

Chemistry and Chemical Biology Oral History Project

A Conversation with Simon H. Bauer

Video Total Run Time: [146 minutes]

Interviewed by Robert E. Hughes

Internet-First University Press

A Conversation with Simon H. Bauer

The Oral History Project:
Department of Chemistry
and Chemical Biology
Cornell University



Interviewed by
Robert E. Hughes

2006



The Interview [2:47]
Chapters
Photo Gallery
Resources
Credits

CHAPTERS [m:s]

Introduction [1:58]

Early Years [1:58]

Undergrad at U. Chicago [2:55]

Graduate at U. Chicago [0:31]

Electron Diffraction-1 [0:34]

Mass Spectrometry [1:39]

Research in 30's vs. present [3:33]

Computers [1:13]

I.I. Rabi [1:35]

Postdoc Study at CalTech [0:58]

Infrared Studies [1:04]

Linus Pauling [1:17]

Depression Era Job [2:49]

Cornell Appointment 1938 [0:55]

Lynn Hoard [0:38]

Teaching Qualitative Analysis [1:22]

Electron Diffraction-2 [1:37]

Harry Bush [1:03]

Peter Debye-1 [2:51]

Frank Long [1:10]

Fluorocarbon [1:04]

Electron Diffraction-3 [1:03]

Ken Hedberg [1:18]

John Kirkwood and Peter Debye-2 [4:01]

Paul Flory and Peter Debye-3 [1:06]

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Chemical Kinetics [2:01]
Impact tubes-1 [1:53]
R. C. Tollman [3:37]
Shock Tubes-2 [1:56]
Hans Bethe [2:00]
Sound Dispersion [2:36]
Photoacoustic Effect [2:46]
CO₂/N₂ Lasers [1:37]
Shock Tube Studies-2 [10:58]
Single-pulse Shock Tubes [2:07]
Chemical Lasers [2:10]
Polyani[2:54]
Molecular Beams [1:53]
Excited States [0:39]

DF Lasers [0:40]
UV Lasers [1:14]
NMR Techniques [4:24]
Formic Acid [1:34]
X-ray / CHESS Studies [6:22]
Heats of Formation of CH Species [3:09]
Heats of Formation of Boron Hydrides [6:05]
Electron Diffraction [2:07]
Boron Hydride Oxidations [1:19]
Condensation of Vapors [11:44]
Shock-tube Synthesis of Amino Acids [6:09]
Four-center Reactions [3:32]
G. N. Lewis-Acid/Base Reactions [4:54]
Instruct. Importance of Quantum Physics [11:39]
Conclusion [2:15]

Simon H. Bauer

“His papers deal with molecular structure determinations by electron diffraction, EXAFS and spectroscopic techniques, measurement of the physical and thermochemical properties of the boranes, kinetics of fast reactions and spectral emissions at high temperatures, as studied in shock tubes and in chemical laser systems, and models of nucleation / condensation processes.

“He was a Guggenheim Fellow (1949), an NSF Senior Postdoctorate Fellow (1962) at CNRC and the Weizmann Institute, NAS Interacademy Exchange Fellow (USSR, 1966). In 1979 he received an Alexander von Humboldt Award and spent 6 months at the Max Planck Institute in Garching-Munchen.”

This DVD

The Oral History Project of the Department of Chemistry and Chemical Biology at Cornell University, led by Charles Wilcox

and Kelly Strickland, presents this DVD of an extended interview with a senior member of the faculty in which they share their life's journey, their professional interests and their reflections about the distinctive character of their department and its nurturing environment. Their comments reveal some of the aspects that make this an exemplary academic unit. Short biographies of interviewee and interviewer are included, in addition to a photo gallery and list of publications of the interviewee.

J. Robert Cooke produced the DVD for The Internet-First University Press, an outgrowth of the Open Access Publishing Project led by Cooke and Kenneth M. King. A streaming video of this interview is available online, without access fee, at <http://dspace.library.cornell.edu/handle/1813/62> and at <http://ifup.cit.cornell.edu>.

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Additional Resources: Bauer Biography and List of Publications; Bauer Photo Gallery; Hughes Brief Biography

Chemistry and Chemical Biology Oral History Project

A Conversation with W. Donald Cooke


Video Total Run Time: [40 minutes]

Interviewed by Charles Wilcox

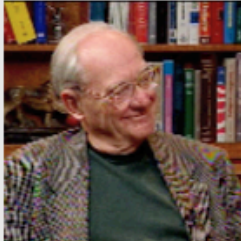
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A Conversation with W. Donald Cooke

The Oral History Project:
Department of Chemistry
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Cornell University



Interviewed by
Charles Wilcox



April 14, 2006

The Interview [0:40]
Chapters
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Credits

Chapters [m:s]

Introduction [1:31]

Growing up in Philadelphia [5:17]

Army Air Force [4:52]

Coming Home [2:38]

Graduate School at Penn [4:42]

Postdoctoral at Princeton [2:00]

Cornell [1:05]

Research Support [0:48]

Cornell – Then and Now [1:03]

Regrets [1:54]

1969 – Troubled Times [3:50]

Vice President for Research [1:39]

Poker [0:35]

Conclusion [0:32]

Chemistry and Chemical Biology Oral History Project

W. Donald Cooke

He joined the Cornell University faculty in 1951 and advanced quickly through the ranks. He published 39 papers in Analytical Chemistry through 1970. He has held a series of administrative posts [Associate Dean of Arts and Sciences (1962-64), Dean of the Graduate School (1964-73); Vice President for Research (1969-83); Acting Provost (1974-74); Acting Chair of Chemistry Department. He was an active and effective member of the Cornell University Senate (1970-74). Because of his love of teaching he has continued an active teaching role throughout his career, even past his retirement in 1987.

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Chemistry and Chemical Biology Oral History Project

A Conversation with Roald Hoffmann

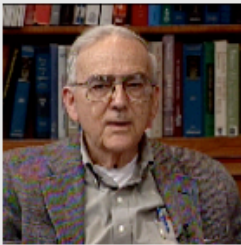
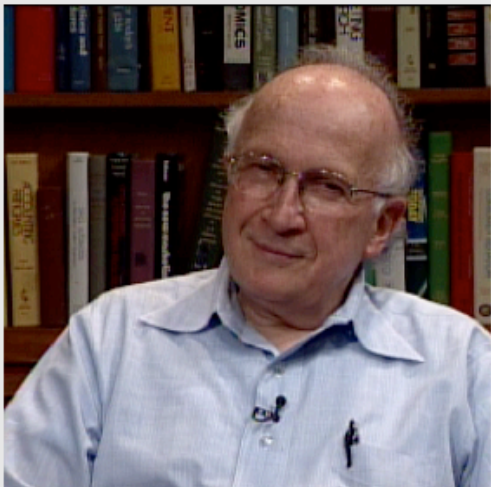
Video Total Run Time: [85 min]

Interviewed by Ben Widom

The Internet-First University Press

A Conversation with Roald Hoffmann

The Oral History Project
Department of Chemistry
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Cornell University



Interviewed
by Ben Widom

June 2006

The Interview [1:25]
Chapters
Photo Gallery
Resources
Credits

Chapters [m:s]

Early Years [17:02]

Coming to America [6:49]

High School and College [10:56]

Graduate School [4:31]

Extended Huckel Method [4:06]

Connection to Woodward [15:12]

Cornell [4:25]

Nobel Prize [7:23]

Current Research [8:13]

Poetry [5:13]

Conclusion [9:00]

Chemistry and Chemical Biology Oral History Project

Roald Hoffmann

“Roald Hoffmann was born in 1937 in Zloczow, Poland. Having survived the war, he came to the U. S. in 1949, and studied chemistry at Columbia University and Harvard University (Ph.D. 1962). Since 1965 he is at Cornell University, now as the Frank H. T. Rhodes Professor of Humane Letters. He has received many of the honors of his profession, including the 1981 Nobel Prize in Chemistry (shared with Kenichi Fukui).

"Applied theoretical chemistry" is the way Roald Hoffmann likes to characterize the particular blend of computations stimulated by experiment and the construction of generalized models, of frameworks for understanding, that is his contribution to chemistry.

“Dr. Hoffmann also writes essays and poems. Two of his poetry collections, "The Metamict State" (1987) and "Gaps and Verges" (1990), have been published by the University Presses of Florida.”

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Chemistry and Chemical Biology Oral History Project

A Conversation with Fred W. McLafferty

Video Total Run Time: [91 min]

Interviewed by Hèctor Abruña

Internet-First University Press

A Conversation with Fred W. McLafferty

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Department of Chemistry
and Chemical Biology
Cornell University

Interviewed by
Hèctor D. Abruña

2006

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Chapters [m:s]

Biography [13:37]

Cornell Faculty [6:26]

Department Changes [19:54]

Industry Changes [4:48]

McLafferty Rearrangement [6:46]

Long View [10:51]

Fourier Transform [9:21]

Next Frontiers [10:46]

Concluding Remarks [3:59]

Chemistry and Chemical Biology Oral History Project

Fred W. McLafferty

“He has been a mass spectrometry pioneer in such fields as gaseous ion reactions (McLafferty rearrangement), instrumentation (GC/MS, LC/MS, MS/MS), techniques (collisionally activated dissociation, neutralization-reionization, electron capture dissociation, IR photodissociation spectroscopy, top down proteomics), computer data acquisition, reduction, and identification (Probability Based Matching), reference data (600K mass spectra), and high-resolution MS/MS characterization of biomolecules and gaseous protein conformers. He has co-authored/edited 500 publications.” And he is still publishing original research papers.

“He is a member of the U.S. National Academy of Sciences (1982), American Academy of Arts and Sciences (1985), and the Italian Academy of Sciences XL (2002). He has received American Chemical Society Awards in Chemical Instrumentation (1972), Analytical Chemistry (1981), and Mass Spectrometry (1989),...”

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A Conversation with Harold A. Scheraga

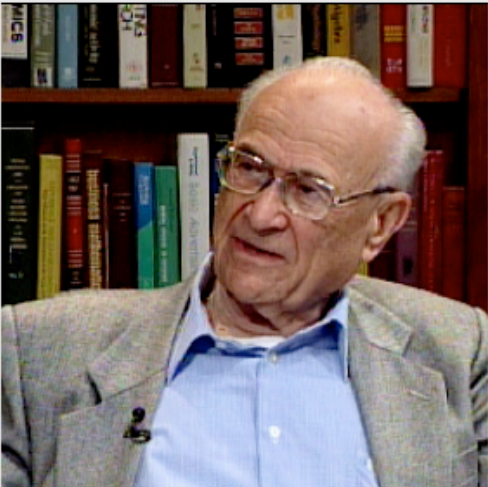
Video Total Run Time: 64 min

Interviewed by Charles Wilcox

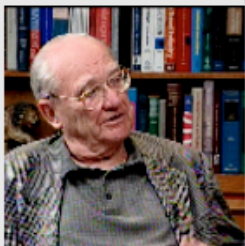
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A Conversation with Harold A. Scheraga

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Interviewed by
Charles Wilcox



2006

The Interview [1:04]
Chapters
Photo Gallery
Resources
Credits

Chapters [m:s]

Growing up in Montocello [5:40]

War Years [7:06]

Post-doctoral at Harvard [5:30]

Coming to Cornell [4:21]

Department Chair [12:42]

Research – Structure of Water [6:40]

Research – Computer Studies [9:33]

Biological Significance of Global Free-

Energy Minimum [6:10]

Can the Protein Folding Problem Be

Solved? [2:42]

Conclusion [1:10]

Chemistry and Chemical Biology Oral History Project

Harold A. Scheraga

He remains an active researcher at age 85, with authorship (or co-authorship) of 1,173 research publications, he has established a legendary record at Cornell University.

His honors include: Guggenheim Fellow and Fulbright Research Scholar

a) Carlsberg Lab., Copenhagen, Denmark, 1956-57

b) Weizmann Institute, Rehovoth, Israel, 1963

National Institutes of Health Special Fellow, Weizmann Institute Rehovoth, Israel, 1970

Fogarty Scholar, National Institutes of Health, 1984, 1986, 1988, 1989, 1990, 1991

ACS Eli Lilly Award in Biochemistry, 1957

Sc.D. (Hon.), Duke University, 1961;

University of Rochester, 1988

Elected Fellow, American Association for the Advancement of Science, 1966

Elected Member, National Academy of Sciences, U.S., 1966

Elected Member, American Academy of Arts and Sciences, 1967

Townsend Harris Medal, C.C.N.Y., 1970

Nichols Medal, New York Section,

American Chemical Society, 1974

City College Chemistry Alumni Scientific Achievement Award Medal, 1977

ACS Kendall Award in Colloid or Surface Chemistry, 1978

Linderstrøm-Lang Medal, Carlsberg Laboratory, 1983

Kowalski Medal, International Society of Thrombosis and Haemostasis, 1983

Pauling Medal, Puget Sound and Oregon

Sections, American Chemical Society, 1985

Elected Honorary Life Member, New York Academy of Sciences, 1985

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