

Alpha Chi Sigma Hall of Fame

The Alpha Chi Sigma Hall of Fame was established in 1982 to recognize outstanding members of the Fraternity and to publicize their contributions to the science and profession of chemistry. Nominations to the Hall of Fame may be made by any member of the Fraternity. Selections are made by the Supreme Council. The original Hall of Fame consisted of seven members, and for awhile new inductees were added every year. Currently, the Supreme Council inducts up to two new members each biennium with the presentations being made at Conclave. The costs of administering the Hall of Fame are borne by the Alpha Chi Sigma Educational Foundation.

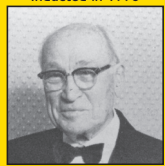
Inducted in 1989



Roger Adams
Omicron 1912

Roger Adams was educated at Harvard University and taught there briefly before moving to the University of Illinois. During World War I, when American laboratories had their supplies of German chemicals cut off, Adams had the “preps” lab at the university manufacture large amounts of specialized organic chemicals to supply U.S. needs. This activity led him to initiate organic syntheses and later organic reactions. Adams had an extraordinary talent for attracting and training students (184 doctorate students and 50, postdoctorate students) to whom he was respectfully known as “The Chief.” His honors and awards include the National Medal of Science, the American Chemical Society’s Priestly Medal and membership in the National Academy of Science. He was president of the American Chemical Society in 1935 and president of the American Association for the Advancement of Science in 1950.

Inducted in 1996



Arnold O. Beckman
Zeta 1921

Arnold O. Beckman was the first to apply electronics to direct chemistry measurement and is known globally as the inventor of the pH meter. He also developed the ultraviolet spectrophotometer, which revolutionized a number of chemical analyses. In 1987, Beckman was inducted into the National Inventors Hall of Fame. In 1988, he was presented with the National Medal of Technology by President Ronald Reagan. And in 1989, President George H.W. Bush presented him with the National Medal of Science. In addition to being an inventor and entrepreneur, Beckman also was a philanthropist. The Arnold and Mabel Beckman Foundation supports five Beckman Institutes and Centers at major universities, a vigorous Young Investigators program and a variety of other research efforts.

Inducted in 2024



Carolyn Bertozzi
Sigma 2001

Carolyn Bertozzi Brother Carolyn Bertozzi is the Anne T. and Robert M. Bass Professor of Chemistry and Professor of Chemical & Systems Biology and Radiology at Stanford University, the Baker Family Director at Sarafan ChEM-H, and an Investigator of the Howard Hughes Medical Institute. She completed her undergraduate degree in Chemistry from Harvard University in 1988 and her Ph.D. in Chemistry from UC Berkeley in 1993. After completing postdoctoral work at UCSF in the field of cellular immunology, she joined the UC Berkeley faculty in 1996. In June 2015, she joined the faculty at Stanford University as an Institute Scholar at Sarafan ChEM-H.

Dr. Bertozzi’s research interests span the disciplines of chemistry and biology with an emphasis on studies of cell surface glycosylation pertinent to disease states. Her lab focuses on profiling changes in cell surface glycosylation associated with cancer, inflammation and bacterial infection, and exploiting this information for development of diagnostic and therapeutic approaches, most recently in the area of immuno-oncology. In addition to her outstanding research, she is known for emphasizing the importance of inclusivity in science. She has often spoken about her personal challenges as a woman and lesbian entering the field at a time when opportunities for under-represented groups were emerging. She is also recognized as a great mentor and collaborator to many.

Dr. Bertozzi has been recognized with many honors and awards for both her research and teaching accomplishments. She is an elected member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the German Academy of Sciences Leopoldina. Some awards of note include the 2024 Priestley Medal, 2022 Nobel Prize in Chemistry, Lemelson-MIT award for inventors, Whistler Award, Ernst Schering Prize, MacArthur Foundation Fellowship, the ACS Award in Pure Chemistry, Tetrahedron Young Investigator Award, and Irving Sigal Young Investigator Award of the Protein Society. Her efforts in undergraduate education have earned her the UC Berkeley Distinguished Teaching Award and the Donald Sterling Noyce Prize for Excellence in Undergraduate Teaching.

Inducted in 2008



R. Byron Bird
Alpha Rho 1942

Dr. R. Byron Bird earned his bachelor’s degree in chemical engineering from the University of Illinois and his doctorate degree from the University of Wisconsin.

Dr. Bird’s postdoctoral work was at Instituut voor Theoretische Fysica, Universiteit van Amsterdam, after which he joined the faculty at the University of Wisconsin. Dr. Bird’s interests include transport phenomena, polymer fluid dynamics, polymer kinetic theory and rheology. He is co-author of *Transport Phenomena*. Since the textbook’s publication, the subject of transport phenomena has become a standard course in chemical engineering curricula in the United States and abroad. Dr. Bird was a Fulbright Lecturer in the Netherlands and Japan and is a recipient of the National Medal of Science and the Society of Engineering Science’s A.C. Eringen Medal for outstanding achievements in Engineering Science.

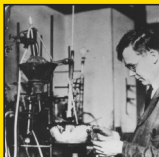
Inducted in 2000



Robert C. Brown
Beta Nu 1960

Herbert C. Brown received his doctorate degree from the University of Chicago. Dr. Brown's research in boranes and organoboranes is well known, as is his work in non-classical ions, on a quantitative theory of aromatic substitution and on steric effects. This work has been recognized by various awards and prizes, including election to the National Academy of Sciences in 1957, the American Chemical Society Award for Creative Research in synthetic organic chemistry in 1960, the National Medal of Science in 1969, the Nobel Prize in Chemistry in 1979, the Priestley Medal in 1981, the American Institute of Chemists' Gold Medal in 1985 and the Herbert C. Brown Award for Creative Research in Synthetic Methods in 1998 (the first recipient).

Inducted in 1982

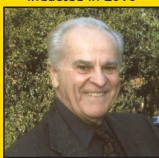


Wallace H. Carothers
Zeta 1926

Wallace H. Carothers received his doctorate degree under the direction of Roger Adams, Omicron 1912, at the University of Illinois. After that, Dr. Carothers was a chemistry instructor at the University of Illinois in 1924 and at Harvard University from 1924 to 1927.

He also was director of organic chemistry in the Central Research Laboratory of E.I. DuPont de Nemours and Company from 1927 to 1937. Dr. Carothers is considered a pioneer in both the theory and applications of polymer chemistry. Dr. Carothers and his associates laid the foundations for the synthetic fiber (nylon) and elastomer (neoprene) industries in the United States.

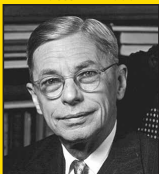
Inducted in 2010



Gregory R. Choppin
Beta Iota 1973

Gregory R. Choppin received a bachelor's degree in chemistry from Loyola University and a doctorate degree from the University of Texas. From 1953 to 1956, Dr. Choppin was a postdoctoral research associate at the Lawrence Berkeley Laboratory where he worked with Glenn T. Seaborg and his team on new elements. During that time, he co-discovered Element 101, Mendelevium. In 1956, he joined the Department of Chemistry at Florida State University. He served as chair of the department from 1968 to 1977 and again from 1993 to 1994. Dr. Choppin received numerous awards that recognized his contributions to chemical research, including the Alexander Von Humboldt U.S. Senior Scientist Award, the American Chemical Society Award for Nuclear Chemistry, the Seaborg Award in Separation Science, the Southern Chemist Award of the American Chemical Society, the Gold Medal of the Florida Academy of Sciences, a Presidential Citation for Outstanding Service to Nuclear Science and Technology, the American Institute of Chemists' Award and the Becquerel Medal by The Royal Society of Chemistry.

Inducted in 2000



James B. Conant
Omicron 1912

James B. Conant received his doctorate degree from Harvard University and later became the president of Harvard University. A founding member of Omicron Chapter at Harvard, Dr. Conant was an early contributor to physical organic chemistry. He was elected to the National Academy of Sciences in 1929. He served in various governmental positions during and following World War II, including the National Defense Research Committee, the National Science Board and the Atomic Energy Committee. He also served on the cabinet-level committee overseeing the Manhattan Project. In his lifetime, Conant was granted 52 honorary] doctorate degrees and several awards, including the Presidential Medal of Freedom and the Priestley Medal in 1944.

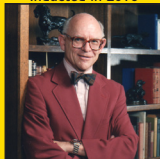
Inducted in 1988



Elias J. Corey
Zeta 1952

Elias J. Corey received his doctorate degree from the Massachusetts Institute of Technology. After graduation, he continued at MIT as a member of a program on synthetic penicillins. In 1950, he joined the University of Illinois as a chemistry instructor. In 1959, he accepted a professorship at Harvard University. His interests in chemistry covered metal complexes, synthesis and enzyme chemistry. He pioneered the method of retrosynthetic analysis and was the first to achieve the chemical synthesis of prostaglandins. He received the 1990 Nobel Prize in Chemistry for his development of the theory and methodology of organic synthesis for Creative Research in Synthetic Methods in 1998 (the first recipient).

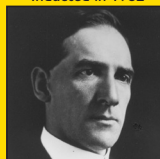
Inducted in 2016



Frank A. Cotton
Beta Eta 1978

Frank A. Cotton received an A.B. degree from Temple University in 1951 and a PhD in chemistry from Harvard University in 1955. Dr. Cotton joined the faculty of the Massachusetts Institute of Technology and in 1961, became the youngest person at MIT to achieve the rank of full professor. In 1972, he moved to Texas A&M University as a professor and played a key role in growing the chemistry department into a world renowned program. While at Texas A&M, Dr. Cotton was the holder of the W.T. Doherty-Welch Foundation Chair in Chemistry. He was a recipient of 30 honorary degrees from universities around the world and received prizes including the King Faisal Prize, the Robert A. Welch Award, the Wolf Prize, the National Medal of Science, the Priestley Medal, and the George Pimentel Award in Chemical Education. Dr. Cotton was a pioneer in the research of direct chemical bonding of pairs and clusters of atoms of elements known as transition metals. He discovered and analyzed many compounds that contain double or multiple metal-metal bonds, including the first known metal-metal quadruple bonds. Dr. Cotton's work was highly important in helping understand catalysts.

Inducted in 1982



Frederick G. Cottrell
Sigma 1917

Frederick G. Cottrell received his bachelor's degree from the University of California at Berkeley in 1896 and his doctorate degree from Leipzig, under the direction of Wilhelm Ostwald, in 1902. For many years, he worked for the U.S. Bureau of Mines, finally as its director. He is the inventor of the electrostatic "Cottrell" precipitator for removing particulate matter from flue gases. He used the royalties from this invention to form the Research Corporation for Science Advancement, which continues to fund imaginative scientific projects. Cottrell said, "[I am] willing to risk, or even sacrifice on occasion, possible legitimate profits...if thereby a more important public service can be rendered."

Inducted in 1982



Farrington Daniels
Beta 1908

Farrington Daniels received his bachelor's degree from the University of Minnesota in 1910 and his doctorate degree from Harvard University in 1912, under the direction of Theodore William Richards. Dr. Daniels served as a member of the faculty of the University of Wisconsin from 1920 to 1972 where he succeeded Alpha Chi Sigma founder J. Howard Mathews as chairman of the Department of Chemistry in 1952. He also served as president of the American Chemical Society in 1953 and received the ACS's Priestley Medal. Dr. Daniels was a renowned pioneer in gas-phase kinetics and solar and nuclear energy. He also authored the standard physical chemistry text, popularly known as Alberty and Daniels.

Inducted in 1982



Petrus J.W. Debye
Tau 1941

Petrus J.W. Debye received his doctorate degree from the University of Munich under the direction of Arnold Sommerfeld. After serving on the faculties of the universities of Zurich, Utrecht, Göttingen, Leipzig and Berlin, he joined the faculty of the Department of Chemistry at Cornell University in 1940 as chairman. During his long career, he made fundamental contributions to physical chemistry in many areas, including X-ray scattering, dipole moments, light scattering and its application to macromolecules, electrolytic solutions (Debye-Huckel theory), heat capacities of solids and magnetization at low temperatures (principle of adiabatic demagnetization). Dr. Debye was the 1936 Nobel Laureate in Chemistry.

Inducted in 2004



Willard H. Dow
Alpha Beta 1917

Willard H. Dow earned his bachelor's degree from the University of Michigan in 1919. He succeeded his father, Herbert H. Dow, as president of the Dow Chemical Company in 1930. In his 19-year tenure as president of Dow Chemical, the company made chemical and industrial history, growing in a time of decline. He was a visionary when others might have been conservative, and he turned Dow Chemical into a \$200 million corporation of diverse companies and nearly 600 different commercial products, most of which were unknown in 1930. He received many honors during his lifetime, including Columbia University's Chandler Medal in 1943, the Gold Medal of the American Institute of Chemists in 1944 and the Medal for the Advancement of Research from the American Society for Metals in 1948. He was inducted into the Plastics Hall of Fame in 1975.

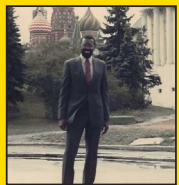
Inducted in 2020



Dr. H. Scott Fogler
Zeta 1960

Dr. H. Scott Fogler's work is focused on problems in upstream research with focus on asphaltene and paraffin deposition. He received his BS from the University of Illinois, and his MS and PhD from the University of Colorado. In 1965, he joined the faculty at the University of Michigan, where he served as Associate Dean of Engineering from 1981-1984 and Chair of the Department of Chemical Engineering from 1985 – 1990. He received the AIChE Warren K. Lewis award in 1996 for his contributions to chemical engineering education and served for 2 years on President Obama's commission to study of the Keystone Pipeline. He has authored several books, including *Elements of Chemical Reaction Engineering* and *Essentials of Chemical Reaction Engineering*, which have been used by more than 70% of all chemical engineering programs in the US and have also been used widely around the world.

Inducted in 2024



Slayton A. Evans
Rho 1986

Slayton A. Evans was born in Chicago, IL, in 1943 but spent his childhood in Meridian, Mississippi. Upon moving south, the Evans family lived in a segregated public housing project and Slayton and his siblings attended St. Joseph's School, a private Catholic school that sought to give Black children an equal opportunity to excel. Slayton helped pay for his school tuition by mowing lawns and by working as a junior assistant janitor at his elementary school. His interest in chemistry began early, when he was given a chemistry set. The solution he concocted was so potent it shattered windows and blew a hole in the backyard of the family home. Undeterred—and encouraged to conduct future experiments at his grandmother's house rather than in the projects—Slayton dreamed of one day enlisting in the Air Force and becoming an astronaut, but his height disqualified him from flight training. Instead, he secured both academic and athletic scholarships to Tougaloo College, a historically Black liberal arts college in Jackson, MS.

As a private HBCU, Tougaloo was a hotbed of Civil Rights activity, regularly hosting – and graduating – some of the best-known leaders of the Movement. As an undergraduate, Slayton and his fellow chem majors did their part by filling perfume spray bottles with mild solutions of hydrochloric acid and distributing them to students who were on their way to protests. If police dogs were used against the students, Slayton explained, the protestors were instructed to aim the bottles at the dogs and spray them in the eyes: "It wasn't enough to hurt the animals," Slayton said, "but it would blind them temporarily so the protestors would be safe."

His time in college and two internships at Abbott Laboratories in Chicago solidified Slayton's desire to be an academic chemist. He entered graduate school at Case Western Reserve University and, in a fortunate turn of events, his graduate project investigating a medication for a parasitic disease common to Southeast Asia was deemed crucial to the war effort in Vietnam and allowed him to defer his draft notice.

Inducted in 2022



Reynold Clayton Fuson
Sigma 1920

Reynold Clayton Fuson was born in Wakefield, Illinois on June 1, 1895. He studied education at Central Normal College in Danville, Indiana. Reynold then attended the University of Montana, where he received a Bachelor's degree in chemistry. This was followed by a Master's degree from the University of California, Berkeley, and a Ph.D. from the University of Minnesota. Dr. Fuson then moved to Harvard University to carry out postdoctoral work in the laboratory of E.P. Kohler. In 1927, he joined the Department of Chemistry at the University of Illinois, where he served as a distinguished teacher and researcher until retiring in 1963. Following his retirement from the University of Illinois, Fuson spent 14 years at the University of Nevada as a distinguished visiting professor and then as a professor emeritus. During his long career Brother Fuson published 285 scientific articles on a wide variety of topics and wrote or co-wrote five textbooks. His accomplished career included recognition as a member of National Academy of Sciences, receiving of the Nichols Medal, the Manufacturing Chemists' Association Award for College Teaching, and the John R. Kuebler Award of Alpha Chi Sigma in 1964.

Inducted in 2002



Mary L. Good
Beta Phi 1976

Mary L. Good received degrees from the Arkansas State Teachers College and the University of Arkansas. Her first career was in academe, beginning at the Louisiana State University in Baton Rouge and later at the New Orleans campus of LSU. Her research included inorganic and radiation chemistry. Good then moved to Universal Oil Products as director of research and rose to the position of senior vice president of technology. In 1993, her career took another turn when she was appointed under secretary for technology in the U.S. Department of Commerce. Then she returned to academe, serving as dean of the Donaghey College of Information Science and Systems Engineering at the University of Arkansas-Little Rock. Good also served as chair of the board of directors and later as president of the American Chemical Society. Her service and professional accomplishments were recognized by several awards, including the Priestley Medal in 1977 and the Parsons Award of the American Chemical Society in 1991.

Inducted in 2002



Paul J. Flory
Tau 1949

Paul J. Flory received degrees from Manchester College and The Ohio State University. Following an active industrial career with DuPont, ESSO Labs and Goodyear Tire & Rubber, Flory joined the faculty of the Department of Chemistry at Cornell University. He later spent a brief time as the executive director of research at the Mellon Institute before going on to Stanford University. Flory's work in polymer chemistry, including polymerization mechanisms, configurational statistics and physical and thermodynamic properties of high polymers, earned him numerous honors, including the American Chemical Society's Debye Award in 1969, the Gibbs Medal in 1973, the Priestley Medal in 1974, the National Medal of Science and the Nobel Prize in Chemistry in 1974.

Inducted in 2012



Harry B. Gray
Upsilon 1958

After completing his graduate work at Northwestern University and postdoctoral research at the University of Copenhagen, **Harry B. Gray** joined the chemistry faculty at Columbia University, where in the early 1960s he developed ligand field theory to interpret the electronic structures and substitution reactions of metal complexes. After moving to the California Institute of Technology in 1966, he began work in biological inorganic chemistry and solar photochemistry, including the development of inorganic systems for energy storage. Gray has published more than 800 research papers and 18 books. He has received numerous American and international awards. He currently is the Arnold O. Beckman Professor of Chemistry and the founding director of the Beckman Institute at Caltech.

Inducted in 2018



M. Frederick Hawthorne
Beta Delta 1946

M. Frederick Hawthorne attended the Missouri School of Mines and Metallurgy, Rolla, Missouri (now Missouri University of Science and Technology) as a chemical engineering student. While there, he joined the Beta Delta Chapter of Alpha Chi Sigma in 1946. He later transferred to Pomona College and received a B.A. in chemistry. Brother Hawthorne then moved to the University of California, Los Angeles to seek a PhD in organic chemistry. While there he worked under Donald Cram, who later shared the 1987 Nobel Prize in Chemistry with Jean-Marie Lehn and Charles J. Pedersen "for their development and use of molecules with structure-specific interactions of high selectivity." He then moved to Iowa State University, where he conducted postdoctoral research in physical-organic chemistry for a period of sixteen months. Hawthorne is the author or co-author of more than 560 research papers, 30 patents and 10 book chapters that reflect the joint efforts of approximately 200 Ph.D. students and postdoctoral associates and 11 Ph.D. coworkers at Rohm and Haas, Redstone.

Inducted in 1984



Joel H. Hildebrand
Sigma 1913

Joel H. Hildebrand received his bachelor's and doctorate degrees from the University of Pennsylvania. After spending a year as a postdoctoral fellow with J.H. van 't Hoff and Walther Nernst in Berlin, Dr. Hildebrand returned to the University of Pennsylvania where he taught from 1907 to 1913. In 1913, he joined the faculty at the University of California at Berkeley. Dr. Hildebrand taught there until past the age of 70. He considered his lifelong work on the behavior of liquids and nonelectrolyte solutions his most important contribution to chemistry. Dr. Hildebrand was the recipient of numerous awards, including having a chemistry building named for him while he was still living.

Inducted in 2002



Darleane C. Hoffman
Sigma 1988

Darleane C. Hoffman received her bachelor's and master's degrees from Iowa State University. She briefly joined the staff of the Oak Ridge National Laboratory before moving to the Los Alamos Laboratory, where she spent nearly 30 years, rising to the position of division leader. Then she moved to the Lawrence Berkeley Laboratory, where she was named a senior scientist and a group leader of the Heavy Element Nuclear & Radiochemistry Group in the Nuclear Science Division. At the same time, Hoffman joined the faculty of the Department of Chemistry at the University of California at Berkeley. From 1991 to 1996, she served as the director of the Seaborg Institute for Transactinium Science. In 1994, she was named a professor of the graduate school at UC-Berkeley. For her work in nuclear and radiochemistry, Hoffman received the American Chemical Society Award in Nuclear Chemistry in 1983, the Garvan-Olin Medal in 1990, the U.S. Medal of Science in 1997 and the Priestley Medal in 2000.

Inducted in 2000



Charles James
Mu 1911

Charles James was educated at the Institute of Chemistry at University College in London where he was mentored by Sir William Ramsey and John Norman Collie. James started teaching at the New Hampshire College in 1907 and was head of the Chemistry Department from 1912 until his death in 1928. He is a founding member of Mu Chapter. James' main research interest was rare earth chemistry and fractional crystallization for separation. Through his research, he separated lutetium from what was thought to be ytterbium and provided highly purified rare-earth samples for research throughout the world. Mu Chapter describes him this way: "His creed in life is well represented by the Three Objects of Alpha Chi Sigma; he was a true member."

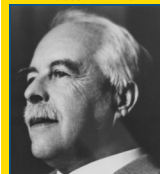
Inducted in 2012



Paul K. Kuroda
Alpha Sigma 1996

Paul K. Kuroda received his bachelor's and doctorate degrees from the Imperial University of Tokyo. His first paper was published in 1935, and he became the youngest faculty member at the Imperial University of Tokyo in 1944. In 1949, he sailed to America. His postdoctoral studies at the University of Minnesota were in analytical chemistry, but he returned to the study of natural and artificial radioactivity after joining the faculty at the University of Arkansas in 1952. At the University of Arkansas he trained 64 doctorate students and several postdoctoral associates and befriended many undergraduate students. He officially retired from the University of Arkansas in 1987, but he remained active in research. He was the author or co-author of almost 400 publications, and he was the Honor Initiate at the 43rd Biennial Conclave in 1996.

Inducted in 1982



Gilbert N. Lewis
Sigma 1913

Gilbert N. Lewis received his doctorate degree at Harvard University under the direction of Theodore William Richards. From 1905 to 1912, Lewis was a professor of chemistry at the Massachusetts Institute of Technology. From 1912 to 1941, he served at the University of California at Berkeley as dean of the College of Chemistry and chairman of the Department of Chemistry. Lewis is noted for his work on chemical bonding (electron pair bond, octet rule, Lewis acids and bases) as well as his work with deuterium, the theory of color and paramagnetism. He also is the author of the classic text *Thermodynamics and the Free Energy of Chemical Substances*, written in collaboration with Merle Randall, Delta 1907.

Inducted in 1998



Warren K. Lewis
Alpha Zeta 1925

Through his coordination of chemistry, physics and engineering into an independent discipline, **Warren K. Lewis** has been called the Father of Modern Chemical Engineering. He identified and quantified unit operations and was involved in much research on distillation, evaporation and petroleum cracking. Lewis was known for his aggressive teaching and demand of straight-thinking. Lewis received several honors throughout his lifetime, including the Priestley Medal in 1947, the first American Chemical Society Award in Industrial and Engineering Chemistry in 1956 and the American Institute of Chemical Engineers' Founders Award in 1955.

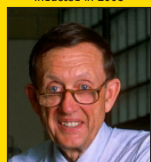
Inducted in 2018



Willard Frank Libby
Sigma 1941

Willard Frank Libby attended the University of California, Berkeley from 1927 to 1933, earning his B.Sc. (1931) and Ph.D. (1933) degrees. He was subsequently appointed Instructor in the Department of Chemistry at California University, Berkeley, eventually earning the rank of Associate Professor. In 1941, he was awarded a Guggenheim Memorial Foundation Fellowship in 1941 and moved to Princeton University. From 1945 to 1954, Libby was Professor of Chemistry in the Department of Chemistry and Institute for Nuclear Studies (now the Enrico Fermi Institute) at University of Chicago. Libby was appointed in 1954 as a member of the U.S. Atomic Energy Commission by President Eisenhower. He is most well known for his work on natural carbon-14 (radiocarbon) and its use in dating archaeological artifacts. For this work he was awarded the Nobel Prize in Chemistry in 1960 "for his method to use carbon-14 for age determination in archaeology, geology, geophysics, and other branches of science."

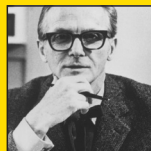
Inducted in 2008



Edwin N. Lightfoot
Tau 1944

Edwin N. Lightfoot earned his bachelor's and doctorate degrees in chemical engineering from Cornell University. He joined the faculty of the University of Wisconsin in 1953. Dr. Lightfoot's interests are in mass-transport reaction modeling, biological mass-transfer processes and separations processes. He is co-author of *Transport: Phenomena*, a classic textbook used worldwide by chemical engineering students and educators. Dr. Lightfoot has received numerous awards, including the National Medal of Science and the Society of Biology Engineering James E. Bailey Award for outstanding contributions to the field of biological engineering.

Inducted in 2014



William N. Lipscomb, Jr.
Alpha Gamma 1939

William N. Lipscomb, Jr., was a graduate of the University of Kentucky and Caltech. Together with his students, he is noted for achieving a quantum-mechanical understanding of the three-center two-electron bond, studies of boron hydrides and carboranes, the first accurate calculation of the ethane barrier and contributions to Hartree–Fock self-consistent field (SCF) theory. The mineral lipscumbite was named after Lipscomb, whose group determined the structure. Lipscomb was the 1976 Nobel Laureate in Chemistry for his theoretical chemistry results. Fellow Alpha Chi Sigma Brother and Nobel Laureate Linus Pauling was Lipscomb's dissertation advisor. And two of Lipscomb's students are Nobel Laureates, who in a way continued Lipscomb's work.

Inducted in 2014



Rudolph A. Marcus
Zeta 1965

Rudolph A. Marcus received his bachelor's degree in 1943 and a doctorate degree in 1946 in experimental research from McGill University. He was a member of the faculties of the Polytechnic Institute of Brooklyn from 1951 to 1964 and the University of Illinois from 1964 to 1978. Then he joined the Caltech faculty as the Noyes Professor in 1978 and became the Kirkwood-Noyes Professor in 2013. Dr. Marcus has conducted research on almost every aspect of chemical reaction rate theory. A trademark of his research has been a strong interaction between theory and experiment. Dr. Marcus received the Nobel Prize in Chemistry in 1992, the Wolf Prize in Chemistry in 1985, the U.S. National Medal of Science in 1989 and various honorary doctorates and professorships and other awards.

Inducted in 1988



Carl S. Marvel
Zeta 1918

Carl S. Marvel received his doctorate degree from the University of Illinois in 1920 under the instruction of William A. Noyes, Sr., and Roger Adams. He served on the faculties at the University of Illinois from 1920 to 1961 and at the University of Arizona from 1961 to 1978. "Speed" Marvel was one of the pioneers of synthetic polymer chemistry. His research in the 1930s laid the groundwork for much of today's polymer technology. He also played a key role in developing synthetic rubbers during World War II, and in his later years he developed important heat stable polymers. Marvel Hall at the American Chemical Society headquarters is a tribute to his many years of service to the ACS, including its presidency in 1945.

Inducted in 1986



Thomas Midgley, Jr.
Alpha Delta 1936

Thomas Midgley, Jr., received his education at Cornell University and then achieved fame as an industrial chemist. His discoveries include dichlorodifluoromethane (Freon) as a stable, non-toxic, non-flammable replacement for ammonia in refrigerant cycles and tetraethyl lead as an octane booster for gasoline. Midgley discovered iron selenide, one of the first known catalysts for cracking hydrocarbons to yield aromatic compounds. His work earned the Nichol Medal, the Perkin Medal, the Priestley Medal and the Gibbs Medal. He also was president of the American Chemical Society.

Inducted in 2022



Donna Nelson
Beta Nu 1981

Donna Nelson Donna Nelson was born in Eufaula, Oklahoma in the Muscogee Creek Nation. She earned a B.S. in chemistry at the University of Oklahoma. She then moved to the University of Texas at Austin, where she carried out her Ph.D. work with Michael Dewar. This was followed by postdoctoral work at Purdue University with Chemistry Nobel Laureate Herbert C. Brown. After joining the faculty at the University of Oklahoma, Nelson served as a faculty fellow in the University of Oklahoma Provost's Office from 1989 to 1990. Dr. Nelson was the first woman faculty fellow and the first assistant professor to enter the position. In 2016, she served as president of the American Chemical Society. Her research interests include the development of a new technique for gathering mechanistic information on addition reactions of alkenes which helped to determine mechanisms of important addition reactions of alkenes, such as hydroboration, oxymercuration, bromination, the Wacker process, and the Wilkinson's catalyst reaction. And the use of NMR to examine the effects of substituents upon single-walled carbon nanotube (SWCNT) reactions. In addition to her scientific accomplishments, Brother Nelson has had a significant impact upon improving Science Education and understanding the lack of diversity in science and engineering. She has authored or co-authored more than 200 research articles and has received myriad honors and awards, including being named a fellow of both the American Chemical Society and the Royal Society of Chemistry.

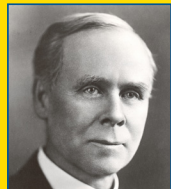
Inducted in 1982



James F. Norris
Alpha Zeta 1920

James F. Norris received his doctorate degree from The Johns Hopkins University in 1895 under the direction of Ira Remsen. He was a faculty member at the Massachusetts Institute of Technology for 30 years, and for half of that time he served as director of the research laboratory in organic chemistry. Dr. Norris' research interests centered on the reactivity of atoms and groups in organic chemistry. He was president of the American Chemical Society for two years. "Sunny Jim" was a prolific author of textbooks, which he wrote without consultation to reference works other than tables of physical constants, believing that nothing should be included in a general text that a chemist does not remember as useful information.

Inducted in 2010



William A. Noyes, Sr.
Zeta 1912

William A. Noyes, Sr. received his doctorate degree from The Johns Hopkins University in 1882. In 1885, he began developing the chemical program at the new Rose Polytechnic Institute. He left Rose in 1903 to become the first chief chemist at the U.S. National Bureau of Standards where he worked on atomic weight determination. Dr. Noyes arrived at the University of Illinois in 1907 and served as department head until his retirement in 1926. He was the architect of the chemistry program at Illinois, attracting chemists such as Roger Adams and Carl S. Marvel. Dr. Norris was also involved closely with chemical literature, serving as editor of the *Journal of the American Chemical Society* for 15 years and the first editor of *Chemical Abstracts*, among other publications. He won many awards, including the Nichols Medal and the Priestley Medal. He served as president of the American Chemical Society in 1920.

Inducted in 1983



Lars Onsager
Chi 1950

Lars Onsager graduated from the Norwegian Technical Institute in 1925, studied at the Swiss Federal Institute of Technology in Zurich and received his doctorate degree in theoretical chemistry at Yale University in 1933. He received numerous awards and honors for his outstanding contributions to understanding irreversible thermodynamics, electrolytic solutions, dielectric properties of liquids, the structure of ice, thermal diffusion in gases and the surfaces of solids. Among these awards, Dr. Onsager received the Nobel Prize in Chemistry in 1968 and was the Presidential Award in Science, in addition to other science medals and honorary degrees.

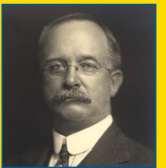
Inducted in 2002



Donald F. Othmer
Theta 1924

Donald F. Othmer received degrees in chemical engineering from the University of Nebraska and the University of Michigan. Although he worked briefly for Eastman Kodak – during which time his research led to more than 40 patents and the design of the Othmer Still for studying properties of distilling mixtures – he spent most of his career at the Polytechnic University in Brooklyn, N.Y. There he carried out research in phase equilibria, thermodynamics, heat transfer and desalination while being perhaps the preeminent consultant in chemical engineering. He is known most widely, however, for his editorship of the Kirk-Othmer Encyclopedia of Chemical Technology and Philanthropy. Othmer's personal fortune, the result of shrewd investments, supported the Chemical Heritage Foundation (the Othmer Gold Medal of the CHF is named for him) and the International Chemistry Olympiad, as well as other organizations and activities.

Inducted in 2006



Charles L. Parsons
Mu 1911

Charles L. Parsons received his bachelor's degree from Cornell University in 1888. Upon leaving Cornell, he became assistant chemist in the New Hampshire Experiment Station at Hanover and taught chemistry at Hanover in Durham, N.H. In 1911, Dr. Parsons was appointed chief mineral chemist of the Bureau of Mines in Washington, D.C. During that time he obtained funds for establishing the National Radium Institute and had full charge of building the radium plant and developing methods for radium extraction. During World War I, through his efforts the U.S. was made independent of foreign countries for materials for explosives. He served as secretary of the American Chemical Society from 1907 to 1947, during which time the membership increased from 3,000 to more than 43,000 members. In 1919, Parsons was elected the vice president of the International Union of Pure and Applied Chemistry and acted as America's representative at the conference held in Rome in 1920. He received the Priestly Medal in 1932. In 1952, the American Chemical Society created the Charles Lathrop Parsons Award to recognize outstanding public service by a member of the American Chemical Society.

Inducted in 1996



Linus C. Pauling
Sigma 1940

Linus C. Pauling, the only person to be awarded two unshared Nobel Prizes, probably is best known for his advocacy of Vitamin C as a cure for a wide range of ailments. Jumping to Oregon State University without finishing high school, Pauling's studies took him to Europe to work with Niels Bohr and Erwin Schrodinger. Pauling's first Nobel Prize in Chemistry came in 1954 for his discoveries on the nature of chemical bonds. His second Nobel Prize (for Peace) came in 1962 for his contributions to an international ban on nuclear weapons testing. Pauling joined Albert Einstein and other prominent scientists to create the Emergency Committee of Atomic Scientists.

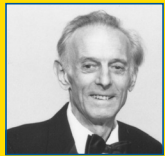
Inducted in 1987



John H. Perry
Xi 1915

John H. Perry received a bachelor's degree in chemical engineering from the University of Maine in 1917. After serving in the Army during World War I, he returned to academia, receiving a master's degree in chemical engineering from Northwestern University under the tutelage of Harry A. Curtis. Perry then went on to receive a doctorate degree in chemical engineering from the Massachusetts Institute of Technology. Dr. Perry is well known for his development of improved catalysts for sulfuric acid production. While working for DuPont, he was commissioned by McGraw-Hill to develop a Chemical Engineers' Handbook. The first edition was published in 1934. He continued the editorship over the next two editions of what became known as Perry's Chemical Engineers' Handbook, the definitive reference book for chemical engineers. When John Perry passed away in 1953, his son, Robert H. Perry, took over the editor's responsibilities. John Perry also developed and edited the Chemical Business Handbook.

Inducted in 1990



George C. Pimentel
Beta Gamma 1942

George C. Pimentel earned his doctorate degree at the University of California at Berkeley, under Kenneth Pitzer, Sigma 1940. Pimentel remained at UC Berkeley and joined the faculty. During his 40 years there, he made significant advances in IR spectroscopy techniques, including discovering chemical lasers. Dr. Pimentel headed the NAS/NRC project, which produced Opportunities in Chemistry, popularly known as The Pimentel Report, and he edited the National Science Foundation's CHEM Study textbook used in high schools worldwide. Dr. Pimentel was a member of the National Academy of Science, an associate director of the National Science Foundation for three years and president of the American Chemical Society in 1986. He also received the National Medal of Science and the Priestly Medal.

Inducted in 1994



Kenneth S. Pitzer
Sigma 1940

Kenneth S. Pitzer received his first doctorate degree from the University of California at Berkeley in 1937 and became an instructor there. He quickly rose to professor then dean. After a term as director of the Atomic Energy Commission, he went on to become president of Stanford University then Rice University before returning to UC-Berkeley. Dr. Pitzer was awarded the Priestly Medal, the National Medal of Science, the Gold Medal of the American Institute of Chemists, the Welch Award and a number of other prestigious awards.

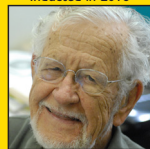
Inducted in 2020



Dr. Charles Norwood Reilley
Rho 1953

Dr. Charles Norwood Reilley helped lead the renaissance in analytical chemistry post-WWII. He earned his bachelor's degree in chemistry from The University of North Carolina in 1947, after which he joined the faculty at Queens College in Charlotte, NC. In 1949, he undertook graduate work at Princeton University, where he received an M.A in 1951 and a PhD in 1952. He then returned to The University of North Carolina, where he would remain throughout his career. In 1977, he was elected to the National Academy of Sciences. Dr. Reilley's work included describing the nature of the "chelate effect" and the application of nuclear magnetic resonance spectrometry to these complexes, as well as being one of the first to use computers to apply pattern recognition techniques to interpret mass and infrared spectra data to understand their structure. This application of computers to chemical analysis provided a springboard for others in the field.

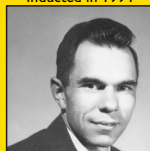
Inducted in 2016



Dr. John D. Roberts
Beta Gamma 1939

Dr. John D. Roberts received an A.B. degree in 1941 and a PhD in 1944 from UCLA. Dr. Roberts began his academic career in 1945 as an instructor in chemistry at UCLA. From 1945 to 1946, he held a National Research Council Fellowship and was an instructor at Harvard. He joined the staff of the Massachusetts Institute of Technology in 1946 as an instructor and was promoted to Assistant Professor in 1947 and to Associate Professor in 1950. He is credited with bringing the first female graduate student to Caltech when he moved from MIT. Dr. Roberts has twice been a John Simon Guggenheim Fellow. He was Robert N. Noyce Visiting Professor of Science at Grinnell College in 2001. Dr. Roberts currently serves on the Board of Directors of Organic Syntheses, Inc. and University Science Books. He has been a consultant to the E.I. DuPont Company since 1950. Dr. Roberts' research has been concerned with the mechanisms of organic reactions, chemistry of smalling compounds, and application of nuclear magnetic resonance (NRM) spectroscopy, especially of F-19, C-13 and N-15, to organic, bioorganic and biochemistry. For more information about Dr. Roberts' career and awards, visit the following link: https://en.wikipedia.org/wiki/John_D._Roberts.

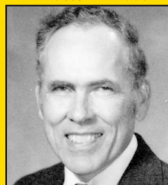
Inducted in 1994



Glenn T. Seaborg
Beta Gamma 1935

For whom element 106 – Seaborgium – is named, **Glenn T. Seaborg** is responsible for the most significant change to the Periodic Table since its inception in the 19th century. He is credited for discovering a number of the transuranic elements and received the 1951 Nobel Prize in Chemistry for this discovery. He also was part of the top secret Manhattan Project and was a frequent advisor to several United States presidents. His first new discovery came in 1940 when he successfully transmuted uranium into plutonium. In 1944, he formulated the actinide concept of heavy elements based on atomic structure.

Inducted in 2008



Warren E. Stewart
Alpha 1945

Warren E. Stewart received his bachelor's and master's degrees from the University of Wisconsin and his doctorate degree from the Massachusetts Institute of Technology. Dr. Stewart began his career at Sinclair Research Laboratories, after which he joined the Chemical Engineering Department at the University of Wisconsin. He is well known as one of the authors of *Transport Phenomena*, a textbook that is cited as "changing the direction of chemical engineering teaching everywhere in the world." Dr. Stewart received numerous awards in his field and for excellence in teaching.

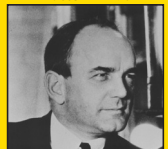
Inducted in 2006



Irving Shain
Alpha 1953

Irving Shain began his academic career at the University of Wisconsin as an instructor where he made important contributions to the field of electrochemistry. His consummate achievement is a paper co-authored with Richard S. Nicholson, which was named by the *Journal of Analytical Chemistry* as one of the 10 most cited papers from 1945 to 1999. He is best known as the person who "invented" cyclic voltammetry, one of the most commonly used electrochemical techniques and the best tool for studying the mechanism of redox reactions. Dr. Shain also served as chemistry department chair, vice chancellor for academic affairs and chancellor at the University of Wisconsin and as vice president and provost at the University of Washington.

Inducted in 1982



Frank C. Whitmore
Omicron 1920

Frank C. Whitmore was educated at Harvard University, obtaining a doctorate degree in 1914 under the direction of Charles Loring Jackson and Elmer P. Kohler. After serving on the faculty of Northwestern University, he became dean of the School of Chemistry and Physics at Pennsylvania State University in 1929, a position he held until his death. Whitmore was president of the American Chemical Society in 1938 and was a member of the National Academy of Sciences. He was an expert in organomercury chemistry and was author of *Organic Compounds of Mercury*. He was renowned for his research on the electronic theory of mechanisms of organic molecular rearrangements.

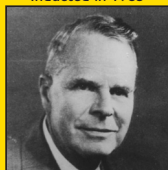
Inducted in 2004



Bassam Z. Shkhashiri
Zeta 1970

Bassam Z. Shkhashiri received his bachelor's degree from Boston University and his master's and doctorate degrees from the University of Maryland. Dr. Shkhashiri founded the Institute for Chemical Education in 1983 and served as assistant director of the National Science Foundation for Science and Engineering Education from 1984 to 1990. Among his many awards and honors are the American Chemical Society's George C. Pimentel Award in Chemical Education in 1986, the Manufacturing Chemists Association's Catalyst Award in 1979, the American Association for the Advancement of Science Award for Public Understanding of Science and Technology in 2002 and a collection of teaching awards and honorary degrees. Dr. Shkhashiri perhaps is best known for his chemical demonstration shows and in particular for his annual demonstration "Once Upon a Christmas Cheery in the Lab of Shkhashiri," which began in 1969.

Inducted in 1985



Hobart H. Willard
Alpha Beta 1916

Hobart H. Willard received his doctorate degree at Harvard University after receiving his bachelor's and master's degrees from the University of Michigan. Willard returned to Michigan where his research in analytical chemistry broke ground into fundamentally new gravimetric and volumetric methods. Dr. Willard's texts *Willard, Merritt and Dean* and *Willard and Diehl* are well known to all analytical chemists. Among his analytical innovations are the introduction of perchlorate chemistry and cerium (IV) chemistry. He was renowned as a tough taskmaster in the classroom. His awards include the Fischer Award in 1951 and the Anachem Award in 1953.