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RUDOLF SIGNER

Transcript of an Interview
Conducted by

Tonja Koepfel

at

Berne, Switzerland

on

30 September 1986

BECKMAN CENTER FOR THE HISTORY OF CHEMISTRY

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RUDOLF SIGNER

1903 Born in Herisau, Switzerland on 17 March

Education

1928 Ph.D., chemistry, Swiss Federal Institute of
Technology, Zürich

Professional Experience

1926-1935 Teaching Assistant and Research Fellow, University
of Freiburg, Germany
University of Berne
1935-1937 Associate Professor of Organic Chemistry
1937-1972 Professor of Organic Chemistry

Honors

1933 Rockefeller Fellowship, Uppsala and Manchester
1948 Rockefeller Special Fellowship, USA
1949 Lavoisier Medal, La Société Chimique de France

ABSTRACT

Rudolf Signer starts this interview by talking of his family background in Herisau. The Kantonschule at St. Gallen emphasized mathematics and the sciences and here Signer's youthful interests in astronomy and philosophy were reinforced. Study of chemistry at ETH followed and Signer recalls some of his professors there. Graduate research on polyoxymethylenes with Staudinger introduces Signer to the young field of polymer chemistry and he remembers the controversy about Staudinger's macromolecular hypothesis. Moving to Freiburg with Staudinger, Signer set up equipment to measure streaming birefringence, which proved a powerful technique of the solution characterization of polymers. A Rockefeller Fellowship enabled Signer to work with Svedberg at Uppsala and to apply ultracentrifugal sedimentation to synthetic polymers in organic solvents. The rest of that postdoctoral year was spent at Manchester with Bragg, where Rudolf Signer used X-rays for structural investigations. Signer tells of his decision to leave Freiburg and of his acceptance of a chair at the University of Berne. The interview includes mention of much research made at Berne, including the isolation and characterization of nucleic acids, water-protein interactions, molecular separation techniques and the thermodynamics of polymer solutions. The interview concludes with recollections of a post-war tour of the United States and of Signer's memories of Staudinger.

INTERVIEWER

Dr. Tonja A. Koeppel received a master's degree in chemistry from the Swiss Federal Institute of Technology in 1944. Since then she has written about chemistry, done research, and taught college chemistry. Dr. Koeppel is also a historian of chemistry. In 1973 she earned a Ph.D. degree in the history and sociology of science from the University of Pennsylvania. She is especially interested in the development of organic chemistry in the nineteenth and early twentieth centuries.

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