Chemical Engineering

Thirty Third Annual Report to the Alumni

1981

OSU

The Ohio State University
Dear Alumni,

It has been another year of growth for the Department. We have added one faculty member, a large number of undergraduate students, and several graduate students. During 1980-81, we will have 79 B.S. graduates, 19 M.S. graduates and 4 PhD graduates.

The job market for all degree levels of chemical engineering, B.S., M.S., and PhD., was strong again last year. Most graduates had several job offers. The average salary accepted by new B.S. chemical engineers was $1815 per month which once again, was the highest of any major discipline at Ohio State. This was about $14 per month above the national average for graduating chemical engineers. The average salary for M.S. graduates was near $2000 per month. The job market continues to be good for our graduating students. This year 40 companies interviewed chemical engineering graduates in Koffolt Laboratories and about 100 interviewed at the College of Engineering Placement Services.

Dr. Kent S. Knaebel joined the staff in July after completing his Ph.D. in chemical engineering with Professor Pigford at the University of Delaware. Kent's Ph.D. thesis was on purification of brackish water by cycling adsorption. Previously, Kent completed his M.S. at Delaware and his B.S. at the University of Kentucky. After receiving his B.S. degree, he spent three years with Tennessee Eastman at Kingsport, Tennessee. Kent will be involved in our process control, process design, and separation processes courses and research, and in the expansion of the departmental computer capabilities.

Undergraduate enrollment keeps increasing. One hundred and forty students tried to register for CH.E 200, the first course in stoichiometry this fall. Twenty of these could not be accommodated and are among over 70 who signed up for the Winter quarter. While we do not expect all of these students to continue in chemical engineering in their junior year, the faculty is quite concerned over the size of the current enrollment. Ohio is having budget problems and the prospects for significant increases in faculty members and facilities to match the enrollment increases are not good. In seeking solutions to this problem, we, along with other faculties in the College of Engineering, considered the pros and cons of limiting undergraduate enrollment. As a first step, the College of Engineering approved a new rule which requires a 2.00 average for students wishing to transfer from University College or wishing to register for entry level engineering courses.

Graduate enrollment has increased but at a much more moderate pace. Last fall we had 46 full-time and 9 part-time graduate students. About 15 of these are Ph.D. candidates. We, along with most departments in the United States, are not attracting the historical fraction of top B.S. graduates (25-35%) that used to go on to graduate school. This is particularly true of the Ph.D. degree where the national output is down and about 50% of the graduates are foreign students. There are many more teaching positions open in U.S. chemical engineering departments than will be filled this year. We would be interested to hear from any of you about ideas you might have on dealing with the large number of undergraduate enrollees and the shortage of U.S. graduate students.

In the long run we hope that some of our equipment problems will be alleviated by contributions from industrial sources, alumni, and friends. Dean Glover's Committee for Tomorrow has organized a Capital Fund Campaign to raise $15,000,000 to meet some of the urgent needs of the College of Engineering. We have identified three major areas in which updating present equipment and obtaining new state-of-the-art equipment
are badly needed. These are a Process Control Laboratory (with emphasis on digital data acquisition and control techniques), a Reaction Engineering Laboratory (over half of our faculty have research interests in reaction engineering), and a polymer processing laboratory.

We have received significant contributions from Ashland Chemical, PPG Industries, General Motors, and Industrial Data Terminals. A grant from the National Science Foundation and matching University funds are providing a new Digital Equipment Company VAX 11/780 computer in the process control laboratory. If any of your companies would be interested in learning more details about our needs in any of these areas, I would be happy to supply more information. We could use surplus equipment as well as financial help. We also plan to construct a highly instrumented stainless steel distillation column for both unit operations and process control teaching and research. This will be an invaluable teaching and research tool but unfortunately, it looks as if it will cost about $200,000.

In addition to the teaching and research uses of the Process Control Laboratory, we also plan to offer short courses for industrial personnel for training those who graduated so long ago that they do not have process control training and those whose training did not include digital techniques. More on this in a couple of years when we hope to have our new equipment in place and shaken down and we are ready to offer short courses.

This report would be incomplete without mentioning the chemical engineering students who have been recognized for their academic achievements and leadership. Seniors Lani Bell, Paul Dubetz, Fred Ehrman, Christine Proctor, Gary Prok, Ellen Silva, Wayne Stuber and David Vutetakis and Juniors Carl Bixel and Nancy Coultrip were cited as Honor Students last ACE Day. Paul Dubetz was president of the Engineers Council and Fred Ehrman was President of Texnikoi. This year Christina Stark, a junior, is President of the Engineers Council; Roseanne Maraffa, junior, is Secretary of the Society of Women Engineers and Nancy Coultrip, a senior, is President of Texnikoi. The AIChE Student Chapter officers are: President, Thomas Hornish, a senior; Vice-President, Mark Frena, a senior; Secretary, Nancy Hummell, a senior; Treasurer, Roseanne Maraffa, a junior.

This year ACE Day will be held on Friday, May 15. Professor Web Kay was ill last year and Professor Bob Mohler substituted as the featured speaker. Professor Kay has been rescheduled this year and I hope that many of you will be able to come back at this time. We especially look forward to greeting the Anniversary Classes of 1916, 1921, 1926, 1931, 1936, 1941, 1946, 1951, 1956, 1961, 1966, 1971 and 1976 from whom we are expecting an especially good turn out.

Sincerely,

Jack Zakim

P.S. We had an enjoyable reunion with a number of alumni at the Chicago AIChE meeting in November. We plan to have another get-together in New Orleans this fall, probably on Tuesday evening, November 10, 1981. Signs will be posted announcing the time and place.
Faculty Activities

In addition to carrying out their normal teaching, research, student advising and university, college and departmental committee activities, the faculty have had a number of experiences, awards or other forms of recognition during the last year.

Professor Bob Brodkey received grants for rheology research from Wright-Patterson Air Force Base, for turbulence research from the Petroleum Research Fund, and for studies on deflocculation of paper fibers from International Paper. Under his continuing NSF Grant, Bob held the second Beta Conference at which a small international group of leading researchers on coherent structures in turbulent shear flows met in Columbus. The purpose of the meetings is to survey areas of agreement and disagreement on turbulent structure and also areas where further research is needed. Bob has four post-docs working with him. Dr. Rad Sharma from India is working on the paper project, Dr. Jacques Levalle from Belgium is working on turbulent research and Dr. Ahmed Ouibrahim from Algeria and France and Dr. Sue Weng are working on the rheology project.

Professor L.S. Fan received grants for research on gas-liquid-solid semi-fluidization and on semi-fluidized bed bioreactor studies from NSF and on coal combustion from the Ohio Coal Research Laboratories Association. He also received a special award to support his fluidization research from Battelle. L.S. worked last summer at Argonne Laboratories on fluidized bed combustors. During the past year he has served as Secretary of the Central Ohio Section of A.I.Ch.E. Professor Katsuhiro Murayama of the University of Kyoto, Japan, is spending this year as Visiting Professor working with him on three-phase fluidized bed reaction dynamics. Visiting Professor Guillermo Marroquín of the Instituto Polytecnico Nacional in Mexico City is spending part of his year working with Professor Fan on modeling fluidized bed combustors.

Professor Christie Geankoplis spent the summer with Henkel Corp. in Minneapolis. Christie's text "Transport Processes and Unit Operations" is receiving increasing acceptance in the U.S., Canada and Europe. As a result, a second edition is being published. Visiting Professor Marroquín of the IPN is spending part of his year working with Professor Geankoplis on a study of axial dispersion coefficients in spray towers.

Professor Ed Haering presented an invited talk on "Surface Studies and Catalysis" at the Industrial Associates Symposium of the OSU Department of Chemistry. He also lectured on "Chemical Reactor Design," and "Process Design" to the ACS (Columbus section) Chemical Engineering for Chemists short course. Ed completed Laboratory Manual for Chemical Operations Laboratory in time for last summer's session. He also served on the Executive Committee of the Central Ohio Section of A.I.Ch.E. Professor Woo Chang Chung of the Department of Chemical Engineering, Hanyang University, Seoul, Korea, is spending a year at OSU working on heterogeneous catalytic reaction studies with Professor Haering.

Professor Harry Hershey is collaborating with Professor Brodkey on a textbook on transport processes. They made good progress this past year with twelve chapters now completed and ready for use by Chemical Engineering 420 students this spring. (Only about five more to go).

Professor Kent Knaebel began teaching the Real-Time Computing and Digital Control course with Professor Bob Mohler. He has been involved in selecting computer equipment and he has taken the leading role in designing a new room to house our new VAX 11/780 computer and interactive graphics units. Kent was elected Secretary of the Central Ohio Section of A.I.Ch.E. He also lectured on "Mass Transfer Fundamentals" and on "Separations" at the ACS (Columbus Section) Chemical Engineering for Chemists short course.
Professor Emy Lynn has continued to serve as advisor to the Student Chapter of A.I.Ch.E. Last spring the chapter hosted a very successful Student Chapter Convention for the North Central Region with about 200 attendees.

Professor Bob Mohler has been spearheading our efforts to set up our Process Control Laboratory. We believe that with new facilities (VAX 11/780 computer and interactive graphics terminals) we can develop a Center for Excellence in Real-Time Process Control and provide data acquisition and control capabilities for research in many areas. Bob was instrumental in obtaining an award of two high performance tape transports to be used for data storage and retrieval from Technicare Corporation.

Professor Duane Skidmore received a grant from Ohio Coal Research Laboratories Association for modeling of heat, flow and reactivity effects on in-situ coal liquefaction. He chaired sessions at the ACS Meeting in Las Vegas and the A.I.Ch.E. Meeting in Chicago. Duane was appointed to the Hazardous Wastes Disposal Facility Siting Board of the Governor and the Mayor's Energy Council.

After being on a sabbatical "around-the-world" leave during the 1979-80 school year, Professor "Slip" Slider is trying to adjust to the tremendous increase in class sizes that occurred during his one-year absence. His petroleum production course enrollments more than doubled in size and the ChE. 200 trailer enrollment increased from 25 to 80 from 1979 to 1981. Last year he taught short courses on gas reservoir engineering, introduction to reservoir modeling, and reservoir fluid flow and applications in New Orleans, Houston and Calgary (Canada). His sabbatical experience has resulted in a contract with his publisher to write a new version of his reservoir engineering book which will have the title Worldwide Petroleum Engineering Methods.

Professor Ed Smith is continuing his fire research under the sponsorship of the Transit Development Corp., NASA, the American Iron and Steel Institute and Wright-Patterson Air Force Base. He chaired a session at the Fifth International Conference on Fire Safety in San Francisco and spoke at two symposia for Products Safety Corp. in San Francisco. Last summer he spent two months with Bell Laboratories working on fire safety of communication cable. He also gave an invited lecture at Bell Labs. Ed serves on the Governor's Alcohol Fuels Advisory Council, on the Federal Aviation Administration "SAFER" committee technical group on aircraft interior materials, ASTM Committees E5 and E7 (he chairs two task groups), and the NBS ad hoc Committee on Fire Modeling. Of special note, the OSU Release Rate Test procedure was published in the grey pages of the 1980 ASTM Book of Standards.

Professor Tom Sweeney presented a seminar on "Particle Collection in Fluidized Beds" at Battelle as part of the "Insight 81 Series." He also lectured on "Heat Transfer" to the ACS (Columbus Section)Chemical Engineering for Chemists short course.

Professor Jack Zakin edited the Proceedings of a Symposium on Polymeric Drag Reducers which appeared in the May 1980 issue of Polymer Engineering & Science. He had earlier organized and chaired that Symposium at the American Chemical Society Meeting in Anaheim in 1978. He also wrote the Introduction to the October 1980 issue of the Journal of Rheology which included most of the papers presented at the Symposium on Drag Reduction which he organized and chaired at the Golden Jubilee Meeting of the Society of Rheology Meeting in 1979. He is still involved in the NASA project on Gas-Solid Airflow Over a Flat Plate which is located at the University of Missouri-Rolla. During the year he presented invited lectures at Exxon and Cleveland State University on turbulent drag reduction. At the October meeting of the Central Ohio Section of A.I.Ch.E. he spoke on "Is There a Crisis in Chemical Engineering Education." He is a member of the newly-formed Committee on Industry/University Interaction, a subcommittee of the A.I.Ch.E. Research Committee.


Staff Members

Fellows, Scholars, Research Associates and Teaching Associates

Professors
Robert S. Brodkey
Christie J. Geankoplis
Harry C. Hershey
Webster B. Kay (Emer.)
R. Emerson Lynn
Waldron D. Sheets (Emer.)
Duane R. Skidmore
H.C. Slider
Edwin E. Smith
Thomas L. Sweeney
Aldrich Syverson (Emer.)
Jacques L. Zakin (Chairman)

Associate Professors
Edwin R. Haering
Karlis Svanks (Emer.)

Assistant Professors
Liang-Shih Fan
Kent S. Knaebel
Robert D. Mohler

Visiting Professors
W.C. Chung
G. Marroquin
K. Murayama

Administrative Assistant
Dwight L. Starr, Jr.

Secretary
Betty Frazier*

Technical Typists
Kathy Kahn
Pat Osborn

Design Engineer
Michael B. Kukla

Laboratory Machinist
Earl Duckum

Post-Doctoral Researchers
J. Lawalle
A. Ouibrahim
R.S. Sharma
S. Weng

Teaching Associates
R. Apel
J. Buchwalter
D. Chang
M. Hu
K. Lakshmanan
S. Lin
A. Mamo
L. Miller
N. Wang

Fellowships
Air Products
James Sauer
American Oil Company
Dan Lindley
Celanese
James Givens
E.I. duPont deNemours
Philip Dalton
Deborah Marek
Arno C. Feldner
Christine Brown
Elizabeth Mulvaney
Owens-Corning Feberglas
Victoria McCauley
Procter and Gamble
Karen Wilson
Louis A. & Lucille Roberts
David Chang
Gary Datsko
Gene Voiril
Rohm and Haas
Robert Kelch
Shell Companies
Lamont Beaver
Sohio
James Toth
Thailand
K. Ratchatasuwon

*Editor, Annual Report
Fellowships (cont.)

Union Carbide
  Helen Holmes
  Michael Peters

University Fellowships
  Booker Spurlock
  David Vutetakis

Research Associates
  B. Beck
  E. Brito
  L.K. Chang
  S.H. Chern
  P. Chung
  S.T. Hwang
  W. Lee
  C. Laotchavichtra
  K. Ogunde
  R. Richardson
  S. Satija
  C. Sherban
  J. Song
  J. Torng
  A. Vangeloff
  K. Wu

Scholarships

Ashland Chemical Foundation
  Andrew Weber
  Debra Worthington

Diamond Shamrock
  Mark Dieringer
  Kay Herouvis
  Thomas Mantowski
  Chrisina Warner
  Robert Zimmerman

Dow Chemical
  Debra Edwards
  Suzanne Wiegleb

Dowell
  Daniel Harriman

Eastman Kodak
  Thomas Hornish
  Dan Lambert
  Anthony Nadratoski

Goodyear Tire & Rubber Fdn.
  Carl Bixel

Raymond D. Hammond
  Tracy Flora
  Ralph Greco
  David Henninger
  James Lawrence
  Elliot Levine
  Roseanne Maraffa
  Charles Tritt
  Leonore Witchey

Lubrizol
  Roy Goldsberry
  Ronald May

Monsanto Company
  Douglas Baughman
  Karen Christensen
  Nancy Hummell
  Elizabeth Knecht
  Ronald Stapleton

Universal Oil Products
  Edward Claugs

Union Oil of California
  Danald Chudanov

James R. Withrow
  James Ferguson
  James Young
Placement of Chemical Engineering Graduates

March 1980 - December 1980

BACHELOR OF SCIENCE

Mary Stolarksy Reynolds
Mohammad Bagheri

March 1980

Allied Chemical, Philadelphia, PA
Enrolled in Mining Engineering, OSU

June 1980

Ralph Antone
Lani L. Bell
Jeffrey R. Brown
Carol A. Bur
Frederick T. Clark
Peter S. Clark
Gary S. Datsko
Bruce R. DeBruin
Michael F. Dranschak
Paul T. Dubetz
Fred D. Ehrman
Matthew J. Galosi
Mark A. George
Walter A. Hansen
William A. Jones
Kyle E. Kennedy
Joseph E. Legenza
Richard L. Mayer
Larry Miller
Michael Moore
Laura L. Murphy
David M. Pentenburg
Sanford L. Phillips
Christine A. Proctor
Gary R. Prok
Stephen R. Reiling
James N. Rigano
Cynthia A. Scheetz
Susan A. Sferra
Jeffrey L. Shifflette
Gary D. Shives
Ellen M. Silva
Arlene A. Simon
Debra S. Simpson
Timothy L. Strickler
Wayne G. Stuber
Charles W. Theuring, Jr.
Jim Y. Tou
David Vuchetakis
Mark R. W field
Mark J. Zeto
Ronald Z. Zitzman
Kent W. Zimmerman

Plaskolite, Columbus, OH
Schio, Cleveland, OH
unknown
Arco Polymer, Philadelphia, PA
Amoco Research, Naperville, ILL
Union Oil of Calif., Ventura, CA
M.S. Program, Chem. Engr. Dept., OSU
Eastman Kodak, Rochester, NY
Allis Chalmers, Fairfield, OH
Graduate School, Stanford University
Graduate School, University of Delaware
Amoco Productions, Lake Charles, LA
Amoco Productions, Tyler, TX
Babcock & Wilcox, Barberton, OH
Ashland Chemical, Columbus, OH
Shell Companies
Halliburton Oil Co., Weston, WVA
Monsanto, Dayton, OH
M.S. Program, Chem. Engr. Dept., OSU
unknown
Radian, Vienna, VA
DuPont, Parkersburg, WVA
Mead Corp., Chillicothe, OH
General Dynamics, San Diego, CA
Eastman Kodak, Rochester, NY
U.S. Air Force
Monsanto, Dayton, OH
B.F. Goodrich, Avon Lake, OH
National Steel, Weirton, WVA
American Liquid Crystal, Kent, OH
Union Carbide, Cleveland, OH
Diamond Shamrock, Cleveland, OH
Mobil, Paulsboro, NJ
B.F. Goodrich, Avon Lake, OH
PPG Industries, Barberton, OH
Air Products, Allentown, PA
Johnson Wax, Racine, WI
Hooker Chemical, Niagara Falls, NY
M.S. Program, Chem. Engr. Dept., OSU
B.F. Goodrich, Avon Lake, OH
Sohio, Cleveland, OH
Rockwell International, Columbus, OH
American Cyanamid, Marietta, OH
BACHELOR OF SCIENCE (cont)

Ruben D. Alfonzo
Philip A. Dalton
Matthew K. Davis
John T. Dent
William F. Hammersley
Carlos O. Mora
Mark C. Oliver
Dan R. Schweigerle
Michael A. Tornes

Carlos E. Aguilera
Anthony A. Datillo
Chris U. Ekeuku
Edward G. Farah
Geroge J. Kreski
Wilmer R. Ramirez
Robert J. Strack

MASTER OF SCIENCE

Joseph Petrarca, Jr.
Michael H. Peters
Padkaj P. Shah

Kunle Ogunde

Michael C.L. Hu
Jeffrey P. Hullinger
Yaw-Chung Yang

Ming Ru Chen
Pong Chung Chung
Craig A. Heselton
Shyh-Jye Hwang

DOCTOR OF PHILOSOPHY

No degrees granted in March 1980

Paul A. D'Ambrana
Peter E. Steacy

Bahman Ghorashi

Keon Y. Park

August 1980
Returned to home in Venezuela
M.S. Program, Chem. Engr. Dept., OSU
General Electric, Columbus, OH
Goodyear Atomic, Piketon, OH
Department of Energy, Washington, D.C.
Returned to home in Venezuela
Union Carbide, San Francisco, CA
Corning Glass Works, Greenville, OH
Ladd Petroleum, Denver, CO

December 1980
Returned to home in Venezuela
unknown
MBA Program, OSU
Amoco Productions, Sweeney, TX
unknown
Returned to home in Venezuela
unknown

March 1980
Diamond Shamrock, Paynesville, OH
PhD candidate, Chem. Engr. Dept., OSU
J.E. Sirrine Co., Houston, TX

June 1980
PhD candidate, Chem. Engr. Dept., OSU

August 1980
PhD candidate, Chem. Engr. Dept., OSU
CH2M Hill, Inc., Montgomery, AL
unknown

December 1980
unknown
Returned to home in Taiwan
Chemamco, Columbus, OH
PhD candidate, Chem. Engr. Dept., OSU

June 1980
Bell Laboratories, Allentown, PA
Shell Companies, Houston, TX

August 1980
Asst. Prof., ChE, Cleveland State Univ.

December 1980
ElPaso Products Co., Odessa, TX
### Bachelor of Science

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### Master of Science

| 5          | 1850, 1895, 2000, 1975, 1975                         |
| 2          | 1940, 2050                                           |
| 1          | 1917                                                |

### Doctor of Philosophy

| 50         | 2617                                                |
| 2          | 2425, 2725                                           |

*other offers were not reflective of market salaries when student graduated*
Ohio State University's
Annual Conference for Engineers and Architects
Friday, May 15, 1981
8:30 Registration & Coffee Hour
Hitchcock Hall Lobby

9:30 Morning Session
Hitchcock Auditorium

- Dedication of the Mars G. Fontana Laboratories (a renaming of the Metallurgical Engineering Building)
  Presiding Dr. Donald D. Glower
  Dean, College of Engineering
  Remarks Dr. Harold L. Enarson, President
  Dr. Mars G. Fontana, Professor and Chairman, Emeritus
  Metallurgical Engineering

- Computer Graphics: A New Tool for Engineers
  Dr. John T. Demel
  Chairman, Engineering Graphics
  Dr. Jacob J. Wolf, III
  Assistant Professor, Engineering Graphics

- Database Computers: Meeting the Challenge of Information Needs of the 1990's
  OSU's Laboratory for Database Systems Research
  Dr. David K. Hsiao
  Professor, Computer & Information Science

  Stanley E. Harrison
  Chairman, Committee for Tomorrow
  Executive Vice President and Chief Operating Officer
  The BDM Corporation

11:15 Reception
Ohio Union
For awardees, friends, faculty, parents, class reunion groups.

12:00 Awards Luncheon
Ohio Union Ballrooms
Presentation:
- The Reunion Classes of '61,'56,'51,'46,'41,'36,'31,'36,'21, & earlier
- 1981 Engineering Honor Students
- Faculty Awards for Distinguished Teaching
- Texnikoi Outstanding Alumnus Award
- Distinguished Alumnus Awards
- Meritorious Service Citation
- Benjamin G. Lamme Medal

Departmental Session
The Joseph H. Koffolt Laboratories, Room 207

2:00 WELCOME TO ALUMNI AND GUESTS
STUDENT AWARDS

2:30 Dr. Webster B. Kay "Fifty-Eight Years as a Chemical Engineer"

3:15 OPEN HOUSE AND SOCIAL HOUR
WILLIAM R. HARRIS

distinguished alumnus

WILLIAM R. HARRIS is the Vice President and General Manager, Industrial Chemical Division, U.S. for PPG Industries. A native of Martins Ferry, Ohio, Mr. Harris attended Ohio State University and, in 1944, was awarded the Bachelor of Science degree in Chemical Engineering. During the time he was a student at Ohio State he was a member of the Tower Club and was also elected to the national engineering honorary, Tau Beta Pi.

In addition he was a member of the student chapter of the American Institute of Chemical Engineers. After graduating, Mr. Harris joined PPG at the Barberton location. In 1961 he was named assistant works manager and then in 1962 he was promoted to works manager of the Barberton operation. In 1969 Mr. Harris was made vice president and general manager of the Houston Chemical Company – a PPG subsidiary and also was the manager of the Manufacturing Industrial Chemical unit.

He held these titles until 1973, when he was named vice president and general manager of the Chemical Division's Organic Chemical unit. In 1976 he was again promoted, this time to vice president and general manager of the Industrial Chemical Department of PPG. Mr. Harris is a member of the American Institute of Chemical Engineers as well as the National Petroleum Refiners Association and the American Petroleum Institute.

Among his several civic activities, he is a member of the board of directors for the St. Clair Memorial Hospital. A member of the Ohio State Alumni Association, Mr. Harris is known as an active and loyal alumnus. He is among the group of industrial leaders who form the Advisory Committee for the Department of Chemical Engineering at Ohio State and he is also one of the team leaders for a capital campaign drive which has as its goal a Chemical Engineering Process Control Laboratory.

In addition to maintaining close ties with his Department of Chemical Engineering, Mr. Harris is also presently serving as a member of the Committee for Tomorrow, a group of leaders from the industrial and business world who have banded together for the betterment of the College of Engineering.
Anniversary Classes

1916
W.T. Maidens
H.E. Mersereau
L.H. Milligan
W.L. Mong

1921
E.H. Adkins
H.W. Baque
C.A. Buehler
C.H. Case
B.F. Flood
F.A. Ford
C.J. Hassler
H.K. Linzell
H.J. Schulte
D.M. Worley

1926
W.H. DeBruin
R.S. Graetz
C.G. Landes
V.A. Lauderman

1931
W.B. Abele
H.W. Almen
R.K. Child
H.L. Coles
M.F. Conn
F.E. Cook
L.K. Herndon
J.H. Koenig
M. Lee
D.D. McKinney
W.E. Mennert
H.S. Olson
I.A. Planc
R.W. Rothrock
M. Schantz
W.D. Scheetz
A.B. Stiles
J.E. Toppari
W.M. Tucker
P.F. Ulmer

1936
N.A. Agepetus
H.C. Anderson
G.S. Bonn
J.W. Catron
J.P. Creah
F.E. Culp
J.L. Dum

1936 (cont.)
R.A. Ewing
C.E. Green
J.J. Jarosi
D. Kaufman
J.H. Koenig
W.C. Lorenz
H.A. Meyer
H.V. Miles
R.A. Miller
R.N. Miller
A.R. Morrison
J.G. Mravec
B.W. Nelson
E.D. Neunherz
C.C. Phillips
J.E. Plummer
L.F. Roy
R.C. Ruffer
W.R. Schnitz
F.J. Sercelj
R.F. Snider
W.A. Taylor
D.A. Truesdell
J. Vasilosky
W.P. Ward
P.W. Wilcox
A.A. Wuest

1941 (cont.)
H.J. Jacoby
C.A. Keller
D.R. Kramer
T.F. Lavery
R.K. Lawson
R.F. Lescher
P.J. Maddex
R.G. Merryman
G.L. Meyers, Jr.
R.N. Miller
R.J. Mitchell
F.L. Nelson
L.T. Oyler
R.T. Reiss
H. Reuben
J.R. Robinson, Jr.
P.W. Ruese
J.W. Salter
D.A. Schmeltz
J.H. Shaffer
D.E. Somerset
D. Thomas
H.R. Unkel
F. Vaclavik
R.L. Waldvogel
W. Warner
M.E. Woods
G.D. Young
R.P. Young
A. Zier

1946
E.G. Anderson
R.W. Arcger
M.B. Baker, Jr.
V.C. Becher
L.H. Beckberger
L. Blazy
C. Broadman, III
S. Bonta, Jr.
H.F. Brown
H.G. Caldwell
J.R. Cameron
L. Campbell
M.J. Cramer
J.D. Crane
F.E. Dresher, Jr.
D.W. Duncan
J.M. Elliott
P.F. Felkner
H.A. Fulgrabe
P.O. Grebus, Jr.
H.H. Grice
S.P. Greenfield
G.B. Hughley
J.D. Ireland

1951 (cont.)
T.R. Atwood
N.G. Bartrug
R.C. Beckett
J.A. Bierlein
T.R. Boch
J.P. Boyer
C.E. Briethaupt
L.T. Bunn
P.R. Caris
R.F. Carroll
B.A. Chandler
M.A. Chernin
G.P. Chapman
C.P. Chipman
J.H. Clark
R.J. Coffey
R.H. Congelliere
L.A. Detamore
C.L. Dornbusch
R.N. Eilerman
B. Entwisle
H.A. Fisch
R.A. Fitz
W.J. Garmus
J.P. Geir
H.F. Gossard
D.C. Haring
D.V. Harris
R.C. Harshman
A.M. Hassan
B.E. Hill
J.H. Hoorman
G. Houghton
P.W. Izant
R.M. Kilian
J.S. Koegle
R.M. Kreager
J.L. Lavin
R.T. Lee
R.L. Leslie
G.R. Lewis
J.T. Lindsay
L.J. Lütz
R.R. MacGregor
D.E. Maple
G. Marti
B.L. Martin
A.N. Masse
L.V. McIntyre
A.L. Medin
W.L. Mengert
E.T. Ming
A.P. Mizisin
R.H. Narwold
1951 (cont)  
J.R. Nelson  
C.L. Newton  
W.L. Norris  
R.E. Ody  
W.O. Overton  
J.R. Parkinson  
J.W. Peters  
D.Y. Pournaras  
C. Reeder  
N.F. Reinert  
D.P. Rice  
V.R. Rinehart  
P.T. Santilli  
E.J. Scharf  
J.J. Schlosser  
D.L. Sharps  
J.P. Slattery  
H. Sobala  
P.W. Spaite  
D.B. Speed  
D.A. Strang  
C.J. Svoboda  
Ohin Tin  
N.D. Van Huyning  
V. Venkatesham  
H.A. Voelkerding  
R.E. Warner  
F.M. Warzel  
R.B. Weiser  
B.W. Willkinson  
R.W. Wilcox  
K.L. Wing  
W. Wolfe  
R.M. Young

1956  
P. Alexander  
G.F. Althouse  
J.P. Berzins  
J.W. Cameron  
R.A. Cody  
W.O. Coe  
H.H. Fanning  
j.r. Farst  
R.A. Fitz  
G.C. Frazier  
C.E. Golden  
J.S. Gordon  
E.R. Haering  
H.F. Hajjar  
J.P. Hazelton  
H.C. Hill, Jr.  
L.W. Jordan  
P.C. Linder  
L.D. Loch

1956 (cont)  
C.G. Marshall  
A.P. Muren  
C.L. Cubre  
D.W. Rumsey  
M.K. Sanghvi  
R.N. Storey  
D.A. Strang  
S.E. Weary  
J.W. Weisel  
L.J. Weisz  
R.M. Yarrington

1961  
R.R. Bigley  
L.G. Borchert  
P.G. Bork  
J.W. Bowers  
D.A. Bauer  
T.E. Chatterin  
R.B. Cooper  
E.R. Corino  
D.C. Edwards  
D.A. Fichtner  
R.L. Folmer  
P.H. Gifford  
C.G. Haines  
J.A. Hammond  
T.J. Hanson  
R.D. Harris  
D.E. Hazelbeck  
G.R. Howard  
D.I. King  
R.A. Krakowski  
F.T. Kremblas  
K.D. McDaniel  
T.M. Mercer, Jr.  
J.H. McMicking  
S. Ng  
D.A. Parker  
J.B. Pausch  
J.N. Rapach  
J.M. Skaates  
H.E. Taylor  
H.H. Warye  
L.E. Wing  
L.W. Woodworth

1966  
W.F. Deerhake  
D.A. Denny  
F.J. Dobscha, Jr.  
E.L. Eggors  
T.E. Fitz  
R.H. Furlow  
J.A. Gosney  
J.E. Haas  
E.R. Haering  
R.D. Hoffman  
E.L. Jarrett  
L.L. Jarrett  
E.F. Jefferis  
R.B. Jutte, Jr.  
H.T. Kim  
J.S. Knox  
M.G. Konicke  
P. Kullavanjaya  
W.G. Lowrie  
S.G. Marlow  
L.J. Mathew  
G.L. McKee  
J.H. Miller  
D.J. Modell  
J.R. Morton  
G.W. Moye  
J.O. Nye  
G.E. Raines  
R.D. Rolinski  
A.R. Shuki, Jr.  
S.S. Sonawals  
K. Svanks  
D.W. Walter  
D.P. Whiteman  
H.J. Zeller

1971  
L.C. Angello  
R.L. Baker  
A. Chen  
H.S. Cho  
D.R. Conner  
J.W. Connor  
M.A. Curran  
M.M. Daiga  
J. Davison (Balmer)  
D.A. Draudt  
J.J. Fair  
W.R. Fontaine  
J.R. Glendon  
P.M. Greenberger  
E.A. Grukle  
D.C. Haberkost  
E.C. Hauswald  
K.G. Hertenstein

1976  
S. Abraham  
D.F. Arnold  
G.R. Bellopatick  
R.A. Bouton  
M.E. Carson  
H.N. Conkle  
J.M. Delabar  
D. Garber (Billman)  
K.E. Hansen  
D.J. Hinerman  
R.R. Holbrook  
D.T. Horn  
P.G. Hursh  
E.E. Imbrogno  
P.J. Karalis  
J.J. Keenan, Jr.  
R.R. Konanz
Welcome

Dr. Zakin extending a happy and cheery welcome to our alumni, students and visitors

Professor Bob Mohler "Computer Applications in ChE..."

Professor Ed Haering Welcomes Anniversary Classes
Anniversary Classes

1930
P.S. Dunn, C.L. Fletcher
H.L. Hamilton, D.D. Huffman

1935
M.I. Zwelling, M. Jones, E.E. Slowter

1940
R.F. McKibben, F.J. Malik, H.E. Austen,
C.H. Aneshansley, W.R. Fisher

1945
K.L. Wing, M.A. Bobal
Dr. Zakin telling...

Professor Emeritus Syverson - "Make mine black - remember?" (That's not Mrs. Olson)

No, that's not a cookie roller!

"Heads up!"
"Chewing
Sipping
Chatting"