Chemical Engineering

1995

Forty-Seventh
Annual Report to the Alumni
The Ohio State University
Joseph H. Koffolt
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Dear Alumni ...

It is good to have this opportunity to write to you again about the activities taking place in the Department. I realize you received an Annual Report not too long ago, but it was a delayed report due to the Chair transition. This report goes out to you in the time frame I intend to establish so that you will receive it before ACE Day. The next report may even be a little earlier in the year. We also intend to have a Departmental newsletter that will come out in December, 1995. Traditionally the Chair reports on each faculty member's activities but as I brought you up to date on everyone's activities just several months ago, it will not be included in this report. I would like to let you know, however, that the latest awards in the Department were the University's 1995 Outstanding International Faculty Award, which was awarded to Jack Zakin and the Lumley Engineering Research Award, which was awarded to Jim Lee and S. T. Yang. We would also like to inform you of a prestigious award to an alumni, Dr. Derrick K. Rollins (PhD 1990 advisor, Dr. Jim Davis) who is presently teaching at Iowa State University of Science and Technology, who received the Presidential Faculty Fellows Award of 1994. We are extremely proud of Dr. Rollins and extend our congratulations. The Faculty and I take great pride when our students receive such awards as we feel it reflects well on the quality of the program.

My first eight months as Chair of ChE have been interesting and productive. Our immediate goals are to acquire more space, increase the size of our faculty, renovate the unit operations lab and create a new biotechnology lab. We have made some administration changes in order to better serve the needs of students and faculty. We now have a staff position devoted to academic advising and coordination of the graduate program (Sherry McDonald), a full-time Administrative Associate (Bill Walters) was named to oversee Department finances and act as an Office Manager, and a full-time instrument maker (Carl Scott) was hired to oversee the machine shop and to aid students in fabricating equipment for research. We are also in the process of moving our undergraduate recruiting efforts to the Engineering Career Center, while maintaining our traditional graduate recruiting program. Despite the job market for chemical engineers not having fully recovered, enrollment at the undergraduate level continues to be high, with a sophomore enrollment in the ChE 200 course of 100 students. These students were selected from a total of 150 freshmen who had declared an interest in pursuing a chemical engineering major. According to the Engineering Career Center at OSU, the starting salaries for B.S., M.S. and Ph.D. chemical engineers remains the highest of all the engineering disciplines. The quality of the upcoming class looks very promising as forty-three incoming freshmen who declared an interest in pursuing the ChE degree received Dean's scholarships. We continue to be extremely well-represented by outstanding women engineers. At the last Women in Engineering Graduating Seniors Dinner, Chemical Engineering had more attendees than any other Department in the College.

We are constantly striving to streamline the curriculum and to enhance our national reputation, particularly as to how we are perceived by our peers at other academic institutions. We are concerned about our ranking and have honed our strategy to qualify as a Center of Excellence in academics and research. On the curriculum and instructional front, we would like to provide students with more opportunities for summer quarter internships to broaden their industrial knowledge and enhance their opportunities for employment after graduation. Serious
deliberation is underway to move the traditional undergraduate Unit Operations Laboratory (UOp) Course from summer of the junior year to regular academic quarters. The UOp course is regarded by industry as one of the most important courses in the undergraduate curriculum. We are discussing changing our current methods of teaching UOp to one in which we would share the responsibility amongst the faculty by having them oversee the unit operation in their area of specialty. Our goal is to provide more in depth instruction and better student/teacher contact. The Faculty has also observed a need to offer a tech elective course (both undergraduate and graduate) in applied mathematics in ChE. Applied math has been covered in various ChE courses dealing with specific chemical engineering subjects. A general course offering on this topic could eliminate the redundancy of the same subject being covered in various ChE courses.

On the research front, it is clear that faculty research is expanding beyond what has been experienced at any time in the history of the Department. While continuing their current excellent individual research programs, the faculty also recognizes that important exposure would be gained by developing Centers of Excellence in different fields of ChE. The faculty are well-posed in several key technology areas as defined by the College and University such as: 1) advanced materials (polymer); 2) material processing (polymer processing); 3) computation, and 4) biotechnology. After reviewing the common interests of the faculty and considering student/industrial preferences, the faculty ascertained environmental engineering would be the thrust of the department's efforts. We are currently in the midst of establishing an Industry/University consortium program in environmental control technology focused on the paper and pulp industry. It was decided to establish an industry-funded research program centered on this industry as a nucleus that could be expanded to an NSF/Industry/University center.

The Amoco Corporation has fully funded the Richard C. Morrow Chair and we will be seeking a renown individual to fill this position in the near future. We are currently seeking to fill Prof. Harry Hershey's vacancy when he takes early retirement at the end of this academic year, with a candidate who has credentials preferably in fluid mechanics with applications to environmental engineering. We have a partnership with Civil Engineering and are currently working on creating a program that will offer our students the ability to minor in environmental engineering. A Chemical Engineer with an environmental minor will have an edge in career placement. We intend to stay on top of changes in the work place to ensure that our graduates have sufficient career opportunities.

Two faculty members took sabbatical leave to foreign academic and/or research institutions, Dr. Jacques Zakin and Dr. Umit Ozkan. Both will return to teaching Fall Quarter 1996. Dr. Zakin spent the first half of his sabbatical at the Technion in Israel working on microstructures of cationic surfactant-counterion micellar systems in order to relate the structures to drag reduction and rheological properties previously measured at Ohio State and in the laboratory of Prof. Ishi Talmon, his sponsor, obtaining Transmission Electron Microscope (TEM) images of the microstructures of dilute surfactant solutions using Cryo-TEM. He is currently at the New Jersey Institute of Technology in the Emissions Reduction Research Center working on pollution prevention on a consortium project made up of members from four universities, government agencies and a number of pharmaceutical companies. Dr. Ozkan is at the Catalysis Research Institute in Lyon, France as an invitee of the French Centre National de la Recherche Scientifique (CNRS). While effectively managing her on-going research projects at OSU through E-mail and occasional return visits, she is involved in collaborative research at the CNRS, working on a new class of catalysts called heteropoly anions and delivering keynote lectures at various academic and research institutes in order to establish long-term contacts that could lead to international research collaboration and to graduate student recruitment.
The Faculty and I want to thank the Department of Chemical Engineering's Industrial Advisory Committee for all their assistance. During our last meeting in March, Bill Lowrie (AMOCO) hosted a dinner in honor of Jack Zakin and then we went on to have a very productive meeting the next day. Jack Hammond (Westvaco) succeeded Bill as Chairman of the Advisory Committee. The Department owes a tremendous debt to Bill for his many years of service to the Department in more ways than I can enumerate in this letter. Thankfully, Bill has agreed to continue his work on the Committee as a member. I think it appropriate to make all our Alumni aware of these individuals who serve the Department in this capacity and they are: Dr. J. A. Brothers (Ashland Oil), Dr. E.R. Corino (Exxon), Nancy C. Dawes (Procter & Gamble), David R. Grove (Eli Lilly), Ronald D. Harris (Kraft), Dr. John P. Henry, Jr. (Data Genetics), Kerry G. Hertenstein (Pfizer, Inc.), E.L. Jarrett (OSI Specialties, Inc.), Dr. John B. Martin (ret., Procter and Gamble), Dr. K. N. McKelvey (DuPont), Karen T. Murphy (Ashland Oil), Cloyd P. Reeg (TRICAT), John Salladay (DOW), and Gene Wheeler (ret., Clorox). Frank Schuh (Drilling Technology, Inc.) and M.D. Winfield (UOP) have agreed to join our Committee this year and we give them a hearty welcome.

Some of you responded and sent in the coupon contained in the last newsletter. We hope to get a better response with this report as not only we, but your former classmates would really like to hear from you. The preliminary coupon response indicates that many of you would like to get in touch with former classmates. Unfortunately we cannot release names and addresses due to privacy laws but this information can be obtained from the Alumni Office (614-292-2500). Through them you can request all the names and addresses they have for a certain graduating class. Just a reminder for those of you who contribute to Ohio State through the Development Office, please be sure to designate Chemical Engineering or we will not receive it (or even be notified of it). Also be sure to return your coupon for the newsletter on the last page of this Report.

Finally, we want to take this opportunity to thank those of you that contribute to the Department and let you know how important that support is to us. There are many worthy students who need financial assistance. As many of you know, the rigors of chemical engineering make it more difficult for our students to be able to work outside of the University while enrolled in school. Much more than that, however, is the department's need to stay up-to-date in order to provide our students with the kind of education that will be relevant to today's job market. Without the continued support of our alumni and friends, we will not be able to stay abreast of current educational trends. With cuts in government spending for research being particularly worrisome we have had to get very creative in order to seek other sources for funding. We are in the process now of establishing Industrial/University Consortiums as a partial means of creating research opportunities for the training of graduate students. If ever your support was appreciated before, it is even more so now. I would also like to take this opportunity to invite all of you to attend ACE Day, which is on May 19 this year. We look forward to seeing as many of our alumni as possible. We are happy to announce that The Benjamin G. Lamme Meritorious Achievement Medal is to be awarded to Frank J. Schuh (Class of 1956), and Kenneth N. McElveen (PhD 1968) will receive a Distinguished Alumnus Award. Those of you who graduated in any year ending with a 0 or a 5 (i.e., 1940, 1945) are considered a member of an anniversary class and have an even more special reason for attending. Hope to see you soon!

Best regards,

Liang-Shih Pan
Professor and Chairman
1994 Contributors

1923
Edgar C Hendrickson
Gordon H Mutersbaugh

1924
Dr Charles C Clark

1927
James L Collins

1930
Parker S Dunn
Marion M McAdams

1932
Samuel S Johnston

1933
John S Eckert

1934
Clarence N Fisher
William J Lawless Jr
Edward E Slowter

1935
Willis M Losh
Albert R Morrison
Dr Linton E Simerl
Frederick L Thomas

1936
Richard A Miller
Dr Robert N Miller
Joseph G Mravec

1937
Andrew E Chute
Nicholas Fatica
Charles W Gaylord
Donald C Miller
Dr George H Sheets
Dr Charles E Stoops Jr
Robert T Whitaker

1938
Edward J Haven
Robert S Radow
George S Tobias

1939
Ira J Kail
Howard G Rohrer
Dr Charles A Rohrmann

1940
Prof Bernard R Sarchet

1941
Clay H Anechansley
Charles H Boardman III
Don E Kennedy
Robert L Lambert
Francis J Malik
Arthur G Mayer
John H Miller
Louis J Nowacki

1942
Pete P Grebus
Roy H Homans
George L Meyers Jr
H R Unkel
Charles D Young

1943
Dr Donald S Arnold
Randal E Bailey
Dr Dale B Baker
Dr Forrest R Hurley
Clyde H Kearns
G J Lambillotte
Donald E Lintala

1944
Nicolaes N Bacaientan
Walter E Craw
Dalton F Drake
Glenn L Gifford
Leonard A Harris
Robert F Lange
Dr Myrl E Miller
James R Randall
Raymond K Ritzert
Dr Wade Wolfe Jr

1947
William F Andrews
Thurman L Graves
John B Martin
Aloysius M Sebian

1948
Richard A Arnold
Dr Saul Barron
Robert L Bates
Richard E Durst
Donald E Garrett
John G Gerlach
Earl W Goodman
Maurice E Hatten
Richard F Hoffman
Manuel Ramos
George R Secrist
Jack C Stewart

1949
Paul E Bates
Raymond D Hammond
Frederick A Mac Dougall
Richard N Miller
Donald R Roberts
Charles R Shepherd
Roland I Spencer
Howard R Steele

1950
David W Hardesty
Richard H Inmel
Franklin A Retzke
Verne R Rinshart
Richard L Scott
Earle C Sumner
Alfred E Withrow

1951
Charles E Breithaupt
Charles L Dornbusch
Dr David A Strang

1952
Robert A Bates
John V Bishop
Roger L Briggs
Wilfred C Ling
Kenneth E Whitehead
James L Wilson

1953
Howard L Foltz
Wendell B Hammond Jr

1956
Paul Alexander Jr
Glenn F Althouse
William D Coe

1957
Walter R Andrews Jr
Arthur L Carter

1958
Dr Edward H Bollinger
John R Kearns
Valdis E Petritis
Richard M Smith
James W Stark
Dr Lawrence R Steele

1959
James O Albery
Dr Ronald M Kovach
James H Laughlin
Darryl Vonlehmden
Dr Gerald A Wilcox

1960
Virgil L Anderson
Orville W Grubmeyer Jr
Warren E McAdams

1961
Paul R Bigley
Dr Edward R Corino
Ronald D Harris
Dr James H McMicking
David A Parker

1962
Dr David E Bidstrup
Kenneth J Fulk
George M Hauswirth
Charles D Osburn
Dean Snider
Michael D Winfield

1963
Dr John P Henry Jr
Robert P Kasper
Fred A Shaffstall
Wilbur H Sidner
Kay L Snider
1994 Contributors

1964
Dr Michael B Cutlip
James A Moomaw
Mr Girish D Parikh
William V Whitmer

1965
Frederick H Flor Jr
Dr Kiu H Lee
Frederick J Rerkto
Michael C Royer
Eugene N Wheeler

1966
William F Deerlake
Linda L Jarrett
Dr Eugene L Jarrett
William G Lowrie
Glenn L McKee

1967
Frank W Hauschildt Jr
Graham F Painter Jr
Bruce E Poling
John M Yacher

1968
Richard T Linak
James W Sebert

1969
Smith E Howland
Dr M A Rao
John W Toussant

1970
George E Cressman Jr
David R Grove
Michael L Nevin
John D Rensel
Richard B Strait
Dr Rosa Uy
Dr Harry H Yieh

1971
Karen L Hendricks
Kerry G Hertenstein
Jeffrey L Kosch
William E Pritchard
Dr Stephen Zakanyecz

1972
Dr Martin R Okos

1973
Dr Johnny O Wright

1974
John E Myers
Dr William M Pekman

1975
John T Erikson

1976
Dr Donald W Buchanan Jr
Lawrence R Latta

1977
Philip M Rose
Kenneth A Yunker

1978
Donald L McDowell
Dr Neil P Stuber
Paul W Vance Jr
Thomas E Winkler
Richard J Yoch

1979
Craig W Sherban
David J Wasela
Dr Keith D Wisecarver

1980
Dr Frederick T Clark
Fred D Ehrman
Matthew J Galosi
Mark A George
Mark C Oliver
Dr David G Vutetakis

1981
Christine P Brown
Nancy C Dawes
Douglas V Lenz
James A Telljohann

1982
Debra D Funderburg
Sumner M Saeks
James J Toth
Dr Andrew M Weber III

1983
Dr Lamont E Beaver
Thomas D Burns
Diana M Chen
Mark D Dieringer
David J Grigger
Kay J Herouvis-Metropo
Dr Cheryl L Kennedy
James A Leonard
Julie M Ockajik

1984
Gregory M Masica
Scott R Northrup

1985
Andrew W Bur
Roger G Facer
David J Moonay
Richard T Strait
Sharyn S Veley

1986
Timothy M Allen
Cynthia G Bishop
Rajeev L Gorowara
Isaac A Robinson III

1987
Dr Martin D Legg
Dallas B Noe

1988
Amy S Doty
Paula F Oren
John W Oren
Annette B Ventura

1990
Darrin L Lacheta
James V Lombardi
Kara B Long

1992
Julie V Joehlin

1993
Dr Prasad P Ramanathan

FRIENDS
Dr Robert S Brodkey
Carol H Camm
Dr Jeffrey J Chalmers
LtC Russell F Dubes
Norman E Ernest
Dr Lian-Sun Fan
Marilyn E George
Judith W Harris
Milton H Hendricks
Jane A Hess
Joann H Hoge
Dr Umit S Ozkan
Ruth Porter
Charles F Porter
Sridhar Reddy
Dr Jacques L Zakin
Industrial Supporters and Corporate Gift Matching

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Faculty and Staff Members

Professors
Robert S. Brodkey (Emeritus)
James F. Davis
L.S. Fan
Milton H. Friedman (Biomed Eng.)
C.J. Geankoplis (Emeritus)
Edward R. Haering (Emeritus)
Harry C. Hershey
L. James Lee
Webster B. Kay (Emeritus)
R.E. Lynn (Emeritus)
Umit S. Ozkan
H.C. (Slip) Slider (Emeritus)
Edwin E. Smith (Emeritus)
Thomas L. Sweeney (Emeritus)
Jack L. Zakin

Associate Professors
Jeffrey J. Chalmers
Karl Svanks (Emeritus)
S.T. Yang

Assistant Professors
Bhavik R. Bakshi
Kurt W. Koelling
James R. Rathman
David L. Tomasko

Adjunct Professors
James Booth
S.C. Chen
Kent S. Knaebel

Visiting Professor
Yoshiyuki Yamashita

Visiting Scholars
Petr Komrzy
Shoujie Li
Vaclav Vancsek

Research Associate I
Peijun Jiang

Post Doctoral Research Associates
Ping Cai
A. Ghosh Dastidar
Kerang Han
Tao Hong
Shirdar Reddy
Jeenhuei Tsai
Jun-Tien Twu
T.M. James Wang
Chao Zhu

Department Administrative Staff
Academic Advisor
Sherry McDonald

Administrative Associate
William Walters *

Design Engineer
Michael Kukla

Instrument Maker
Carl Scott

Secretaries
Kathleen Doddroe (Chair Secretary)
Shirley Newsom

Bin Lu - Graduate Research Associate

* Editor of Annual Report
Graduate Students

Research Associates

Essam Abou-Zeida
Mukul Agarwal
Rajeev Agnihotri
Devamita Chattopdhay
Shriniwas Chauk
Guo-Hua Chen
Yuen-Yuen Chiu
Paul Clark
Angel Garcia-Brione
Vishal Gauri
Andrew Goodaker
Lorinda Hancock
Yi He
Yan Huang
Zuwei Jin
Yujira Jirapino
Wai-Ming Kan
Mahesh Kumthekar
Paul Kust
Eung Lee
Sangwha Lee
Wen Li
Shu-Chien Liang
Tsao-Jen Lin
Bin Lu
Xukun Luo
Suhas Mahuli
Steve McVey
Shailesh Muzumdar
Jenn-Yeu Nieh
Nirajumar Patel
Vivek Rohatgi
Brian Schilf
Oron Schuss
Chih-Hsin Shih
Hojae Shim
Cincin Siswanto
Rajesh Srinivasan
Liping Sun
Yi Tseng
Raghavan Venkat
Rahul Vir

Chung-Min Wang
Yyh-Wen Yen
Timothy Zelmanski
Jiang-Ping Zhang
Liping Zhang
Hui Zhu

Mukul Agarwal and Angel Garcia-Brione, adjusting lighting for a flow visualization experiment.

Teaching Associates

Patricia Bauer
Pranay Gupta
Sengjoo Haam
Paul Jacyk
Xun Ma
Jack Marchio
Saputra
David Shackleford
Dede Surjadi
Huan Zhong

Administrative Associates

Paul Gudde
Todd Harris
# Sponsored Students

<table>
<thead>
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<th>David Miller</th>
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<td>Donna Gardner</td>
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<td>Proctor &amp; Gamble</td>
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<td>Jacque Gates</td>
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<td>Susan Schudt</td>
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<td>Louis A. and Lucille Roberts</td>
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<td>Randy Lytle</td>
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<td>Prakar Bansal</td>
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<td>Undergraduate Scholarships</td>
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<td>Betz-Metchem</td>
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<td>Christiana Hambadi</td>
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<td>Class of 1941</td>
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<td>Samir Paarikh</td>
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<td>Mathew Schmidt</td>
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<td>Angela Kleman</td>
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<td>David H. George</td>
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<td>Alicia Collins</td>
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<td>Cynthia Lamoreaux</td>
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<td>Dorothy J. and Herbert L.</td>
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<td>Fenburr</td>
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<td>Allan I. Gordon</td>
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<td>Mark Buzek</td>
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<td>Jaideep Vaidya</td>
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<td>Kane Doerfler</td>
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<td>David Klepak</td>
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<td>Melissa Kobbe</td>
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<td>Meredith Lewis</td>
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<td>Aldrich Syverson</td>
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<td>Nicole Williams</td>
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Row 1: Craig Olwert, Denise Cromes, Jason Long, Derek Heath, Mark Tripodi, John Martin, Rolland Neutzling, Mitch Kaminski

Row 2: Michael Peterson, Robert Brodkey, Cincin Siswanto, Xun Ma, Lisa Apel, Gwen Cheney, Jerry Spires, Tate Jenkins

Row 3: Liang-Shih Fan, Jeanine Lohman, Mark Menning, Darren Tanner, Trant Holt, Tonya Huff, Scott Horne, Michael Giffen

Row 4: Todd Morris, Matt DeWitt, Dale Vandersommen, Jacqueline Head, Min Joo, Joseph Rusckak

Row 5: Sror Kat-Kuoy, Miguel Garcia-Briones, Jay Nardi, Chris Money, Paul Nelson, Don Kennedy, Nilay Dalal

Row 6: Venkat Raghavan, Scott Goff, Robert Pfaffle, John Tritschuh, Webster Schooley

Row 7: Harry Hershey, Chris Wunker, Christopher Voight, Trent Shidaker, Paul Jacyk
AIChe Student Awards - Presented by L.S. Fan

Cincin Siswanto
The AIChe Outstanding Senior Award

Trent Shidaker
The AIChe Outstanding Senior Award

Cassandra Foltz
The AIChe Outstanding Junior Award

Mark R. Sippola
The AIChe Outstanding Junior Award

Jason Galloway and Audrey Moravek (not pictured)
The AIChe Outstanding Sophomore Award
Student Awards

Matthew DeWitt
The American Institute of Chemists Award
Presented by Professor Umit S. Ozkan

Jason Galloway
Hoechst-Celanese Outstanding Sophomore Award
Presented by Professor Jack L. Zakin

Utomo Utojo
Hoechst-Celanese Outstanding Teaching Associate Award
Presented by Professor Jack L. Zakin

Angela Kleman
Dow Outstanding Junior Award
Presented by Rich Brandon, B.S. '83
Student Awards

Mahesh Kumthekar, John Clay, and Hui Zhu
ChE Dept. - Teaching Associate Recognition
Excellence for Best Single Quarter

Dede Surjadi and Michael Elsass
Hoechst-Celanese Outstanding
Teaching Associate Award - Honorable Mention
Presented by Professor Jack Zakin

NOTICE:
Computer Users - OSU ChE has an Information (WWW) Page on the Internet

Check out the OSU ChE Home page at: Http://kcg11.eng.ohio-state.edu/che/
The Ohio State University Home Page: Http://www.acs.ohio-state.edu

Some other useful links to WWW Servers:
WWW Virtual Library: Chemical Engineering: Http://www.che.ufl.edu/www-che/
American Institute of Chemical Engineers: Http://che.ufl.edu/www-che/AIChE
Computing and Systems Technology Division of AIChE: Http://control.cheg.nd.edu/cast10/
Computer Aids for Chemical Engineering Education: Http://che.utexas.edu/cache:80
American Chemical Society Publications Division: Http://pubs.acs.org
Placement of Chemical Engineering Graduates

June 94
Doctor of Philosophy
Master of Science
No Graduates

Bachelor of Science
L. Apel, Kraft, IL
T. Charske, PPG, OH
G. Cheney, Majestic Paint, OH
T. Cooke, Barney Corp., MO
D. Gromes, Strathmore Paper Co., MA
N. Dalal, No Information Available
M. Dewitt, Grad School
K. Ferguson, General Elec., OH
M. Giffen, Crown Envir. Group, OH
R. Gill, Aristech Chemical Corp., OH
S. Goff, No Information Available
D. Heath, Betz Labs., KY
T. Holt, Roxanne Labs, Columbus
L. Jenkins, No Information Available
S. Johnson, Goodyear, OH
D. Kennedy, Graduate School, Ohio Univ.
J. Long, No Information Available
X. Ma, Grad School, Ohio State Univ.
J. Martin, Grad School
R. Morris, AGA Gas, Inc., OH
P. Nelson, OSI Specialties Inc., WV
R. Neutzlimg, Goodyear, OH
Z. Odeh, No Information Available
R. Pfaffle, OM Group, Inc., OH
T. Richmond, Dow Corning, KY
J. Rusak, Goodyear, OH
W. Schooley, Ameri. Home Products, IA
C. Siswanto, Graduate School, Ohio State Univ.
J. Spires, DNV Technica, OH
M. Tripodi, Kurtz Brothers Compost, OH
J. Trittshuh, Goodyear, OH
D. Vandersonmen, No Information Available

August 1994

Doctor of Philosophy
K. Sravana, No Information Available
C. Tritt, Univ. of Wisconsin, Milwaukee

Master of Science
W. Halvorsen, No Information Available

Bachelor of Science
J. Dawson, Artesian OH Employed
J. Head, Grad School
S. Kat-Kuoy, Allied Machine & Engineering OH Employed
J. Lenczyk, Still Looking
C. Olwert, Exxon LA Employed
M. Peterson, No Information Available
T. Shidaker, Grad School
D. Webb, No Information Available

December 94

Doctor of Philosophy
Y-Y. Chiu, No Information Available
M. Garcia-Briones, International Papers AL Employed
S. Muzumdar, No Information Available
N. Patel, General Electric, IN Employed

Master of Science
J. Clay, Grad School
D. Gardner, DuPont OH Employed
T. Harris, RNT Inc. OH Employed
P. Kust, Grad School
F. Von Fahnestock, No Information Available

Bachelor of Science
G. Horne, Ford Plastics & Trim, OH
T. Huff, Andersen Consulting OH Employed
P. Mount, Andersen Consulting OH Employed
J. Nardi, No Information Available
D. Tanner, Goodyear Tire & Rubber Co. TX Employed
C. Voight, Batelle Columbus Operations OH Employed
C. Wunker, No Information Available

March 1995

Doctor of Philosophy
D. Chattopadhyay, No Information Available
S. Lee, No Information Available
J. Yen, No Information Available

Master of Science
No graduates

Bachelor of Science
J. Lohman, Lexmark, KY
C. Money, Lexmark KY
M. Washburn, No Information Available
Kurt M. Dubowski is the George Lynn Cross Distinguished Professor of Medicine at the University of Oklahoma College of Medicine. He received the Bachelor of Science, Master of Science, and Doctoral degrees in Chemical Engineering in 1944, 1947, and 1949, respectively.

He began his career in chemical toxicology and forensic science by holding positions in Connecticut and Iowa hospitals and working simultaneously in coroners' offices in Bridgeport and Des Moines. In 1958, Dubowski joined the clinical chemistry department of the University of Florida. In 1961, he became Director of the Clinical Chemistry laboratories of the University of Oklahoma Hospitals.

His research interests have involved various aspects of clinical chemistry and toxicology methodology, as well as many clinical studies with human subjects. Over the past 20 years, his research has also included studies on the behavioral toxicology of marijuana and other substances which affect the central nervous system and are subject to abuse.

The author of over 100 publications and a visiting professor at over a dozen universities, Dubowski has been elected Fellow of the New York Academy of Sciences, Fellow of the American Academy of Clinical Toxicology, and Distinguished Fellow of the American Academy of Forensic Sciences.
Publications and Presentations

Books and Book Chapters

Brodkey, R.S., "The Phenomena of Fluid Motions", first published in 1969, has been corrected and will be reissued as a Dover Publication in July 1995.


Refereed Papers


Davis, J.F., Blau, G., and Reklaitis, G.V., "Computers in Undergraduate Chemical Engineering Education: A Perspective on Training and Application", Chemical Engineering Education (in press)


Publications and Presentations


Publications and Presentations


Chattopadhyay, M.; Rathman, J.F.; Chalmers, J.C. Biotechnology and Bioengineering, in press "Thermodynamic Approach of Cell Adhesion to Air-Medium Interfaces"


Proceedings Publications


Publications and Presentations


Technical Reports


Yang, S.T., Yen, J.W., Marchio, J.L., "Quasi-Elastic Light Scattering Studies of Protein Refolding and Aggregation", final report to the National Science Foundation, February 1994

Yang, S.T., Huang, Y., Jin, Z., Zhu, H., "Calcium Magnesium Acetate at Lower-Production Cost, Production of CMA Deicer from Cheese Whey", Phase II interim report to Federal Highway Administration and New York State Energy and Development Authority, 100 pages, May 1994


Patents


Presentations

A. Invited Lectures, Seminars and Short Courses


Brodkey, R.S., "Image Processing and Analysis in Fluid Dynamics Research", Seminar at the Applied Mechanics Department, University of Illinois, March 24, 1994

Brodkey, R.S., "Image Processing and Analysis in Fluids in Chemical Engineering Research", The W.W. Clyde Seminar at the College of Engineering, University of Utah, October 25, 1994

Brodkey, R.S., "Image Processing and Analysis in Fluids and in Chemical Engineering Research", Seminar in Chemical Engineering at Clarkson University, March 23, 1995

Shu-Chien Liang, taking measurements of flow properties in multi-phase systems.
Publications and Presentations


Fan, L.S., "Fluidized Bed Bioreactor," Univ. of Queensland, Australia, Sept. 20, 1994


Koelling, K.W., K. Ishii, "Life-Cycle Design and Polymer Degradation Model", Life Cycle Design Meeting, Fawcett Center, Ohio State University, June 9, 1994


Lee, L.J., Department of Chemical Engineering, Tsinghua University, Beijing, China, June (1994).

Lee, L.J., Department of Chemical Engineering, East China Science & Technology University, Shanghai, China, June (1994).

Lee, L.J., Department of Chemical Engineering, Zhejiang University, Hangzhou, China, July (1994).

Lee, L.J., Research & Development Center, Bell Helicopter Inc., Fortworth, TX, August (1994).


Lee, L.J., Department of Chemical Engineering, McMaster University, Hamilton, Canada, September (1994).

Lee, L.J., Department of Chemical Engineering, University of Akron, Akron, OH, October (1994).


Ozkan, U.S., "Selective Catalytic Reduction of Nitric Oxide with Ammonia--Mechanistic Investigations", Princeton University, Department of Chemical Engineering, Princeton, New Jersey, presented March 1994


Publications and Presentations


Rathman, J.F., Seoul National University, Department of Chemistry Education, Seoul, Korea, (1994)

Rathman, J.F., Seoul National University, Department of Chemical Engineering, Seoul, Korea, (1994)

Rathman, J.F., Korean Advanced Institute of Science and Technology (KAIST), Taijon, Korea, (1994)


Yang, S.T., "Novel Processes for Organic Acids Production from Whey", Annual Food and Dairy Industries Conference, Ohio State University Department of Food Science and Technology, Columbus, OH, February 15-16, 1994


Yang, S.T., "Ecological Processing for Value-Added Products from Agricultural Commodities and Food Processing Wastes", presented at the meeting with The Japanese Research and Development Association for Ecological Processing in Food Industry, Ohio State University, Columbus, OH, November 7, 1994


Yang, S.T., "A Novel Fibrous Bioreactor for Bioprocessing", presented to member companies of the Emission Reduction Research Center, State College, PA, November 30, 1994


Zakin, J.L., "Recent Developments in Cationic Surfactant Drag Reduction", Technion - Department of Chemical Engineering (1994)

Zakin, J.L., "Recent Developments in Cationic Surfactant Drag Reduction", Ben Gurion University (1994)


B. Additional Paper Presentations


Brodkay, R.S., Papers presented by co-Authors at the National A.I.Ch.E. meeting, San Francisco, November 1994


Fan, L.S., P. Jiang, T.-J. Lin and X. Luo, "Flow Visualization of High Temperature and High Pressure Three-Phase Fluidization Bed
Publications and Presentations


Koelling, K.W., J. Clay, “Improved Biocompatibility of Polymer Coated Stents”, Graduate Student Competition, Ohio State University, April 23, 1994


Suhas Mahuli, adjusting high temperature reactor for SO₂ capture studies.

Publications and Presentations


Gardner, D.K., Ozkan, U.S., "Use of Alkyl Halides to Probe Reaction Networks for Oxidative Coupling and Partial Oxidation of Methane" to be presented at the Annual Meeting of the American Institute of Chemical Engineers, San Francisco, CA, November 1994


C. Organizers and Session Chairs of National and International Meetings

Brodky, R.S., Symposium Chair for "Symposium on the Measurement of Fluid Fields" at the US National Congress on Theoretical and Applied Mechanics, Seattle, WA, June 26-July 1, 1994

Brodky, R.S., Organized Committee, The 8th Beer Sheva Seminars on MHD Flows and Turbulence, Bem Gurion University of the Negev, Beer Sheva, Israel, Feb. 1996

Davis, J.F., Session co-chair, AIChE Spring National Meeting, Atlanta, April, 1994

Davis, J.F., Session co-chair, AIChE Fall National Meeting, San Francisco, November 1994


Davis, J.F., Co-Chair, 9th IEEE International Symposium on Intelligent Control, Columbus, OH, August 1994

Davis, J.F., Co-Chair, CACHE Corporation and CAST Division of AIChE, "Intelligent Systems in Process Operations", Snowmass, CO, July 1995

Koelling, K.W., Conference Chair and Organizer, International Conference on Gas-Assisted Injection Molding Technology, ERC/NSM at Ohio State University, Nov., 1994


Lee, L.J., Session Organizer and Chairman, 10th Int. Polymer Processing Society Conference, Akron, OH.


Ozkan, U.S., "Symposium on NOx Reduction" 207th National Meeting of the American Chemical Society, Petroleum Chemistry Division, San Diego, CA, March 1994

Tomasko, D.L., Session Co-Chair, AIChE Spring National Meeting, April, 1994

Tomasko, D.L., Session Co-Chair, AIChE Annual Meeting, Nov. 1994
Publications and Presentations

Yang, S.T., Co-chair and organizer, session on "Food Engineering IV: Biotechnology in Food Processing", AIChE Annual Meeting, San Francisco, November 13-18, 1994

Yang, S.T., Meeting organizer and host for the The Japanese Research and Development Association for Ecological Processing in Food Industry (14 Japanese company delegates), Ohio State University, November 7, 1994


Zakin, J.L., Chair, Organizing Committee for Local Arrangements for 1997 Annual Meeting of Society of Rheology to be held at The Ohio State University

D. Editorial Boards, National Committees and Other Professional Activities


Brookap, R.S., ABET/AIChE Chemical Engineering Visiting Accreditation Panel, 1984-to date

Brookap, R.S., Member North American Mixing Forum (NAMF, former Area 3a of AIChE)


Davis, J.F., Board of Trustees of the CACHE (Computer Aids in Chemical Engineering) The Board of Trustees for CACHE consists of 21 academic and 7 industrial representative from the United States and Canada since 1987


Davis, J.F., Chair CACHE Standing Committee on Curriculum since 1991

Davis, J.F., External Examiner for PhD dissertation on knowledge-based diagnostic systems, University Trondheim, Trondheim, Norway, December 1994

Davis, J.F., Director, CAST (Computing and Systems Technology) Division AIChE (American Institute of Chemical Engineers), since 1991

Davis, J.F., Associate Director for Research Computing, Academic Technology Services, Ohio State University, 1992 to present

Davis, J.F., Coordinator and representative of a university-wide computing plan for research and instruction for the Ohio State University, since 1993

Fan, L.S., Consulting Editor of Noyes Publications on book series on Particle Technology (1994 to date).


Fan, L.S., Consulting Editor, AIChE Journal (1994 to date).

Fan, L.S., Founding Member and Chairman, Particle Technology Forum-An Affiliated Organization of AIChE (1992 to date).

Fan, L.S., Member, AIChE National Program Committee, Area 3B - Fluidization and Fluid-Particles Systems, Member of Steering Committee (1985 to date).

Fan, L.S., Chairman (1992-date); Member (1989-date), AIChE National Program Committee, Area 7e - Multiphase Flow.


Fan, L.S., Director, Ohio State University Coal Research Program (Program theme: Dry sorbent injection technology for air pollution control in coal combustion) (1987 to date).

Fan, L.S., Member of the Scientific Committee, First International Particle Technology Forum (3rd World Congress on Particle Technology), Denver, August 17-19 (1994); Repertoire for the Fluidization and Transport Phenomena program.

Fan, L.S., Member of the International Advisory Committee, The 1st International Symposium on Measuring Techniques for Multiphase Flow, Nanjing, P.R. China, May 7-10, 1995

Fan, L.S., Member of the Scientific Committee, 2nd International Conference on Multiphase Flow '95-Kyoto, to be held on April 3-7, 1995 in Kyoto, Japan.


Fan, L.S., Elected Member of Honor Society of Phi Kappa Phi, April 8, 1994.

Fan, L.S., Member, the International Advisory Committee, The 1st International Symposium on Measuring Techniques for Multiphase Flow, to be held in Nanjing, P.R. China, May 7-10, 1995.

Fan, L.S., Member, the Scientific Committee, 2nd International Conference on Multiphase Flow '95-Kyoto, to be held on April 3-7, 1995 in Kyoto, Japan.
<table>
<thead>
<tr>
<th>Publications and Presentations</th>
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<tbody>
<tr>
<td>Lee, L.J., Editorial Board, Journal of International Polymer Processing</td>
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<tr>
<td>Lee, L.J., Coordinator of Polymer Processing Thrust Area, Engineering Research Center for Net Shape Mfg., Ohio State Univ., 1988-date</td>
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<tr>
<td>Lee, L.J., Evaluator of NSF sponsored &quot;Center for Molecular and Microstructure of Composites&quot; at Case Western Reserve University and University of Akron.</td>
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<td>Lee, L.J., Member of Technical Program Committee: Plastics Joining Special Interest Group, Society of Plastics Engineers, 1993-date</td>
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<tr>
<td>Lee, L.J., External Reviewer for Ph.D. Dissertation on Reactive Extrusion, McGill University, Canada, 1994</td>
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<tr>
<td>Lee, L.J., Foreign Proposal Reviewer: Kuwait University, Hong Kong Research Grants Council</td>
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<tr>
<td>Lee, L.J., Consultant of the International Research Cooperation Program, National Cheng Kung University, Taiwan, 1992-94</td>
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<tr>
<td>Lee, L.J., Special Consultant for Economic and Technical Exchanges, Ministry of Foreign Economic Relations and Trade, China, 1994</td>
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<tr>
<td>Lee, L.J., Reviewed proposals for NSF, ACS Petroleum Chemistry, DOE</td>
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<tr>
<td>Ozkan, U.S., American Chemical Society Colloids and Surface Chemistry Division Chair for the Continuing Symposia in Catalysis (National) 1994-1996</td>
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<tr>
<td>Yang, S.T., Served on the review panel for National Science Foundation, Academic Research Infrastructure Instrumentation Grant 1994</td>
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<td>Yang, S.T., Reviewed over 20 proposals for National Science Foundation, U.S. Dept. of Agriculture, Dept. of Energy, Hong Kong Research Grants Council, etc. 1994</td>
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<td>Yang, S.T., Reviewed over 10 journal papers for Biotechnology &amp; Bioengineering, Biotechnology Progress, Industrial &amp; Engineering Chemistry Research, J. Food Science, and J. Food Engineering, 1994</td>
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<td>Yang, S.T., External reviewer for Ph.D. dissertation &quot;Development of a FIA/WJE System for Fermentation Monitoring&quot; Yu-Liang Huang, National University of Singapore, 1994</td>
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<td>Yang, S.T., Member of Board of Directors, The Ohio Chinese Academic and Professional Association, 1992-1994</td>
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<td>Zakin, J.L., ABET/AIChE Chemical Engineering Accreditation Visiting Panel</td>
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<td>Zakin, J.L., Editorial Board, Chemical Engineering Research Compendium</td>
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<td>Zakin, J.L., American Chemical Society, Petroleum Chemistry Award Cauvassing Committee Professional Engineer</td>
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<td>E. Honors</td>
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<tr>
<td>Brodkey, R.S., W.W. Clyde Chair of Engineering, Univ. of Utah, 1994</td>
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<td>Brodkey, R.S., North American Mixing Forum Award for Outstanding Research, Division of AICHE, 1994</td>
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<tr>
<td>Brodkey, R.S., Annual AICHE meeting San Francisco, two sessions held in his honor for his 65th birthday, 1994</td>
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<td>Davis, J.F., Elected to CACHE (Computer Aids in Chemical Engineering) Executive Committee, July 1994, CACHE is a non profit corporation comprised of 21 academic and 7 industrial trustees from the US and Canada commissioned to advanced computing technologies in academia and industry</td>
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<td>Fan, L.S., 1994 Thomas Baron Award in Fluid-Particle System from Particle Technology Forum of the American Institute of Chemical Engineers.</td>
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<td>Fan, L.S., 1994 American Institute of Chemical Engineers' Fluid-Particle Systems Plenary Lectureship Award.</td>
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<td>Fan, L.S., The Krameris Fysisch Technologisch Lectureship of Delf University of Technology on the occasion of its 45th anniversary (ninth recipient award made once every five years).</td>
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<td>Fan, L.S., 1994 Institution Eminent Speaker Award from the Institution of Engineers, Australia.</td>
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<td>Lee, L.J., outstanding Session Organizer Award, AIChE Summer Meeting, Seattle, 1994</td>
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<tr>
<td>Ozkan, U.S., W.M. Keck Foundation Engineering Teaching Excellence Award (National Award) 1994</td>
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<td>Zakin, J.L., Outstanding Educator of the Year Award from Ohio Society of Professional Engineers</td>
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<td>Zakin, J.L., Visiting Professor of Chemical Engineering at Technion - Israel Institute of Technology</td>
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Theses

PhD. Theses

Y. Chiu, B.S. (National Taiwan University); M.S. (Kansas State University); Experimental and Theoretical Analysis of Free Radical Crosslinking Polymerizations.

A. Garcia-Briones, B.S. (Ingeniero Autonomous Univ. of San Luis potosi); M.S. (The Ohio State University); Studies on the Characterization of the hydrodynamic Environment in Sparged Animal Cell Cultures.

S. Muzumdar, B.S. (Maharaja Sayajirao University); M.S. (Ohio State University); Rheological, Kinetic, and Volumetric Characterization of Unsaturated Polyester Resins.

N. Patel, B.S. (University of Bombay); M.S. (Ohio State University); Micro Scale Flow Behavior, Fiber Wetting and Void Formation in Liquid Composite Molding.

K. Sravana, B.S, M.S. (Indian Institute of Technology); Diagnostic Knowledge-Based Systems for Batch Chemical Processes: Hypothesis Queuing and Evaluation.

C. Tritt, B.S. (Ohio State University); M.S. (Ohio State University); An Investigation of Thermal Swing Adsorption Process for the Regeneration of Renal Dialysate.

J. Yen, B.S. (National Taiwan University); M.S. (National Tsing Hua University); Denaturation and Aggregation of Beta-Galactosidase During Cross-Flow Ultrafiltration.

Master's Theses

J. Clay, B.S. (University of Toledo); Use of Polyetherurethane Coating to Improve the Biocompatibility of Vascular Stents.

D. Gardner, B.S. (Youngstown State University); The Oxidative Coupling of Methane Over Alkali and Palladium-Promoted Manganese Molybdate

T. Harris, B.S. (Ohio State University); The Partial Oxidation of C5 Hydrocarbons Over Unpromoted and Alkali Promoted V205.

W. Hovorsen, B.S.(Case Western); Machine Interpretation of Complex Data Shapes.

P. Kust, B.S. (Purdue); Synthesis of N,N-Dimethyldodecylamine N-Oxide Using Micellar Autocatalysis.

Saputra, B.S. (Ohio State University); The Numerical Characteristics and Simulation procedure for Coal Combustion Modeling.

F. Von Fahnestock, B.S. (California State Polytechnic University); Full-Scale Baseline Performance Evaluation of the Agro-Kinetics Composting System.

Jacque Gates and Mitch Kaminski, preparing permeability measurement experiments for composite materials.
## Current Academic Status and Capsule History

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*Estimated Spring '95
### Anniversary Classes

**1915**
- Harry Mitzenhandler
- Clarence J. Strobel

**1920**
- Clifford R. Athy
- Robert A. Fisher
- Philip M. Foote
- Marion W. Harman
- Clare S. Martin
- Lyle J. Michael
- Gordon D. Patterson
- James T. Robson

**1925**
- John L. Arms
- Edward J. Cannon
- Edwin B. Carr
- Howard G. Cooper
- Harold F. Cronenberger
- Parker S. Dunn
- Charles L. Fletcher
- Anthony George
- Harold L. Hamilton
- Harry W. Huang
- Dean D. Huffman
- Mary B. Junkin
- Walter A. Lower
- Cheili Ma
- Marion M. McAdams
- Glendon J. Miller
- Lee A. Parker
- John C. Pew
- Julius D. Stone
- William M. Tucker

**1935**
- Napoleon A. Agapets
- Lawrence A. Bedford
- Francis L. Benton
- George S. Bonn
- Charles B. Cochran
- Harry L. Conoway
- William J. Crohan
- William K. Cusick
- Harvey J. Drake
- Roger D. Dubbel
- William E. Earhart
- Russell J. Emmons
- Arthur H. Flower
- Allan I. Gordon
- Charles E. Graham
- Herbert F. Gray
- Elden D. Haller
- Richard E. Holmes
- Morgan Jones
- Warren E. Jones
- Delwin Kaufman
- Harold C. Klassen
- Norbert K. Koebel
- Wen-I Liao

**1940**
- Napoleon A. Agapets
- Clay H. Anshen
- Herman E. Austen
- Francis J. Avery
- Fred O. Barrett
- Charles H. Boardman III
- Heinz A. Boker
- John G. Braden
- Richard W. Buerke
- Jack P. Burch
- Jack R. Caddell
- Azro J. Cheney, Jr.
- Charles B. Cochran
- Frank M. Cooper
- Paul D. Cooper
- George E. Duckwall
- Winston H. Duckworth
- John A. Finch
- William A. Fisher
- Paul A. Fodor, Jr.
- David S. Gilmore
- Liren F. Grandey
- Elton B. Gunyou
- Elden D. Haller
- John K. Harvey
- Robert W. Hooper
- Paul B. Huffman
- Robert L. Huffman
- Henry J. Jacoby
- Ira J. Kail
- Gangadhar D. Kaner
- William R. Keller
- Clifford B. Kemp
- Don E. Kennedy
- Robert L. Lambert
- Robert M. Lawless
- Francis J. Malik
- James E. Massie

**1945**
- Robert S. Atkinson
- Felice J. Celli
- John V. Lawler
- Ralph G. Patterson
- Arch G. Robison
- Robert F. Snider
- Dunbar G. Terry
- Alexander E. Wallace
- Kennard L. Wing

**1950**
- Robert E. Albert
- Robert M. Allen
- James E. Anderson
- William K. Averitt
- Dean B. Barnes
- William J. Berk
- Harlan D. Bowerer
- John O. Bradfute
- Donat B. Brice
- Theodore B. Burkholder
- Darren E. Calvin
- *Emil H. Chao
- John Chocholak
- Halvor S. Christianson
- Walter E. Donham
- Robert E. Duval
- Donald G. Floyd
- Donald E. Garrett
- Walter T. George
- William G. Graves
- William W. Grimes
- John A. Gurkus
- Robert D. Haber
- David R. Hamilton III
- Thoms J. Hanratty
- Sharnadkumar C. Hansoti
- David W. Hardesty
- James R. Harrison
- Ellis L. Hawk, Jr.

**1955**
- John R. Hill
- Preston L. Hill
- Richard H. Immel
- Clyde H. Kearns, Jr.
- *Robert J. King
- *R. K. Kelley
- Harold E. Knowlton
- William L. Larcamp
- Robert W. Laurerle
- William C. Leavitt
- Wayne H. Lee
- Charles D. Lindberg
- Carl J. Lyons
- Ju Luana Ma
- Frederick A. MacDougall
- Sanatkumar S. Majumdar
- Raymond J. Mayfield, Jr.
- Hobart C. McGinnis
- John R. Milne
- Ralph I. Mitchell
- *Vipinchandra C. Nauvati
- Thomas D. Nevens
- Louis J. Nowacki
- Kashihaai Patel
- Jewel H. Perkins, Jr.
- Donald A. Plautz
- Joseph M. Quattlebaum, Jr.
- Ramwili J. Rathi
- Cherkupalli C. Reddi
- Harold F. Reza, Jr.
- Franklin A. Retzke
- Verne R. Rinehart
- R. Brown Ritter
- John D. Rogers, Jr.
- Earl C. Rosenberger
- Bernard Rubin
- Alvin M. Sabroff
- Leo F. Salzberg
- Jean M. Scharenberg
- Richard L. Scott
- Frank E. Sennett
- Berman J. Shafer
- Ralph E. Sieber
- Earl C. Sumner
- Julius Teres
- Robert E. Thompson
- James J. Ubelhart
- Joseph P. Verkamp
- Louis J. Weiss
- Paul L. Wells
- David W. Wilson
- Fredrick H. Winterkamp
- Alfred E. Withrow
- *Bernard T. Wolfson

* indicates deceased
Anniversary Classes

Jack W. Bodenheimer
Ronald F. Cook
Thomas C. Core
Charles J. Corso
Howard A. Cox
Richard A. Drewyer
James G. Ferguson, Jr.
Carl E. Fleming
Howard L. Foltz
Richard E. Grant
Margers Grins
Wendell B. Hammond, Jr.
John H. Hoge
Stanley P. Huchro
*William E. Kreiner
Fredrick K. Lane
Eugene R. Manson
David S. Nantz, Jr.
Glenn R. Schaer
Harry L. Scutt
William H. Seaton
Robert W. Seffass
Frank A. Simko, Jr.
Edward J. Snook
David G. Stephan
Sidney W. Street
Charles W. Thomas
Thomas J. Tibbits
Keith R. Weaver

1965
Creighton Anderson, Jr.
Fredric C. Arnold
Charles E. Baumann
Edward R. Corino
James M. Davidson
Oliver L. Davies
Vincent L. DePaola
Thomas W. Dobb, Jr.
Richard M. Dunlop
Ronald S. Evanko
Fredrick H. Fler, Jr.
Kandukuri S. Gandhi
John P. Geggner
Joseph M. Gemo
Douglas W. Hisong
Roy R. Huddleston
William J. Kems
Dae Sik Kim
*Hyung Wook Kim
Kiu Hee Lee
William E. Lewis
Thomas C. McKeelvey
Edwin K. Middleswart
Jerome Walter Mills
Arthur H. Morth
*Larry R. Perkins
Louie W. Perkins
Fredrick J. Rerkoff
Michael C. Royer
*Ronald J. Rundt
*Jagdish M. Sanghavi
Paul H. Schmitz
Fred A. Shaffstall
William A. Smith
David J. Stazenski, Sr.
Larry A. Stichweh
Gary L. Street

Richard M. Vaezie
John A. Weaver
Eugene N. Wheeler

1970
Paul C. Auh
Benjamin Choy-Moc
Lewis P. Clark IV
Paul E. Cooke
George E. Cressman, Jr.
James F. Dietz
Bradford F. Dunn
Raul E. Fajardo
*Gary W. Good
Terry S. Groh
David R. Grove
David C. Grulke
Carlos G. Gutmann
*Donald C. Haberkost
Abd E. Hafeez
Gary Q. Johnson
A. Jay Kaplan
Charles A. Klingensmith
David O. Kutscher
Herbert R. Landor, Jr.
*Amerigo L. Larez
Michael S. Lerch
Michael L. McMillan
Mukul M. Mehta
Michael L. Nevin
Walter R. Nixon II
Doyle R. Painter, Jr.
*Anurkumar C. Patel
Gautam A. Patel
John D. Rensel
Steven E. Russell
William P. Skinner
James N. Stambolis
Richard B. Strait
Fredrick A. Teeters
Rosa Uy
Danley B. Wolfe
Harry J. Yieh

1980
*Carlos E. Aguilera
*Ralph J. Antone
*Mohammad Bagheri
Lani L. Bell
Jeffrey R. Brown
*Ming-Ru Chen
Pong Ching Chung
Fredrick T. Clark
Peter S. Clark
Paul A. D'Ambra
Philip A. Dalton
Gary S. Datsko
Anthony A. Dattilo
Matthew K. Davis
Bruce R. DeBruin
John T. Dent
Michael P. Dranschak
Paul T. Dubetz
Carol B. Ehrman
Fred D. Ehrman
*Chris U. Ekeku
Edward G. Farah
Arlene S. Freeman
Matthew J. Galosi
Mark A. George
Bahman Ghorashi
William F. Hammersley
Walter A. Hansen
Craig A. Hesleton
Michael C. Hu
*Jeffrey P. Hullinger
Shyh-Jye Hwang
Anniversary Classes

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*No current information available. If you know their address, please send it to us.*
Anniversary Class Pictures

Class of 1934
Clarence N. Fisher and Edward Slowter

Class of 1939
Willis E. Jackson

Class of 1944
William R. Harris, Marshall C. Kidd,
Edwin E. Smith, Wallace L. Bostwick,
and David N. Clark

Class of 1949
George R. Lewis, Kurt M. Dubowski,
and John B. Martin
Anniversary Class Pictures

Class of 1954
Richard Dudley

Class of 1959
James O. Albery

Class of 1969
Robert D. Litt, John W. Toussant, and Smith E. Howland

Class of 1974
Kenneth R. Cox and Thomas B. Hackett

Class of 1979
John F. Krein
## Chemical Engineering Alumni Information

### Alumni News

### PERSONAL

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<table>
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<th>Children</th>
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### COLLEGE

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<th>Major</th>
<th>Month/YR.</th>
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### PROFESSIONAL

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<table>
<thead>
<tr>
<th>Most Recent Employer</th>
<th>Department</th>
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<tbody>
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</table>

### ACTIVITIES

News and information to share with fellow alumni and friends in Chemical Engineering. Work related, outside activities, achievements, honors, family news, etc.

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Please fold and staple/tape this page so the address on opposite side is centered. No postage is necessary, postage will be paid by Chemical Engineering.