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Guide to the Harold C. Urey Papers 1932-1953



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Descriptive Summary

Identifier	ICU.SPCL.HCUREY
Title	Urey, Harold C. Papers
Date	1932-1953
Size	1.5 linear feet (3 boxes)
Repository	Special Collections Research Center University of Chicago Library 1100 East 57th Street Chicago, Illinois 60637 U.S.A.

Abstract Harold C. Urey was a physical chemist who won the Nobel Prize for the discovery of deuterium, served as Director of War Research for Columbia University's Atomic Bomb Project, then joined the University of Chicago's Institute for Nuclear Studies. This collection consists of scientific notebooks developed by Urey and his students, most dating from the mid-1930s and documenting research in isotope separation, an area in which Urey was the leading authority.

Information on Use

Access

Open for research.

No restrictions.

Citation

When quoting material from this collection, the preferred citation is: Urey, Harold C. Papers, [Box #, Folder #], Special Collections Research Center, University of Chicago Library

Biographical Note

Harold Clayton Urey was born on April 29, 1893 in Walkerton, Indiana. He received his Bachelor of Science degree in Zoology from the University of Montana in 1917 and a Ph.D. in Chemistry from the University of California in 1923. Following postgraduate work at Niels Bohr's Institute for Theoretical Physics, he taught at Johns Hopkins University, and was appointed Associate Professor in Chemistry at Columbia University in 1929. In 1934 he was awarded the Nobel Prize in Chemistry for the discovery of deuterium. He continued to research isotopic chemistry, and particularly the separation of isotopes.

Between 1940 and 1945, Urey served as Director of War Research, Atomic Bomb Project, at Columbia University, where he contributed to the Manhattan Project. In 1945, he moved to the University of Chicago's Institute for Nuclear Studies, becoming the Martin A. Ryerson Professor in 1952. His work at University of Chicago made major contributions to the field of geochemistry. He later went on to positions at Oxford and University of California.

Following World War II, Urey advocated arms control and nuclear safety, joining the Union of Concerned Scientists. Later in his life, he was involved in the U.S. space program as an advisor and consultant.

Urey's publications include *Atoms, Molecules and Quanta* (1930, with A.E. Ruark), and *The Planets* (1952), as well as numerous papers. From 1933 to 1940, he was editor of the *Journal of Chemical Physics*.

Scope Note

This collection consists of 17 laboratory notebooks developed by Urey and the students he mentored. Most of the notebooks date from the mid-1930s, immediately following Urey's discovery of deuterium and spanning the award of his Nobel Prize and further research in isotope separation at Columbia University.

Many of the students whose notebooks are included here made important contributions to their fields, both in their work with Urey and later in their careers. Represented here are Harry G. Thode, a prominent Canadian nuclear chemist and key figure in the development of McMaster University; Charles A. Bradley, with whom Urey introduced the Urey-Bradley force field; Weldon G. Brown, who went on to serve as a professor of organic chemistry at University of Chicago; and several others who performed significant research in isotope separation under Urey's mentorship.

The notebooks in Box 3 are not identified by the researchers who developed them, but are likely to be Harold Urey's own, or possibly those of his students.

Related Resources

The following related resources are located in the Department of Special Collections:

<http://www.lib.uchicago.edu/e/spcl/select.html>

Association of Oak Ridge Engineers and Scientists. Records

Atomic Scientists of Chicago. Records

Bulletin of the Atomic Scientists. Records

Chandrasekhar, Subrahmanyan. Papers

Darwin Centennial Celebration. Records

Emergency Committee of Atomic Scientists. Records

Fermi, Enrico. Collection

Franck, James. Papers

Harrison, Roland Wendell. Papers

Simpson, John. Papers

Subject Headings

- Urey, Harold Clayton
- Isotope separation
- Manhattan Project (U.S.)
- Chemists

INVENTORY

Box 1

Folder 1

Bradley, Charles A., "Thermal Conductivity Apparatus," 1932-1935

Box 1

Folder 2

Brown, Weldon G., "Fractionation of Carbon Isotopes," 1935

Box 1

Folder 3

Daggett, A.F., "Record of Analysis of Samples from Heavy Water Plant I," 1934-1935

Box 1

Folder 4

McLaren, James, n.d.

Box 1

Folder 5

Myers, L.S., Jr., "Nuclear Studies," n.d.

Box 1

Folder 6

Thode, Harry G., "Separation of Isotopes - Nitrogen," 1936

Box 2

Folder 1

Thode, Harry G., 1937

Box 2

Folder 2

Urey, Harold C., "Solutions to Numerical Problems in MacDougall's Thermodynamics,"
n.d.

Box 2

Folder 3

Wahl, M.H., "Research," 1933

Box 2

Folder 4

Wahl, M.H., 1934

Box 2

Folder 5

Weber, Lawrence A., "Concentration of Isotopes," 1934-1936

Box 3

Folder 1

Unidentified notebook, 1932

Box 3

Folder 2

"N₂ and C Isotopes, Enzyme Activity Tests," 1935

Box 3

Folder 3

Unidentified notebook, 1937

Box 3

Folder 4

"Isotope Separation," 1939

Box 3

Folder 5

Unidentified notebook, 1944

Box 3

Folder 6

"Gas Samples," 1948-1953