

CHEMICAL HERITAGE FOUNDATION

MICHAEL A. KELLY

Transcript of an Interview

Conducted by

David C. Brock and Arthur Daemmrich

at

Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy  
New Orleans, Louisiana

19 March 2002

(With Subsequent Corrections and Additions)

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## MICHAEL A. KELLY

1936 Born in Roswell, New Mexico on 14 December

### Education

1959 B.S., engineering, University of California at Los Angeles  
1963 M.S.E.E, Brooklyn Polytechnic Institute  
1968 Ph.D., nuclear physics, University of California at Berkeley

### Professional Experience

1964-1968 Lawrence Livermore Laboratory  
Electrical Engineer/Research Scientist

1968-1971 Hewlett-Packard Company  
Research Scientist  
1971-1976 Research and Development Manager, ESCA

1976-1985 Surface Science Laboratories  
President

1985-1989 Kevex Corporation  
President and Chief Operating Officer

1989-present Stanford University  
Consulting Professor, Department of Materials  
Science and Engineering

### Honors

1979 IR(100) Award for an imaging, photon counting detector  
1982 IR(100) Award for a high spatial resolution XPS spectrometer  
1986 Glenn T. Seaborg Laboratory Special Award for a soft x-ray window, Kevex Corporation  
American Physical Society, member  
American Vacuum Society, member  
Materials Research Society, member

## ABSTRACT

Michael A. Kelly begins the interview with a discussion of his childhood and education. Growing up in Roswell, New Mexico, Kelly became interested in radio and television electronics at a young age. After high school, Kelly earned an ROTC scholarship at UCLA, and obtained his bachelor's degree in engineering from that University in 1959. He later earned his master's degree in electrical engineering from Brooklyn Polytechnic, and his Ph.D. in nuclear physics from the University of California at Berkeley. In 1968, Kelly began as a research scientist for the Hewlett-Packard Company [HP]. After three years, he was promoted to manager of R&D for electron spectroscopy for chemical analysis [ESCA]. While there, he developed and refined the first ESCA instruments for commercial use. Kelly left HP in 1976, and became the president of Surface Science Laboratories; a company that designed and marketed ESCA instrumentation. In 1988, Surface Science merged with the KeveX Corporation, and Kelly became the president and chief operating officer. He stay with KeveX for about a year, but when the company was bought-out by Thermo Vacuum Generators, Inc., Kelly took a teaching position at Stanford University. He currently teaches materials science at the University, and is working on some new analytical techniques. Kelly concludes the interview with a discussion of his impact on ESCA instrumentation, and the importance of innovation in society.

## INTERVIEWERS

David C. Brock is Program Manager for Educational and Historical Services at the Chemical Heritage Foundation in Philadelphia. He is currently a Ph.D. candidate in the History Department, Program in the History of Science at Princeton University. In 1995, Mr. Brock received his M.A. in the History of Science from Princeton University and in 1992, he earned a M.Sc. in the Sociology of Scientific Knowledge from the University of Edinburgh.

Arthur Daemmrich is a policy analyst at the Chemical Heritage Foundation in Philadelphia. He holds a Ph.D. in Science and Technology Studies from Cornell University and has published on biotechnology policy and politics, the sociology of medicine, and pharmaceutical drug regulation. In his research, he brings long-range perspectives to bear on the analysis of globalization, risk, health, and environmental policy. Daemmrich has held fellowships from the Social Science Research Council/Berlin Program for Advanced German and European Studies, and the Kennedy School of Government at Harvard University.

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3. Michael A. Kelly and C. E. Tyler, "A Second-Generation ESCA Spectrometer," *Hewlett-Packard Journal: Technical Information from the Laboratories of Hewlett-Packard Company* 24 (1973):2-14.

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