

**Darleane (Christian) Hoffman**  
**CV August 2008**



Born: Terril, Iowa

B.S., Chemistry/Math, Iowa State College, Ames, Iowa, 1948

Ph.D., Physical (Nuclear) Chemistry, Iowa State College, Ames, Iowa, 1951

Oak Ridge National Laboratory, Chemist, 1952-53

Los Alamos Scientific Laboratory, Los Alamos, New Mexico, 1953-78

Staff member, Project Leader, Associate Group Leader

Guggenheim Fellow, Lawrence Berkeley Laboratory, University of California, 1978-79

Los Alamos National Laboratory, Los Alamos, New Mexico, 1979-84

Division Leader, Chemistry-Nuclear Chemistry Division, 1979-82

Division Leader, Isotope and Nuclear Chemistry Division, 1982-84

University of California, Department of Chemistry, Berkeley, California 1984-present

Professor of Chemistry (Nuclear), 1984-91

Professor Emerita, 1991-93

Professor of the Graduate School, 1994-present

Lawrence Berkeley National Laboratory, Nuclear Science Division, 1984-present

Faculty Sr. Scientist & Group Leader, Heavy Element Nuclear & Radiochemistry, 1984-96

Faculty Sr. Scientist & Co-Group Leader, 1996-2001

Faculty Sr. Scientist, Nuclear Science Division, 2002-present

LLNL Seaborg Institute for Transactinium Science, Charter Director, 1991-96, Senior Research

Advisor, 1996-present

Senior NSF Postdoctoral Fellowship, Oslo, Norway, 1964-65:

Guest lecturer, Institute of Atomic Energy, Beijing, Lanzhou, Peoples Republic of China, 1982

Japan Society for Promotion of Science Fellowship (July-August), 1987

Director's Fellow, Los Alamos National Laboratory, 1990

ACS Representative and invited lecturer at Polish Chemical Society meeting in honor of 100<sup>th</sup>  
Anniversary of the discovery of radium and polonium by Marie Sklowdoska Curie, Wroclaw,  
Poland, 1998

Welch Foundation Lecturer, March 2001.

Lecturer for Actinide Science Summer School sponsored by Seaborg Institute for Transactinium  
Science, Lawrence Livermore National Laboratory & Lecturer for ACS Division of Nuclear  
Chemistry & Technology sponsored summer schools in Nuclear & Radiochemistry, San Jose  
State University, 1998-2005

Invited presentation on "*The Crisis in Radiochemistry and Nuclear Chemistry Education*" for  
the Nuclear Forensics Advisory Panel, Washington, DC, January 2008

**Awards:**

American Chemical Society Central New Mexico Section John Dustin Clark Award for Meritorious Service to Chemistry in New Mexico, 1976  
Iowa State University Alumni Citation of Merit of College of Sciences and Humanities, 1978  
American Chemical Society Award for Nuclear Chemistry, 1983  
Iowa State University Alumni Association Distinguished Achievement Award, 1986  
Fellow, American Physical Society, 1986  
National Honor Initiate & Speaker, Alpha Chi Sigma National Conclave, 1988  
ACS Garvan Medal-Olin Medalist, Physics and chemistry of the heaviest elements, 1990  
Norwegian Academy of Science and Letters, 1990  
Fellow, American Association for the Advancement of Science, 1994  
Berkeley Citation of University of California, Berkeley, 1996  
U. S. National Medal of Science, 1997  
Fellow, American Academy of Arts and Sciences, 1998:  
Frontiers of Science Award of Society of Cosmetic Chemists and Invited Lecturer, New York City, December, 1998  
ACS Priestley Medal, March 25, 2000  
WITI (Women in Technology International) Hall of Fame, April 2000  
Honorary Doctorates: Clark University, May 2000; University of Bern, Switzerland, December 2001.  
Harry & Carol Mosher Award of the Santa Clara, CA Section, ACS, January 2001  
Induction into Alpha Chi Sigma Hall of Fame, August 2002  
Sigma Xi William Procter Award for Scientific Achievement, November 2003  
Radiochemistry Society Lifetime Award for Devotion to Radiochemistry Science & Education November 2003  
Honorary International Member, Japan Society of Nuclear and Radiochemical Sciences, May 2004  
Recipient of J. V. Atanasoff Search & Discovery Alumni Award from College of Liberal Arts and Sciences, Iowa State University, Ames, Iowa, October 2007.  
Member, President's Selection Committee for the National Medal of Science Awards (2007-2009).

**Professional Service:**

Chair, Committee on Nuclear and Radiochemistry of NAS-NRC Board of Chemical Sciences and Technology: 1982-84.  
Executive Committee, ACS Division of Nuclear Chemistry & Technology, 1975-77  
Chairman-Elect (Program Chairman), 1977-79  
Symposium organizer for PACIFICHEM International Chemical Congress of Pacific Basin Societies in 1979, 1984, 1989, and 1995  
IUPAC-IUPAP Committee to examine claims to priority of discovery of elements 104 and 105, 1974-80  
IUPAC Commission on Radiochemistry and Nuclear Techniques: Titular Member, 1983-93  
Secretary (1985-87), Chair (1987-91). Associate Member (1991-93)  
Steering Committee and Panelist, Workshop on "Opportunities and Challenges in Research with Transplutonium Elements, Washington, D. C. , 1983  
Scientific and Organizing Committee, International Conference on Nuclear and

Radiochemistry, Lindau, West Germany, 1984  
International Organizing Committee, International Conference on Nuclear and Radiochemistry, Beijing, China, 1986  
Co-Chair, American Nuclear Society International Conference on Methods and Applications of Radioanalytical Chemistry, Kona, Hawaii, 1987  
Co-Chair, Organizing Committee for Celebration of 25<sup>th</sup> Anniversary of the ACS-DNCT Symposium, "Nuclear Chemistry & Technology: Yesterday, Today, and Tomorrow", Boston, MA, 1990  
Chair, Organizing Committee for Symposium for 50<sup>th</sup> Anniversary of the Discovery and First Chemical Identification of Plutonium, February, Berkeley, CA, 1991  
Panel Member, DOE Review of Laboratory Programs for Women, LLNL, 1992  
Co-Organizer, Actinides-93 International Symposium on Chemistry and Physics of Heaviest Actinides and Transactinides, Santa Fe, NM, 1993  
NAS-NRC Board on Radioactive Waste Management (BRWM), 1994-99  
Co-Organizer, Pacificchem-95 Congress, Symposium on "Nuclear Science in 2020", Honolulu, Hawaii, 1995.  
International Advisory Committee, 1st Asian-Pacific Symposium on Radiochemistry '97, Japan.  
Review committees for ANL, 1986-96, LLNL, 1988-present, MIT, 1997-2002  
Advisory Committee, 1<sup>st</sup> International Conference on the Chemistry and Physics of the Transactinide Elements, Seeheim, Germany, 1998  
Program Committee Member & Plenary Speaker for Plutonium Futures, Santa Fe, NM, 1998, 2000  
Symposium Organizer for ACS Division of Nuclear Chemistry & Technology, Washington, D. C., August 2000.  
Congressional mandated Steering Committee for Roadmapping of R&D Program for Accelerator Transmutation of Nuclear Waste (ATW), 2000  
NAS-NRC BRWM Joint US/Russian Committee on "End Points for Spent Nuclear Fuel and High-Level Radioactive Waste in Russia and the United States", 2001-2003.  
International Advisor & Program Committee, Actinides 2001, Hayama, Japan  
Member, Advanced Nuclear Transmutation Technology (ANTT), subcommittee of DOE's Nuclear Energy Research Advisory Committee (NERAC): 2001-2007; Advisory Committee to Global Nuclear Energy Program (GNEP): 2007  
NAS-NRC Joint US/Russian National Academies Committee on collaboration to prevent radiological terrorism, 2004-6.  
Office Civilian Radioactive Waste Management: Member of Independent Evaluation Panel to assess Science & Technology Program for Yucca Mountain Site, 2005-2006.  
Member, External Review Committee for the School of the Physical Sciences, Department of Chemistry, University of California, Irvine: March 11-14, 2006.  
Chair, Audit Team Radiochemistry, Paul Scherrer Institute, Villigen, Switzerland: June 2006.  
Member, NAS/NRC Committee on Nuclear Forensics, 2007-present  
Member, APS Panel on Public Affairs Committee on *Energy and Environment Study of "Readiness of the U. S. Nuclear Workforce for 21<sup>st</sup> Century Challenges* and co-author of June 2008 report.  
DOE Nuclear Energy Advisory Committee (NEAC): member, *Ad Hoc Subcommittee on Nuclear Facilities 2008*; member, Subcommittee on Global Nuclear Energy Program, 2008-present

**Research interests:** Rapid chemical separation of short-lived fission products; separation chemistry of lanthanide, actinide and transactinide elements; search for heavy elements in nature; studies of radionuclide migration in geologic media; studies of spontaneous fission; heavy ion reactions; production reactions for new neutron-rich heavy element isotopes; atom-at-a-time studies of chemical and nuclear properties of the heaviest elements including first chemical studies of elements 106 (seaborgium) through 108 (hassium); use of automated systems such as SISAK and its flowing liquid-scintillation system to study chemical properties of very short-lived isotopes; atom-at-a-time studies of chemical and nuclear properties of actinides and transactinides; use of the Berkeley Gas-filled Separator (BGS) as preseparator for chemical studies and identification of new heavy isotopes and elements and elucidation of their nuclear decay properties.

She has helped organize many national and international symposia in these fields as well as on the status of women in science.

**Publications:** Dr. Hoffman has published more than 260 papers in refereed journals and presented a host of invited lectures. She was editor and co-author of the book, "The Transuranium People: the Inside Story" by Darleane C. Hoffman, Albert Ghiorso, and Glenn T. Seaborg (2000) which gives a more "popular" account of the discovery of the elements heavier than uranium.

She has taught nuclear chemistry and laboratory courses for both undergraduate and graduate students and served as major professor and advisor for 19 Ph. D. students, 3 M. S. students, and as mentor for numerous undergraduates, postdoctoral fellows, and visitors. Her last Ph. D. student completed his Ph. D. in November 2004. Although she is no longer taking new students she continues to be on UCB campus examination committees. Prof. Hoffman also serves on a large number of advisory and review committees in her fields of special expertise for both national and international organizations.