiliation National Meeting 2012

POGIL NW Region, Steering Committee Member 2010–2012

Local Arrangements Chair, American Scientific Affiliation National Meeting 2008

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

Service at George Fox University

General Education Committee Chairperson Fall 2007–9, Fall 2010–Spring 2011

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*, *Journal of Chemical Education*, *Review of Scientific Instruments*, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, *Sensors and Actuators B: Chemical*, *Perspectives on Science and Christian Faith*

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