

CURRICULUM VITAE: JUDITH A. HALSTEAD

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Research Interests

Curriculum development for interdisciplinary environmental studies courses, development of laboratory experiments for first year interdisciplinary courses, reactions of environmental significance; environmental water chemistry.

Education

Ph.D. in Physical Chemistry, 1979, Rensselaer Polytechnic Institute
Thesis topic: Time-resolved Spectroscopy of the 6^3P_1 State of Mercury
Thesis advisor: Dr. Robert R. Reeves
B.A. Chemistry, 1974, SUNY, Binghamton

Professional Experience

<u>Position</u>	<u>Location</u>	<u>Dates</u>
Professor	Department of Chemistry Skidmore College, Saratoga Springs, NY	July 2004 - present
Director	Environmental Studies Program Skidmore College, Saratoga Springs, NY	June 1998 - present
Associate Professor	Department of Chemistry Skidmore College, Saratoga Springs, NY	July 1993 – July 2004
Assistant Professor	Department of Chemistry & Physics Skidmore College, Saratoga Springs, NY	July 1987 – July 1993
Visiting Faculty	Department of Chemistry Rensselaer Polytechnic Inst., Troy, N.Y.	May 1990 - May 1991
Visiting Assistant Professor	Department of Chemistry Williams College, Williamstown, MA	July 1984 - June 1987
Visiting Assistant Professor	Department of Chemistry Russell Sage College, Troy, NY	September 1982-June 1984
Research Scientist	Center for Laboratories and Research, New York State Department of Health, Environmental Health Laboratories Institute, Albany, New York	February 1981-August 1982
Postdoctoral Associate (teaching and research)	RPI Chemistry Department Troy, New York	September 1979-January 1981

Professional Organizations

American Chemical Society (member)
Council on Undergraduate Research (member)
Northeast Environmental Studies Group (NEES)

Authored Manuscripts (published)

“Home Energy Conservation Exercise.” *Journal of Geoscience Education*, V51, 521, **2003** (with Steven T. Frey, William R. Moomaw, Caitlin W. Robinson, Kimberly A. Marsella and John J. Thomas).

“Seed selection by foraging birds.” *Exploring Animal Behavior in the Laboratory and Field*, Bonnie Ploger and Ken Yasukawa ed., Academic Press, San Diego, 239, **2003** (with Monica Ravert-Richter and Kierstin Savastano).

“Seed selection by foraging birds.” *Teaching Animal Behavior in the Laboratory and Field: An Instructor’s Manual to Accompany Exploring Animal Behavior in the Laboratory and Field*, Bonnie Ploger and Ken Yasukawa ed., Academic Press, San Diego, 83, **2003** (with Monica Ravert-Richter and Kierstin Savastano).

“Potential for Chlorate Interference in Ion Chromatographic Determination of Total Nitrogen in Natural Waters Following Alkaline Persulfate Digestion.” *Journal of Chromatography A* 857, 337, **1999** (with J. Edwards, R. J. Soracco and R. W. Armstrong).

“Shaping the Future: CUR Seventh National Conference Continues a National Dialogue.” *Journal of Chemical Education* 75, 1366, **1998**.

“Spring Shock: Impact of Spring Snowmelt on Lakes and Streams.” *Journal of Chemical Education* 75, 400, **1998**.

“Creating Undergraduate Research Opportunities in Changing Communities: CUR Seventh National Conference.” *Journal of Chemical Education* 75, 407, **1998**.

“Rains, Lakes and Streams – Investigating Acidity and Buffering Capacity in the Environment.” *Journal of Chemical Education*, 74, 1456A, **1997**.

“What is Undergraduate Research?” *Journal of Chemical Education*, 74, 1390, **1997**.

“An Investment in Tomorrow” – Undergraduate Research Students Meet Members of Congress. *Journal of Chemical Education* 74 892, **1997**.

“Council on Undergraduate Research: A Resource (and a Community) for Science Educators.” *Journal of Chemical Education* 74,148, **1997**.

“Remote Plasma Copper CVD with Hydrogen and Oxygen Atoms.” *Chemical Engineering Communications*, 153, 211, **1996** (with P.S. Locke, R.R. Reeves).

“Local Waters: Questions and Answers.” *Chemistry Laboratory Modules from the Women-in-Chemistry Consortium*, CURI Inc., 1001 Connecticut Ave. N. W., Suite 901, Washington, DC 20036, (see also <http://wic.sbc.edu>), **1995** (with Anne M. Wagner, Virginia Lerner, Esra Yavuz and Susan B. Piepho).

“What Color is Your T-Shirt? Reflections on an Absorbing Question.” *Chemistry Laboratory Modules from the Women-in-Chemistry Consortium*, CURI Inc., 1001 Connecticut Ave. N. W., Suite 901,

Washington, DC 20036, (see also <http://wic.sbc.edu>, **1995** (with Anne M. Wagner, Virginia Lerner, Esra Yavuz, Mary Campbell and Susan B. Piepho).

"A Spectroscopic Study of Vapor-Phase Titanium." *Journal of Quantitative Spectroscopy and Radiative Transfer*, *49*, 3, 303, **1993** (with S. Ramaswami, R.R. Reeves and M. Rutten).

"Reactions of Metal Species in Dry Etching and Chemical Vapor Deposition." *Gas-Phase Metal Reactions*, chapter 28. A. Fontijn, Ed., Elsevier, Amsterdam, 661 – 682, **1992**.

"Determination of Organic and Inorganic Anions in Wet Precipitation Samples." *Proceedings of the Sixth National Conference on Undergraduate Research*, Minneapolis, March 26-28, 1992, (with Kurt Speers).

"Copper Film Deposition Using H and O Atoms." *Advanced Metallization and Processing for Semiconductor Devices and Circuits II Materials Research Society Proceedings Vol. 260*, A. Katz, Y. Nissim and S. P. Murarka, Braun-Brumfield, Eds, 647 – 652, 1992 (with Peter Locke and Robert R. Reeves).

"Tungsten Film Deposition by Hydrogen Atom Reaction with WF₆." *Journal of Vacuum Science Technology*, *A9(3)*, 653 **1991** (with W.W. Lee and R.R. Reeves).

"A Diagnostic Approach to Plasma Etching Kinetics: Determination of Atom Concentrations." *Journal of the Electrochemical Society*, *137*, 3517, **1990** (with R.R. Reeves, M. Rutten, S. Ramaswami and P. Roessle).

"Nonaqueous Heterogeneous Oxidation of Sulfur Dioxide." *Journal of Physical Chemistry*, *94*, 3261, **1990** (with Roger Armstrong, Bruce Pohlman, Scott Sibley and Robert Maier).

"Surface-Catalyzed Formation of Electronically Excited Nitrogen Dioxide and Oxygen." *Journal of Physical Chemistry*, *90*, 466, **1986** (with A.L. Chu and R.R. Reeves).

"Creation of Electronically Excited States by Heterogeneous Catalysis." *Gas-Phase Chemiluminescence and Chemi-ionization*, A. Fontijn, Ed., Academic Press, 1985 (with N. Triggs, A.L. Chu and R.R. Reeves).

"Mn/V Ratio as a Tracer of Aerosol Sulfate Transport." *Atmos. Environ.*, *18*, 1059, **1984** (with L. Husain, J.S. Weber, E. Canelli and V.A. Dutkiewicz).

"Anatomy of a Sulfate Episode." *Atmospheric Environment*, *17*, 1475, **1983** (with V.A. Dutkiewicz and L. Husain).

"Determination of the Lifetime of the Mercury 6³P₁ State." *Journal of Quantitative Spectroscopy and Radiative Transfer*, *28*, 289, **1982** (with R.R. Reeves).

"Time-resolved Spectroscopy of the Mercury 6³P₁ State." *Journal of Physical Chemistry*, *85*, 2777, **1981** (with R.R. Reeves).

"Mixed Solvent Systems for Optimizing Output from a Pulsed Dye Laser." *Optics Communications*, *27*, 273 **1978** (with R.R. Reeves).

“Solvation and Segmental Motions of n-Alkylammonium Ions, A Carbon-13 Spin Lattice Relaxation Study.” *Journal of the American Chemical Society*, 96, 5456, 1974 (with G.C. Levy and R.A. Komoroski).

Selected Grants received:

Rathmann Family Foundation, “Grant to Skidmore College Environmental Studies Program”, \$160,000 , 2002 – 2004 (proposal written by Bob DeSieno, Barry Pritzer, Judy Halstead and Karen Kellogg, grant administered by Judy Halstead and Karen Kellogg)

United States Department of Education, “Building Bridges Between International Affairs and Environmental Studies: Preparing Skidmore Students for the ‘Century of the Environment’”, \$151,098, 1999- 2001 (proposal written by Roy Ginsberg and Judy Halstead, grant administered by Roy Ginsberg and Judy Halstead.)

American Chemical Society - Petroleum Research Fund Type B Grant: "Mechanisms of Halogen Atom Reactions at a Solid/Gas Interface", \$19,900 for a 2 year project beginning September 1991.

Research Corporation Grant: "A Chemical Kinetic Investigation of Plasma Dry Etching of W, Ti:W and TiSi₂", \$17,250 for a 2 year project starting June 1991.

Sematech Corporation Subcontract: "A Kinetic Investigation of Plasma Dry Etching of Copper Metal", approved as a subcontract to Skidmore through the New York State Sematech Center of Excellence (SCOE) at Rensselaer Polytechnic Institute Center for Integrated Electronics (RPI CIE)
First year: \$15,886 for 1/15/1991 - 1/15/1992 Second year: \$15,886 for 1/15/1992 - 1/15/1993

Women-in-Chemistry Project: "Revitalizing the Introductory Chemistry Laboratories: Development of Modules that Use a Hands-on, Open-ended, Collaborative Approach" (with 6 other chemists from 6 other colleges), from National Science Foundation: \$207,000 for 3 year project administered through CURI; from Jesse Ball duPont Fund: \$190,000 (administered through Sweet Briar), approximately 1/8 of the total of \$397,000 to each of the 7 colleges. This includes summer support for 2 students per year.