

DONALD W. ESTES
Department of Chemistry and Biochemistry
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EXPERIENCE

- 1999 - Yeshiva University, New York, NY
Senior Laboratory Instructional Specialist
- taught general chemistry and physics laboratories and recitations and organic chemistry and biochemistry laboratories
 - maintained the organic chemistry laboratory manual, developed new experiments, and served as the course coordinator
 - mentored undergraduate students in summer research in biophysical chemistry
 - acted as advisor and second reader of departmental honors theses
 - served as co-advisor and advisor of the American Chemical Society Student Affiliates chapter which has received numerous national awards and funding
 - participated in the Physical Chemistry On-Line consortium and developed a new module – “The DNA Melt”
 - refereed articles for the *Journal of Undergraduate Chemistry Research*
 - taught the general chemistry lecture for faculty on leave
 - maintained the chemistry laboratory equipment and software, assisted in the procurement of new instruments and the subsequent training of their use, and ordered laboratory supplies
 - created and updated departmental, faculty, and course websites
 - functioned as the liaison with plant operations, support services, and academic computing for day-to-day laboratory operations
 - assisted in the coordination of the College’s annual science poster competition
 - participated in a task force on planning and resources for the Middle State Reaccreditation Review
 - wrote an NSF proposal to acquire and integrate an NMR spectrometer into the undergraduate curriculum
- 1993 - 1999 New York University, New York, NY
Tutor and Adjunct Assistant Professor of Chemistry
- taught biochemistry and tutored biophysical chemistry, general chemistry, physical chemistry, and general physics

- 1994 - 1999 The City University of New York, New York, NY
Adjunct Assistant Professor of Chemistry and Physics
- taught general chemistry lecture and laboratory, general physics lecture and laboratory, and organic chemistry laboratory
- 1998 Hofstra University, Hempstead, NY
Adjunct Assistant Professor of Chemistry
- taught organic chemistry laboratory
- 1998 Mercy College, Dobbs Ferry, NY
Adjunct Assistant Professor of Chemistry
- taught general chemistry lecture and laboratory
- 1998 South Lyon Community Schools, South Lyon, MI
Guest Teacher
- substitute taught in all areas for the middle and high schools
- 1994 - 1995 Barnard College, Columbia University, New York, NY
Laboratory Associate
- taught physical chemistry laboratory
- 1992 - 1993 Wilson College, Chambersburg, PA
Visiting Assistant Professor of Chemistry
- taught biochemistry, physical chemistry, organic chemistry lecture and laboratory, general physics lecture and laboratory, and senior science seminar
- 1992 The University of Michigan, Ann Arbor, MI
Administrative Assistant
- implemented software to automate payroll processing
- 1990 - 1991 Fitness Research of Southern California, Los Angeles, CA
Research Associate
- analyzed the effects of underwater aerobics on water resistance training
- 1988 - 1990 Research and Development Associates, Los Angeles, CA
Senior Research Fellow
- evaluated the effects of lasers on hardened materials for missiles
- monitored the performance of several subcontractors on a government classified lethality program
- 1983 - 1988 TRW, Inc., Redondo Beach, CA
Systems Engineer
- developed data processing algorithms for missile tracking
- simulated the performance of ionospheric propagation of radio waves for communication
- analyzed the effects of radiation on electronic systems
- simulated the guidance and control commands for missile navigation

1982 - 1983 University of Illinois, Urbana, IL
Postdoctoral Research Associate
- developed a methodology for calculating molecular
rovibrational bound states

EDUCATION

University of Illinois, Urbana, IL
Ph.D. in Chemistry, 1982
Thesis: "The Quantum Mechanical Hamiltonian of Rotating-Vibrating Polyatomic
Molecules and an Exact Solution"

Harvard University, Cambridge, MA
1977 - 1978, Chemical Physics

Wayne State University, Detroit, MI
B.S. in Chemistry with High Distinction, 1977

HONORS AND ORGANIZATIONS

Phi Beta Kappa
Phi Lambda Upsilon
Sigma Xi
Michigan Chapter American Institute of Chemists Award, 1977
Presidential Scholarship, Wayne State University, 1973 - 1977

PUBLICATIONS

D. Estes, L. Blau, S. Guigui, and N. Seleski, "Base Stacking in Deoxyoligonucleotide
Duplexes", *Journal of Undergraduate Chemistry Research*, **11**, 27 (2012).

D. Estes and D. Secrest, "The Vibration-Rotation Hamiltonian – A Unified Treatment of
Linear and Nonlinear Molecules", *Molecular Physics*, **59**, 569 (1986).

G. Fraenkel, M. Geckle, A. Kaylo, and D. Estes, "Effects of Ligands on Ion-Pairing
Behavior of Benzylic Lithium Compounds", *Journal of Organometallic Chemistry*, **197**,
249 (1980).

G. Fraenkel, D. Estes, and M. Geckle, "Reaction of t-Butyllithium with 1-
Phenylcycloalkenes", *Journal of Organometallic Chemistry*, **185**, 147 (1980).

ABSTRACTS

D. Estes and L. Blau, "Techniques, Synthesis, and Analysis in a One Semester Organic
Chemistry Laboratory Course of a Liberal Arts College", 24th Biennial Conference on
Chemical Education, Allendale, MI, August 2014.

D. Estes and L. Blau, "The Instructional Organic Chemistry Laboratory of a Small
Liberal Arts College", 22nd Biennial Conference on Chemical Education, University
Park, PA, July 2012.

J. Meir, L. Soldokin, A. Soloveichik, R. Weiss, and D. Estes, "The Chemistry Club of Stern College for Women, Yeshiva University", 241st American Chemical Society Meeting, Anaheim, CA, March 2011.

D. Estes and L. Blau, "Synthesis and Analysis in the Organic Chemistry Laboratory of a Small Liberal Arts College", 21st Biennial Conference on Chemical Education, Denton, TX, August 2010.

L. Blau, D. Estes, N. Seleski, And S. Guigui, "Stabilizing of Deoxyoligonucleotide Duplexes by Base Stacking", 235th American Chemical Society Meeting, New Orleans, LA, April 2008.

S. Guigui, D. Estes, and L. Blau, "DNA's Stability: Composition vs. Sequence", 233rd American Chemical Society Meeting, Chicago, IL, March 2007.

D. Estes, N. Ben-Zvi, and L. Blau, "The DNA Melt", 19th Biennial Conference on Chemical Education, West Lafayette, IN, July 2006.

D. Estes, N. Ben-Zvi, and L. Blau, "The DNA Melt: Composition, Sequence, and Thermodynamics", Gordon Conference on Chemistry Education Research and Practice", New London, CT, June 2005.

L. Blau, C. Dobin, D. Estes, and C. Rapp, "Nontraditional Experiments in an Honors Biochemistry Laboratory Course", 225th American Chemical Society Meeting, New Orleans, LA, March 2003.

B. Keningsberg, A. Sedletcaia, D. Estes, and L. Blau, "Twenty Years of Bonding: The Chemistry Club and the ACS, 223rd American Chemical Society Meeting, Orlando, FL, April 2002.

L. Blau, D. Estes, and M. Pommot-Maia, "Visualization and Perception in Physical Science Courses", Gordon Conference on Science Education and Visualization", South Hadley, MA, August 2001.

L. Blau and D. Estes, "Organic Chemistry for Pre-Health Students", 221st American Chemical Society Meeting, San Diego, CA, April 2001.

D. Estes, "The Vibration-Rotation Hamiltonian of a Linear Triatomic Molecule," 10th Midwest Theoretical Chemistry Conference, Minneapolis, MN, May 1980.