

**CURRICULUM VITAE**

**Daniel W. Armstrong  
Robert A. Welch Professor**

**University of Texas at Arlington  
Arlington, Texas 76019**

## DANIEL WAYNE ARMSTRONG

**Date of Birth:** November 2, 1949

**Place of Birth:** Fort Wayne, Indiana

**Citizen of:** United States of America

**Family Status:** Married: Wife, Linda M. Armstrong; Children: Lincoln Thomas (b. 1976), Ross Alexander (b. 1978), Colleen Victoria (b. 1986)

**Educational Background:** September 1968 - June 1972  
Washington & Lee University, Lexington, Virginia  
B.S. Interdepartmental Science and Math

September 1972 - September 1974  
Texas A&M University, College Station, Texas  
M.S., Oceanography

January 1975 - December 1977  
Texas A&M University, College Station, Texas  
Ph.D., Bio-organic Chemistry

### Positions:

1978 - 1982, Assistant Professor of Chemistry, Bowdoin College, Georgetown University.

1983 - 1985, Associate Professor of Chemistry, Texas Tech University.

1986 - 1987, Professor of Chemistry and Head of Analytical Division, Texas Tech University.

1987 - 1989, Professor of Chemistry and Head of Bio-analytical Division, University of Missouri-Rolla.

1989 - 2000, Curators' Distinguished Professor of Chemistry.

1991 - 1998, Founder and First Director of the Center for Environmental Science and Technology, University of Missouri-Rolla.

2000 - 2005, Caldwell Distinguished Professor, Iowa State University, DOE Ames Laboratory.

2006 - Present, Robert A. Welch Professor, Department of Chemistry/Biochemistry, University of Texas at Arlington.

## Awards and Citations:

Elected as a member of the Chemistry Honor Society, Phi Lambda Upsilon (PLU), 1975, Texas A&M University; Who's Who, Who's Who in the South and Southwest, Personalities of America, Personalities of the South, American Men and Women of Science, Directory of World Researchers, Who's Who in the Midwest. Teaching Excellence Award from the "Arts and Sciences Council" of Texas Tech University, 1985. Faculty Excellence Award, University of Missouri-Rolla, 1988. Teaching Excellence Award, University of Missouri-Rolla, 1988-89, 92, and 94. Curators' Distinguished Professorship, 1989. EAS Award for Outstanding Achievements in the Fields of Chromatography, 1990. 1991 Great Britain's Martin Medal in recognition of outstanding contributions to Chromatography. 1992 ISCO Lectureship Award for Significant Contributions to Instrumentation for Biochemical Separations. 1993 49th American Chemical Society Midwest Regional Award. 1993 Presidential Award for Research and Creativity. Publication entitled "Evaluation of the Macrocyclic Antibiotic Vancomycin as a Chiral Selector for Capillary Electrophoresis" received a 1994 Perkin-Elmer Award for Excellence in Capillary Electrophoresis. 1995 R&D 100 Award. 1995 American Association of Pharmaceutical Scientists Fellow Award. 1996 The American Microchemical Societies' A. A. Benedette-Pichler Award. "1997 Karen Morehouse Best Paper Award" presented by the 12th Annual Conference on Hazardous Waste Research. 1998 American Chemical Society - Helen M. Free Award for Public Outreach. 1999 American Chemical Society Award in Chromatography. 1999 Distinguish Scholar, Hope College/Park Davis. Caldwell Chair, Iowa State University, 2000. Chicagoland Chromatography Discussion Group (CCDG) Merit Award, 2001. Weber Medal for Contributions to Pharmaceutical Science, 2001. Honorary Member of the Societatis Pharmaceuticae Slovacae, 2001. Welch Lectureship speaker, Texas A&M University, 2002. Kenneth A. Spencer Award for Meritorious Contributions to Agricultural and Food Chemistry, 2002. Dow Lectureship in Chemistry, University of British Columbia, 2003. IAP Lectureship, Columbia University, NY 2003. Chirality Medal, Shizuoka, Japan, 2003. Vladimir J. Zuffa Medal for Pharmaceutical Chemistry, 2004. Dal Nogare Award for Separation Science, 2005. Medal of the Slovak Medical Society, 2007. Admitted as a Fellow of The Royal Society of Chemistry, 2009. Named American Chemical Society Fellow, 2013. UTA Distinguished Record of Research or Creative Activity 2012. ACS Award for Separation Science & Technology, 2014. 2014 M.J.E. Golay Award. UT Arlington Distinguished Scholars Award 2014. Inducted to the UTA Academy of Distinguished Scholars, 2014. Named to *the Analytical Scientist's* 2013 Power List top 20 (<http://theanalyticalscientist.com/the-power-list-2013/>). Wilfred T. Doherty Research & Service Award – DFW Section of American Chemical Society, 2015. Editor of *Chirality*. Section Editor for *Amino Acids*. Separations Associate Editor for *Analytical Chemistry*. Member of the Editorial Board of *Journal of Pharmaceutical & Biomedical Analysis*, *Amino Acids Journal*, *The Journal of Chromatography*, *The Journal of Liquid Chromatography*, *The Journal of Planar Chromatography*, *Journal of Inclusion Phenomena*, *Separation Science and Technology*, and *Chromatographia*. Member of the Instrumentation Board for *Analytical Chemistry*, 1990. Member of the Scientific Advisory Board for *Analytical Chemistry*, 1996 -98. 1999 Editorial Advisory Board of *Chromatographia*, 2001 Editorial Advisory Board for *Electrophoresis*, *Chromatographia*, *J. Separation Science*. 2008 Editorial Consultant for *Scientia Chromatographia*.

## Administrative Experience:

1. Chairman, Division of Bio-analytical Chemistry: (Texas Tech University 1983-87; Univ. of Missouri-Rolla 1987-2000).
2. State of Missouri-System Research Board: (Founding member, 1990, reviews, controls and disburses research funds for the State University System in areas of science, engineering, health sciences, humanities and social science. Annual budget \$4.0M/year).
3. Director for the Center for Environmental Science and Technology: (Founded (1990) this multidisciplinary research center which is one of three on the UMR campus. Budget \$1.6 M. Involved contacts and liaisons with congress, industry and academia)
4. Board of Directors: University of Missouri-Kansas City, Center for Environmental Studies.
5. Corporate Board of Directors: Advanced Separations Technologies, Inc., Whippany, NJ.
6. Chairman and CEO of Separations, Inc. (An independent corporation for the organization of meetings, short courses, consulting, etc.).
7. Corporate Advisory Board: Bioanalytical Systems (BAS) Scientific, West Lafayette, IN.
8. Corporate Advisory Board: PDR Chiral, Inc., Palm Beach Gardens, FL.
9. Member of Research Foundation (an independent nonprofit corporation for the support of the chemistry at the University of Missouri-Rolla, Budget ~\$1.2M).

10. Presidential Award Advisory Board (Judges and recommends recipients for Presidential Research Award).
11. Chairman of International Symposium on Chiral Discrimination, St. Louis, MO. Budget: \$0.6M.
12. Chairman of numerous other national and international conferences and symposia (average budget ~\$0.25M per symposium).
13. Chairman of 22nd International Symposium on High Performance Liquid Phase Separations and Related Techniques, St. Louis, MO (The world's largest international symposium and exhibition on separation science).
14. NIH Metallobiochemistry Study Section (~\$15-20M/session).
15. NIH Physical Biochemistry Study Section (~\$18-30M/session).
16. NSF Review Board.
17. Chairman of International Symposium on Chiral Discrimination, Orlando, FL. Budget: \$ 250,000.00
18. Laboratory Director, DOE - Ames National Laboratory.
19. Member of the Seminar and Library Committee, Iowa State University, Ames, Iowa
20. Member of the Salary Advisory Committee, Iowa State University, Ames, Iowa
21. Head of the Salary Advisory Committee, Iowa State University, Ames, Iowa
22. Head of the and member of the Faculty Search Committee, Iowa State University, Ames, Iowa
23. Member of the Graduate Recruiting Committee, Iowa State University, Ames, Iowa
24. Washington & Lee University Science Advisory Board, Lexington, VA
25. Defense Tribunal, Universitat Jaume, Castellon, Spain
26. International Scientific Committee, International Conference of Chirality

#### Teaching Experience:

<u>Course</u>	<u>Level</u>	<u>Semester Taught</u>
Quantitative Analytical Chemistry	Undergraduate	10
Quantitative Analytical Chem. Lab.	Undergraduate	20
Instrumental Analysis	Undergraduate/Graduate	11
Instrumental Analysis Lab.	Undergraduate	9
General Chemistry	Undergraduate	2
Organic Chemistry	Undergraduate	2
Undergraduate Research	Undergraduate	38
Adv. Quant. Analysis	Graduate	1
Graduate Research	Graduate	48
Colloid Chemistry	Graduate	4
Separations	Graduate	22
Special Topics in Analytical Chemistry	Graduate	5
Enantiomeric Separations for the Pharmaceutical Industry	Post-Graduate	38 short courses
Ionic Liquids in Gas Chromatography	Post-Graduate	2 short courses

#### Publications:

1. "Interstitial Water Chemistry: Deep Sea Drilling Project, Legs 21 and 22", B. J. Presley, J. Trefrey, D. W. Armstrong and M. Nuzzo. *Initial Reports of the Deep Sea Drilling Project*, XXII, 861-864 (1974).
2. "Novel Prebiotic Model Systems: Interactions of Nucleosides and Nucleotides with Aqueous Micellar Sodium Dodecanoate", J. Nagyvary, J. H. Harvey, F. Nome, D. W. Armstrong and J. H. Fendler. *Precambrian Research*, **3**, 509-516 (1976)
3. "Novel Prebiotic Systems: Nucleotide Oligomerization in Surfactant Entrapped Water Pools", D. W. Armstrong, F. Nome, J. H. Fendler and J. Nagyvary. *J. Mol. Evol.*, **9**, 213-223 (1977).
4. "Differential Partitioning of tRNAs between Micellar and Aqueous Phases: A Convenient Gel Filtration Method for Separation of tRNAs", D. W. Armstrong and J. H. Fender, *Biochim. Biophys. Acta*, **478**, 2, 75-80 (1977).
5. "Use of an Aqueous Micellar Medium to Improve the Spectrophotometric Determination of Cyanide Ion with 5,5'-Dithiobis(2-Nitrobenzoic Acid)", S. Spurlin, W. Hinze and D. W. Armstrong, *Analyt. Lett.*, **10**, 12, 977-1008 (1977).

6. "Partitioning of Amino Acids and Nucleotides between Water and Micellar Hexadecyltrimethyl-ammonium Halides", D. W. Armstrong, R. Seguin and J. H. Fendler, *J. Mol. Evol.*, **10**, 241-250 (1977).
7. "Spontaneous Polypeptide Formation from Amino Acyl Adenylates in Surfactant Aggregates", D. W. Armstrong, R. Seguin, C. J. McNeal, R. D. Macfarlane and J. H. Fendler, *J. Am. Chem. Soc.*, **100**, 4605-4606 (1978).
8. "Synthesis of Amino Acyl Adenylates Using the *tert*-Butoxycarbonyl Protecting Group", D. W. Armstrong, R. Seguin, M. Suburi and J. H., Fendler, *J. Mol. Evol.*, **13**, 103-113 (1979).
9. "A Novel Phase Transfer Catalyst Capable of Facilitating Acid-Catalyzed and/or Electrophilic Reactions", D. W. Armstrong and M. Godat, *J. Am. Chem. Soc.*, **101**, 2489-2491 (1979).
10. "Thin Layer Chromatographic Separation of Pesticides, Decachlorobiphenyl and Nucleosides with Micellar Solutions", D. W. Armstrong and R. Q. Terrill, *Anal. Chem.*, **51**, 2160-2163 (1979).
11. "Use of Micelles in the TLC Separation of Polynuclear Aromatic Compounds and Amino Acids", D. W. Armstrong and M. McNeely, *Anal. Lett.*, **12**, A12, 1285-1291 (1979).
12. "Organometallic Compounds as Phase Transfer Catalysts", D. W. Armstrong, H. Kornahrens, D. J. Carucci, B. A. Wohler, J. E. Kahn and J. K. Shillington, *Tetrahedron Lett.*, **47**, 4525-4526 (1979).
13. "Use of an Aqueous Micellar Mobile Phase for Separation of Phenols and Polynuclear Aromatic Hydrocarbons via HPLC", D. W. Armstrong and S. J. Henry, *J. Liq. Chromatogr.*, **3**, 5, 657-662 (1980).
14. "Thin Layer Chromatographic Separation of Substituted Benzoic Acids with Aqueous Solutions of  $\alpha$ -Cyclodextrins", W. L. Hinze and D. W. Armstrong, *Anal. Lett.*, **13**, A12, 1093-1103 (1980).
15. "Pseudophase Liquid Chromatography: Applications to TLC", D. W. Armstrong, *J. Liq. Chromatogr.*, **3**, 6, 895-900 (1980).
16. "Reactions of Vitamin B<sub>12</sub>r with Polyhalogenated Hydrocarbon Pesticides", M. C. M. Laranjevia, D. W. Armstrong and F. Nome, *J. Bioorganic Chem.*, **9**, 313-317 (1980).
17. "Application of Pseudophase Liquid Chromatography (PLC): Highly Selective Mobile Phase for Present and Future Separations", D. W. Armstrong, *American Laboratory*, **13**, 8, 14-20 (1981).
18. "Partitioning Behavior of Solutes Eluted with Micellar Mobile Phases in Liquid Chromatography", D. W. Armstrong and F. Nome, *Anal. Chem.*, **53**, 11, 1662-1666 (1981).
19. "Enhanced Fluorescence and Room Temperature Liquid Phosphorescence Detection in Pseudophase Liquid Chromatography (PLC)", D. W. Armstrong, W. L. Hinze, K. H. Bui and H. N. Singh, *Anal. Lett.*, **14**, A19, 1659-1667 (1981).
20. "A Simple Salt-Enhanced Surface Tension Technique for Detection of Trace Surfactants in Water", D. W. Armstrong, F. Lafrachise and D. Young, *Anal. Chim. Acta*, **135**, 165-168 (1982).
21. "Use of Micellar and Cyclodextrin Solutions in Liquid Chromatographic Separations," D. W. Armstrong, in *Proc. Inter. Symp. Soln. Behavior Surfact.*, K. L. Mittel and E. J. Fendler, (Eds), Plenum Press, N. Y.. (1982) pp. 1273-1282.
22. "Nonaqueous Reversed Phase Liquid Chromatographic Fractionation of Polystyrene", D. W. Armstrong and K. H. Bui, *Anal. Chem.*, **54**, 4, 706-708 (1982).
23. "Use of Aqueous Micellar Mobile Phases in Reverse Phase TLC", D. W. Armstrong and K. H. Bui, *J. Liq. Chromatogr.*, **5**, 6, 1043-1050 (1982).
24. "Mechanism of Enhancement of Analyte Sensitivity by Surfactants in Flame Atomic Spectrometry", H. Kornahrens, K. D. Cook and D. W. Armstrong, *Anal. Chem.*, **54**, 1325-1329 (1982).

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