

CHEMICAL HERITAGE FOUNDATION

DELBERT H. MEYER

Transcript of an Interview  
Conducted by

James G. Traynham

at

Naperville, Illinois

on

20 January 1997

(With subsequent corrections and additions)

## ACKNOWLEDGEMENT

This oral history is one in a series initiated by the Chemical Heritage Foundation on behalf of the Society of Chemical Industry (American Section). The series documents the personal perspectives of Perkin and the Chemical Industry Award recipients and records the human dimensions of the growth of the chemical sciences and chemical process industries during the twentieth century.

This project is made possible through the generosity of Society of Chemical Industry member companies.

THE CHEMICAL HERITAGE FOUNDATION  
Oral History Program

RELEASE FORM  
For non-CHF Interviews Donated to CHF

This document contains my understanding and agreement with the Chemical Heritage Foundation with respect to my participation in a tape-recorded interview conducted by

James Truynham of Delbert Meyer

on Jan 20, 1997, of which a copy has been donated to Chemical Heritage Foundation.

1. The CHF copy of the transcript (called the "Work") will be maintained by the Chemical Heritage Foundation and made available in accordance with general policies for research and other scholarly purposes.
2. The manuscript may be read by scholars approved by the Chemical Heritage Foundation subject to the restrictions listed below. The scholar pledges not to quote from, cite, or reproduce by any means this material except with the written permission of the Chemical Heritage Foundation.
3. I wish to place the following conditions that I have checked below upon the use of this interview. I understand that the Chemical Heritage Foundation will enforce my wishes until the time of my death, when any restrictions will be removed.

- a.  No restrictions for access.
- b.  My permission required to quote, cite, or reproduce.
- c.  My permission required for access to the entire document and all tapes.

This constitutes our entire and complete understanding.

(Signature)

Delbert H Meyer

(Date)

2/7/98

This interview has been designated as **Free Access**.

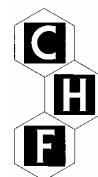
One may view, quote from, cite, or reproduce the oral history with the permission of CHF.

**Please note:** Users citing this interview for purposes of publication are obliged under the terms of the Chemical Heritage Foundation Oral History Program to credit CHF using the format below:

Delbert H. Meyer, interview by James G. Traynham at Naperville, Illinois, 20 January 1997 (Philadelphia: Chemical Heritage Foundation, Oral History Transcript # 0151).



Chemical Heritage Foundation  
Oral History Program  
315 Chestnut Street  
Philadelphia, Pennsylvania 19106



The Chemical Heritage Foundation (CHF) serves the community of the chemical and molecular sciences, and the wider public, by treasuring the past, educating the present, and inspiring the future. CHF maintains a world-class collection of materials that document the history and heritage of the chemical and molecular sciences, technologies, and industries; encourages research in CHF collections; and carries out a program of outreach and interpretation in order to advance an understanding of the role of the chemical and molecular sciences, technologies, and industries in shaping society.

DELBERT H. MEYER

1926 Born in Maynard, Iowa, on 28 August

Education

1949 B.A., chemistry, Wartburg College  
1953 Ph.D., chemistry, University of Iowa

Professional Experience

Amoco Corporation/Amoco Chemical Company  
1953-1961 Research Chemist, Standard Oil Company, Whiting, Indiana  
1961-1967 Research Chemist, Amoco Chemical Company, Whiting, Indiana  
1967-1977 Research Supervisor, Naperville, Illinois  
1977-1989 Director, Exploratory Research Division, Naperville, Illinois  
1989-1992 Research Consultant, Naperville, Illinois  
1992 Retired

Honors

1983 Alumni Citation Award, Wartburg College  
1989 William M. Burton Award, Amoco Chemical Company  
1992 U.S. Medal of Technology  
1993 Honorary D.Sc., Wartburg College  
1995 Perkin Medal, Society of Chemical Industry (American Section)

## ABSTRACT

Delbert Meyer begins his oral history with a description of his family life as a youth in Maynard, Iowa. He was uncertain of his future career choice and served for two years in the U. S. Navy. Influential professors at Wartburg College and later at the University of Iowa fueled his interest in chemistry. Meyer spent thirty-nine years with Amoco, beginning as an exploratory researcher for Standard Oil Company in 1953 and later becoming a research consultant at Amoco in 1992. During his career at Amoco Corporation, Meyer developed a faster and more economical method for producing purified terephthalic acid (PTA), the major material used to make polyester. He eventually moved into research management and product development. Meyer concluded with a discussion scientific innovation as a result of need for products in the marketplace; speculation on the future of research and development management in the chemical sciences; and reflections on winning the 1995 Perkin Medal.

## INTERVIEWER

James G. Traynham is a Professor of Chemistry at Louisiana State University, Baton Rouge. He holds a Ph.D. in organic chemistry from Northwestern University. He joined Louisiana State University in 1963 and served as chemistry department chairperson from 1968 to 1973. He was chairman of the American Chemical Society's Division of the History of Chemistry in 1988 and is currently councilor of the Baton Rouge section of the American Chemical Society. He was a member of the American Chemical Society's Joint-Board Council on Chemistry and Public Affairs, as well as a member of the Society's Committees on Science, Chemical Education, and Organic Chemistry Nomenclature. He has written over ninety publications, including a book on organic nomenclature and a book on the history of organic chemistry.

## TABLE OF CONTENTS

1	Family Background and Early Education Parents' farm in Maynard, Iowa. High school years.
4	College Education and Early Career Difficulty finding job in chemical field after receiving Bachelor's Degree. Marriage. Graduate school at the University of Iowa. Search for work in industrial field.
6	Standard Oil Beginnings in exploratory research. Work on aromatic carboxylic acids. Research and development. Initial work on terephthalic acid.
8	Career at Amoco Chemical Corporation Development of Amoco process for making dimethyl terephthalate (DMT). Amoco's beginnings in polyester feedstock. Development of process for purifying terephthalic acid (TA).
11	PTA Production Refinement of PTA (purified terephthalic acid) process. Process patent. Development of commercially acceptable way to produce PTA. First commercial PTA plant. Development strategies.
15	Management, Development, and Marketing Managing PTA technical service group. Customer working relationships. Product development. Process to make paramethyl styrene. William M. Burton Award. National Medal of Technology. Taking risks to succeed in the marketplace.
20	Retirement and Final Thoughts Views on the future of research and development. Thoughts on new technological breakthroughs. Retirement. Winning Perkin Medal.
26	Notes
27	Index

## NOTES

1. Delbert H. Meyer, "The Preparation of Trimethylamine-p-Toluenesulfonimide," *Dissertation Abstracts*, XIII, no. 6 (1953): 987.
2. Stanley Wawzonek, "Chemistry of Amineimides," *Second Eng. Chem. Product Research and Development*, 19, no. 3 (1980): 338.
3. Delbert H. Meyer, "Fiber-Grade Terephthalic Acid by Catalytic Hydrogen Treatment of Dissolved Impure Terephthalic Acid," U.S. Patent 3,584,039, issued 8 June 1971.
4. "Notable Books of the Year 1996," *New York Times Book Review*, December 8, 1996.
5. John Horgan, *The End of Science: Facing the Limits of Knowledge in the Twilight of the Scientific Age*. (Reading, MA: Helix Books/Addison-Wesley Publishing Company, 1996).



## INDEX

### A

Aldehyde acid, 12-13  
Aldehyde ester, 12  
Aminimide, 5-6  
Amoco Chemical Corporation, 8, 10, 14, 16-17, 19-20, 22-23  
    Amoco process, 11, 13  
    income from chemicals, 18  
    Joliet plant, 14  
Aromatic carboxylic acids, 7  
Arsinimides, 5  
Autoclave, 9, 12

### B

Banns, John, 12  
Barney, Donald, 7  
Burton, William M., 17  
Burton, William M. Award, 17  
Bush, President, George H.W., 17

### C

Catalyst, 8, 10-12, 14, 22  
Catalyst bed, 14  
Centrifuging, 14  
Commercial process, 8, 13, 22  
Commercialization, 20-21  
Crystallization, 8, 12  
Cyclohexane, 12-13

### D

Dacron, 11  
Dehydrogenation, 17  
Development research, 7  
Dimethyl terephthalic acid (DMT), 8-13  
    creation process, 8-9, 22  
Dorclone, 8  
DuPont, 6, 11

### E

Ellingson, --, 3  
End of Science, The, 22  
Ester, 9-10, 13  
Esterification, 9, 13

Ethylene glycol, 9-10  
Exploratory research, 6-7, 16

## **F**

Feedstock, 9, 23

## **G**

GI Bill, 2, 4

## **H**

Hannemann, Don, 14  
Hastelloy C, 14  
Hensley, Al, 10  
Horgan, John, 22  
Humphreys, Robert E., 17  
Hydrazine, 5  
Hypochlorite, 10, 12

## **I**

Intrinsic viscosity, 11  
Iowa, University of, 4, 6  
Isophthalic technology, 15  
Isophthalic acid, 7-8

## **J**

Johnson, Carl, 13

## **K**

Kieselguhr, 12  
Kinetic rate studies, 9  
Knobloch, James O., 8

## **L**

Lambertson, Jack, 13  
Leipold, Hans, 12

## **M**

Malo, Russel, 8  
Mark, Herman, 18  
Maynard, Iowa, 3  
Mehalso, Paul J., 10-11  
Metallurgy, 14  
Methanol, 9  
Meyer, Delbert  
    children, 17, 24

- doctoral thesis, 5
- family, 24
- farming, 1-2
- father, 1
- graduate school, 4-6
- high school years, 1-4
- mother, 1
- on technology, 7, 14, 18-19, 21-23
- sister, 2
- wife, 4, 25

Meyer, Kurt W., 24

Meyer, Michael L., 24

## **N**

National Medal of Technology, 17

Navy, United States, 1-2

New York Times Book Review, 22

Nickel, 12

## **O**

Olsen, George, 13

Organic chemistry, 5

Oxidation process, 9, 11, 14

Oxidation technology, 14, 20

## **P**

Palladium, 12

Paramethyl styrene, 17

Paraxylene, 14

Perkin Medal, 13, 23

Petrochemical research, 6

Petrolite Corporation, 24

Phosphinimides, 5

Polyester, 8-11, 13, 15, 18

- patent for production, 11

Polymer, 9-11, 15

Product development, 16, 21

PTA, 11-12, 15, 19, 22

- commercial PTA plant, 8, 13
- PTA process, 13

Pyridine, 8-9

## **R**

Reactor, 13-14, 22-23

Research and Development, 15-17, 19-21

## **S**

Salt process, 11-13  
Scientific Design, 7  
Shriner, Ralph L., 5  
Smith Kline & French, 5  
Sodium hydroxide, 9  
Standard Oil (of Indiana), 6-7, 20  
Sulfilimines, 5  
Swearingen, John, 13, 18  
Swenson, A.W., 2, 4-5  
Synthetic fiber, 18

## **T**

Ten percent-time experiment, 10-11  
Terephthalic acid (TA), 7-14  
Theophylline derivatives, 5  
Titanium, 14  
Trimellitic anhydride technology, 15

## **W**

Wall Street, 22  
Wartburg College, 2-3  
Washington, D.C., 18  
Wawzonek, Stanley, 5-6  
Wilmington, Delaware, 6  
World War II, 3

## **X**

Xylenes, 7

## **Z**

Zimmerschied, Wil, 14