CHEMICAL ENGINEERING

Twenty-third Annual Report
To The Chemical Engineering Alumni

Professor Joseph H. Kroll

Professor Webster B. Kay

The Ohio State University

Associate Professor Laidron D. Sheets
Pictured on the opposite page are the staff and most of the members of the graduating class of 1971.

First Row (left to right)
Klingensmith, C.A.
Cooke, P.E.
Sullivan, J.E. (Secy.)
Clark, L.P.
Syverson, A. (Chairman)
Frazier, B.M. (Dept. Secy.)
Koffolt, J.H. (Prof.)
Skinner, W.P.
Kutscher, D.O.
Cressman, G.E.
Joublan, C.S.
Bole, N.L. (Secy.)

Second Row (left to right)
Sweeney, T.L. (Prof.)
Lynn, R.E. (Prof.)
Haberkost, D.C.
Rensel, J.D.
Wolfe, D.B.
Nixon, W.R.
Lerch, M.S.

Third Row (left to right)
Patel, A.
Rominger, M.C.
Morth, A.H.
Strait, R.B.
Svanks, K. (Prof.)
Reindl, J.C.
Nevin, M.L.

Fourth Row (left to right)
Guzman, J.A.
Hafeez, A.E.
Johnson, G.Q.
Pak, S.C.
Grove, D.R.
Stambolis, J.N.

Fifth Row (left to right)
Smith, E.E. (Prof.)
Tanner, J.B. (Asst. to Chrmn.)
Geankoplis, C.J. (Prof.)
Groh, T.S.
Teeters, F.A.
Good, G.W.
Fontaine, W.R.

Sixth Row (left to right)
Freh, E.J. (Prof.)
Jachimiak, P.D.
Stolk, R.D.
Lieberman, C.R.
Koenig, D.M.
Schlaechter, J.I.
Haering, E.R. (Prof.)
Kay, W.B. (Prof.)
Heibel, J.T. (Prof.)
GREETINGS FROM ALL OF US ON THE STAFF

This past year has been a rather turbulent one for our University. We were off to a grand start with the Centennial Year celebration. Then came the disruptions in the spring, recuperation in the summer, football and the Rose Bowl in the autumn, and recently basketball and the NCAA contest in the winter. A year that all of us on the Staff will long remember.

This year marks the retirement of three members of our faculty, Joe Koffolt, Web Kay and Waldron Sheets. This 23rd Annual Report is dedicated to them for their devoted and distinguished service to our Department, our University and our profession.

Joe Koffolt, who started his career with Ohio State University in 1920 as a student, is one of the most widely known and loved chemical engineering educators in the nation. Students and alumni throughout the years have benefited from his warm and sincere interest. Giving unselfishly of himself as Department Chairman from 1948 to 1968, he made many important contributions. His efforts were a dominant factor in getting a new building and excellent facilities. His leadership and teaching have been an inspiration to all of us. My personal association with Joe for the past two decades have been very close and I shall always be grateful for having had this friendly and rewarding experience. A fine tribute was given Joe recently in an article published in the January 17, 1971 issue of the Columbus Dispatch. I thought this would be of interest to many of you so I am including it later in the report.

Web Kay joined our faculty in 1947 after having received a Bachelor's degree from Ohio State University in 1922 and a Ph.D. degree from the University of Chicago in 1926, and twenty years' active research with the Standard Oil Company at Whiting, Indiana. Web has gained an international reputation for his PVT research on mixtures. In my twenty years at this institution, I have yet to find one of his graduate students who did not consider it an honor and a privilege to work with Web. He has been a first-rate researcher, generous with kindness and help for students.

Waldron Sheets received an M.S. degree from our Department in 1932. After being away for 15 years serving as a sanitary engineer with industry, City of Columbus, and the U.S. Army, he joined our Engineering Experiment Station staff in the field of waste treatment. A highly popular subject today, Waldron recognized this 38 years ago and has been an active contributor ever since.
For more than twenty years many graduate students have done Master's theses under his able direction. In 1969 a laboratory at our Water Resources Center was named in his honor.

All three of these men have devoted a large portion of their professional lives to chemical engineering education. We on the staff are honored to have had the privilege of being associated with them. Retirement does not mean that this association is terminated. Our doors remain wide open and it is our sincere hope that Joe, Web and Waldron will continue to be with us at their pleasure and without obligations.

Concerning academic affairs of the Department, the transition from the five year to the four year program is now well underway. This has not been without some extra effort, however, inasmuch as many faculty have carried double sections. Furthermore, the present sophomore class is almost twice the size we have had during the past 15 years.

We are nearing completion of the first phase of our Computer-Aided-Instruction program with the installation of the PDP-15 control computer system - thanks to Drs. Freeh and Heibel and Mike Kukla. This system is now operating two and three shifts per day and is now serving seven research projects in the Department for on-line data acquisition in addition to several teaching functions.

The polymer engineering program under Drs. Lynn, Brodkey and Freeh is going very well. The plasticating extruder has been in operation for some time; the first Ph.D. student, Dean Reber, should complete his requirements this summer. We are most grateful to ALCOA for their continued support of a professorship in the department. (Dr. Lynn is the ALCOA Professor.)

Dr. Brodkey was honored when he received the Best Paper Award presented to him by The Canadian Society of Chemical Engineers at their annual meeting in Sarnia, Ontario, on October 20, 1970. He is on leave this Spring quarter and will present papers and lectures as well as attend conferences and research seminars in England, West Germany, Prague, Rome, The Netherlands, and Israel. He will return for the Autumn quarter, 1971. Dr. Freeh was honored when he received the Best Paper Award presented to him at the annual meeting of The Society of Mining Engineers, on February 1970 at Denver, Colorado.

Dr. Geankoplis is now completing a textbook "Mass Transport Phenomena" which will be available this summer or autumn. This book is written to be useful for mass transfer studies for all branches of engineering. Dr. Haering assumed
the responsibilities for the Unit Operations course last quarter and will have his hands full with 65 students in the summer Unit Operations Laboratory.

Dr. Heibel is working closely with other departments in connection with environmental simulation problems and has given extraordinary assistance in teaching our beginning Ch.E. courses. Dr. Hershey assumed responsibility for our second sophomore course with a double enrollment and did his usual excellent job. Professor Slider has offered a fine short course in reservoir engineering and continues his research and teaching in the Petroleum Engineering option.

Dr. Smith and Dr. Svanks are becoming more deeply involved in water pollution research. It is our plan to develop a program in Bio-chemical Engineering along rather basic concepts which are pertinent to environmental problems as well as industrial processes. Dr. Sweeney has been increasingly involved in air pollution work, having participated in teaching a large interdisciplinary course in Environmental Pollution Abatement. He is also teaching a new course in air pollution for students who are not scientists or engineers. Jim Tanner's help has been invaluable; his assistance during this 5 to 4 year transition has made the change possible without serious curtailment of other programs.

Again this year one of our students ranked high in the AIChE Student Contest Problem. Dan Wolfe's solution was among the top five in the nation. For this he participated in the student program at the AIChE annual meeting in Chicago, Illinois, in December. We had a fine alumni luncheon at the AIChE meeting in Chicago - thanks to Don Schroeter for making such splendid arrangements.

It is gratifying to learn about our alumni when they have made outstanding contributions to society as well as to their profession, and when they are recognized for their important work. At the Autumn quarter commencement ceremonies, Harry B. Warner, Cyril Porthouse, and Ed Slowter were presented Centennial Achievement Awards.

We cordially invite all of you to attend our ACE Day Program on Friday, May 21, 1971. The anniversary classes of 1911, 1916, 1921, 1926, 1931, 1936, 1941, 1946, 1951, 1956, 1961, and 1966 will be honored. We look forward to having you with us on this occasion.

Please help us keep our alumni records up-to-date. If you have a new position or a new address, kindly send us this information on the enclosed card.

Best wishes for the coming year.

Sincerely,
Dear Jewels,


I am retiring at the end of the Spring quarter, effective June 30, 1971 and if recommendations are approved my title will be "Professor Emeritus - Chemical Engineering." I have had a staff position at Ohio State for forty-three years. When I received my Ph.D. degree in 1931, Dr. Withrow asked me to stay on as a permanent member of the staff. I told him that I would do it for one year only and then I would go back to my old job at the Skandaean Rayon Company, Utica, New York, where I was granted a leave of absence. I got too interested in my work at Ohio State, above all, the students in chemical engineering and our alumni. As a result my leave was cancelled five years later and the one year finally became forty-three years.

I look back on my forty-three years in the Chemical Engineering Department with nostalgia - they were good. We have one of the strongest groups of alumni who have done so much for the department. Although I have put in many hours of work, the dividends have been great - through our alumni and their continuous interest and support. (I think back to many alumni meetings in many cities of our country such as Charleston, W. Va., Los Angeles, Chicago, Illinois, Rochester, N.Y., New York City, Philadelphia, etc., etc.)

As chairman, Dr. Syverson is doing an outstanding job. The staff is doing commendable work in polymer engineering, computers and problems associated with pollution and the environment. Fine work is also being done in transport phenomena, thermodynamics, kinetics and chemical engineering operations. In my book and also in many others, Dr. Syverson's regime is SECOND TO NONE.

I am sorry that I have not been able to answer all my Christmas cards - I do not have the stamina to write to most of you - I appreciate yours very much.

As most of you probably know, I completed a "History of the Chemical Engineering Department." Seven copies were made. This was in connection with the Centennial celebration of the founding of the University. This history contained over 100 pages. I do want to prepare a more comprehensive one but will need the help of each one of you, so please send the enclosed card to us. Be sure to give your title and company. If you are retired, give information on your last position.

With best wishes to all of you and above all a good life.

Most cordially,
FRIDAY, MAY 21, 1971
THE EIGHTEENTH ANNUAL CONFERENCE FOR ENGINEERS
and
THE FORTY-SECOND ANNUAL HOMECOMING OF THE DEPARTMENT OF CHEMICAL ENGINEERING

MORNING SESSION

8:00 - 11:00 REGISTRATION - Hitchcock Hall

8:30  TECHNICAL TOURS - Visits to exhibits sponsored by various departments of The College

10:00 MORNING SESSION - Hitchcock Hall Auditorium

Dean Robert S. Green

11:30 FELLOWSHIP HOUR - Ohio Union West Ballroom. (Look for your class year banner)

12:30 LUNCHEON SESSION - The Ohio Union Ballroom. Presiding: Marion L. Smith, Associate Dean, College of Engineering
Recognition of Engineering Honor Students
Presentation of Distinguished Alumnus Awards, The Lamme Award and Texnikoi Award.

DEPARTMENT SESSION

DEPARTMENT OF CHEMICAL ENGINEERING, CHEMICAL ENGINEERING BUILDING

2:30 Welcome to Alumni and Guests - Aldrich Syverson, Chairman
Introduction of Anniversary Classes - Joseph H. Koffolt

Introducing the Golden Anniversary Class of 1921

LIVING

Edwin Hayes Adkins
Thomas Patrick Annan
Harold William Baque
Calvin Adam Buehler
Chester Harold Case
Homer B. Cupples
Bernard Francis Flood
Fred Andrew Ford
George Osborne Foster
Clarence John Hassler
Harold Shane Holloway

William Samuel Jones
Henry K Linzell
Jerome Reinhardt Mueller
Charles Ferdinand Rudmann
Henry John Schulte
Kao Shen
Cecil O. Telechert
John Waldron, Jr.
Donald Miller Worley
George John Wrasmann
Samuel Shenker (M.Sc.)

DECEASED

Herman Jesse Bankston
Donald Bene Brooks
Creamus K. Evans
William Keith Gilkey
William Green
Rand Pritch Hollenback
William Aaron Lotze

Daniel I. Mayne
Harold Theodore Reiner-Ruff
Walter F. Spear
Lawrence E. Stout
Albert H. Vilbrandt
John Edward Wiss
3:15 Instruction and Research in Air and Water Pollution - Drs. J.T. Heibel, E.E. Smith and T.L. Sweeney

4:00 Informal Seminars
Problems of Fluid Dynamics in Chemical Engineering, Mixing, Turbulence and Kinetics, Rheology, Two-Phase Flow, Biomedical Area, Archeological Detection - Gerald Bullano (graduate student)
Mathematical Modeling, Process Dynamics and Control - Dr. E.J. Freeh
Mass Transport Phenomena of Liquids and Gases in Heterogeneous Media - Dr. C.J. Geankoplis
Kinetics, Catalysis, Adsorption and Reactor Design - Dr. E.R. Haering
Environmental Modeling, Real-Time Computer Usage - Dr. J.T. Heibel
Drag Reduction - Dr. H.C. Hershey
Critical Properties of Liquids - Dr. W.B. Kay
Polymer Research and Instruction Program - Dr. R.E. Lynn
Water Supply and Water Pollution Control-Professor W.D. Sheets
Student Demonstrations of Petroleum Reservoir Core Analysis; Porosity, Permeability, Oil and Water Saturation and Capillary Pressure of Pore Size Distribution - Professor R.C. Slater
Water Research Petroleum Refining Research, Reaction Mechanism Studies, Development of Analytical Methods and Nuclear Chemical Engineering - Drs. E.E. Smith and Karlis Sveiks
Air Pollution and Heat Transfer - Dr. T.L. Sweeney
Adsorption Kinetics and Heterogeneous Catalysis - Dr. Aldrich Syverson

4:30 Social Hour - Unit Operations Laboratory, Room 117

6:00 Anniversary Class Reunions
THE OHIO STATE UNIVERSITY
DEPARTMENT OF CHEMICAL ENGINEERING
1970-1971 List of Staff Members, Fellows, Scholars
Research Assistants and Associates

Professors
Aldrich Syverson, Chairman
Robert S. Brodkey
Edward J. Freh
Christie J. Geankoplis
Webster B. Kay
Joseph H. Koffolt
Edwin E. Smith

Associate Professors
Harry C. Hershey
Waldron D. Sheets
H. C. Slider (Pet. Engr.)
Thomas L. Sweeney

Alcoa Professorship
R. Emerson Lynn, jr.

Adjunct Associate Professors
Robert L. Bates
John S. Eckert
John B. Martin

Assistant Professors
Edwin R. Haering
John T. Heibel
Karlis Svanks

Adjunct Assistant Professor
Alexis W. Lemmon

Teaching Associates
John H. Becher (W, S)
Charles N. Carpenter
Jorge A. Guzman
Paul D. Jachimiak (A, W)

Teaching Assistants
Wayne R. Fontaine
Robert E. Rosensteel

Assistant to the Chairman
James B. Tanner

Secretary
Betty M. Frazier

Stenographers
Nancy L. Bole
Jane E. Sullivan

Specialist
Michael B. Kukla

Mechanic
Keldon H. Latham

Fellowships
1. American Oil Foundation Fellow
   David Koenig
2. Diamond Shamrock Fellow
   Michael C. Rominger (Su)
3. Dow Chemical Company Fellow
   Joseph L. Taraba
4. Eastman Kodak Company Fellow
   Danley B. Wolfe
5. E.I. duPont de Nemours & Co. Fellow
   Edward C. Hauswald
   Richard D. Stolk (Su)
6. B.F. Goodrich Company Fellow
   Paul W. Springer
7. Lubrizol Foundation Fellow
   Gerald A. Bullano
8. National Science Foundation Fellows
   John H. Becher
   Paul D. Jachimiak
   Michael W. Kosakowski
   David P. Turtle
9. Procter & Gamble Company Fellow
   Martin R. Okos
10. Louis A. & Lucille Roberts Memorial Fellow
    Mazen Y. Anastas
11. Shell Companies Foundation Fellow
    Peter N. Bartram
12. Union Carbide Corporation Fellow
    John C. Reindl
13. University Dissertation Fellow
    Dean H. Reber
Scholarships

1. Atlantic Richfield Scholars
   Eddie S.K. Kwan (W,S)
   Marvin E. Schmehl (W,S)
2. Chemical Industry Council of Ohio Scholar
   Thomas E. Claugus
3. Goodyear Foundation, Inc. Scholar
   John R. Raabe
4. Marathon Oil Scholar
   Thomas J. Jere (A)
5. Monsanto Company Scholars
   Michael A. Curran
   Charles S. Joublanc (A,W)
6. Rohm & Haas Company Scholars
   Karen L. Lafferty
   Robert L. Mills
7. Shell Oil Company Scholar
   William E. Pritchard (A)
8. Standard Oil Co. of Calif. Scholar
   Eric A. Grulke
9. Union Camp Corporation Scholar
   David R. Boodey
10. Union Oil Company of Calif. Scholar
    Richard S. Baker (A)
11. Universal Oil Products Co. Scholars
    Thomas P. Cribbs, III
    Ronald B. Ransom
    Jeffrey L. Kosch
12. Dr. Jas. R. Withrow Memorial Scholar
    Paul R. Swartz

Research Associates

Engineering Experiment Station
   Paul L. Smith (A)
Research Foundation
   Sung C. Pak (S)

Graduate Research Associates

Engineering Experiment Station
   Arthur H. Morth
Research Foundation
   Raul E. Pajardo
   Jeffrey T. Kuo
   Stavros G. Nychas
   Sung C. Pak (A,W)
   Ronald R. Remick

Graduate Research Assistants

Engineering Experiment Station
   Kurtis Y. Chow (S)
   Darryl R. Conner (W,S)
   David R. Grove (A)
   Charles S. Joublanc (S)
   Yoon S. Song (S)

Research Foundation

Jon A. Branson
Anthony H.K. Chen (A,W)
Sam H. Cho
Raymond Mok (A,W)
James N. Stambolis (A,W)

Graduate School

Carl R. Lieberman (A)
Richard D. Stolk (A,W)

Water Resources Center Trainees

Michael S. Lerch
Phillip J. Meves
David R. Miller
Charles L. Steel
The following article on Joe appeared in the magazine section of the Columbus Dispatch newspaper on January 17, 1971. (Photo by Ralph Dicks)

There are a million different things which can go to make a man a legend in his own lifetime, but one thing is pretty well essential—some symbol which automatically identifies the person.

Imagine a bareheaded Davy Crockett . . . a pipe-smoking F.D.R. . . . Buster Keaton smiling . . . Einstein with a crewcut.

University campuses have always had legends about professors—absent-minded or not—but almost always the legends are left behind when students graduate, a legacy from the graduates to the freshmen. If professors are remembered again after graduation it is at class reunions when alumni suddenly realize they have nothing much else in common any more with old college friends.

But a few of these campus legends make it to the outside world and help bind men and women together as they helped bind them when they were students.

One of these is Joseph Howard Koffolt, born in Cleveland in 1902. For thousands of men and women, Joe’s symbol is a cigar. It is one of the more persistent legends at Ohio State University in Columbus that nobody has ever seen Joe Koffolt without a cigar—including Mrs. Koffolt.

It’s not true, but like many legends, it has some basis in fact. The fact is that Joe is seldom without a cigar between his teeth or in his hand or resting in a nearby ashtray. Often as not, the cigar is half-smoked, dead. He relights it from time to time but it always seems to go out.
The cigar is a bit like Winston Churchill's trademark. Towards the end of his life Churchill was limited to smoking two cigars a day by his doctors. But he always managed to have one around whenever a camera was pointed in his direction.

The legend about Joe Koffolt is so strong that a story in a campus magazine some time ago included: "No one, it seems, owns a picture of Koffolt without a cigar. . . ." On the same page were two photographs of Joe without a cigar in sight.

The legend has inspired, among other things, a cartoon by a former student showing graduates rushing headlong from Joe's Chemical Engineering Department classroom and titled "Reluctant Departure." All the grads are smoking cigars. A dog running among them and a bird overhead are smoking cigars. There is even a cigar smoking a cigar. The classroom from which they are escaping looks very much like a cigar box with Joe holding the lid open, but it is labeled "Joe Koffolt's Jewel Box." And that's another story altogether.

Joe Koffolt attracts stories the way a magnet attracts iron filings. Most professors on any campus have foibles and mannerisms which their students recognize, but Joe has more than his share.

He tends to shout into telephones, and people who phone him more than once learn to hold the receiver a few inches away from their ears. In his lectures he always uses the phrases "I remember way back when. . . ." and "Design criterion: Simplicity of operation so that even a monkey. . . ." He's always moving—gesturing with his cigar, jumping up from behind his desk to dig out a graduate's folder, to show a memento from a former student, pointing to some of the photographs which almost entirely line the walls of his office.

"There's Bob Bates, president of Chemineer. He founded his company in 1952 with two employees. Now there are over 200 and he's still expanding. And Harry Warner, president of B. F. Goodrich. . . ." Parker Dunn, he was in my first graduating class, president of American Potash and group vice president of Kerr-McGee. Dale Baker there is head of Chemical Abstracts, and Herb Barneby is president of Barneby-Cheney, the activated carbon manufacturer.

"Cy Porterhouse is president of Dunhill. He's contributed so much to the department! He once raised $2,000,000 in two days. That's Herb Fenburr, chief engineer of the Hanna Paint Company. He's made many substantial contributions to the department."

The photographs all are of graduates from Joe's department—Chemical Engineering—and they are a major clue to what makes him tick.

He's people-oriented.

"I decided when I started to teach that I owed an obligation to the children of the state. I was going to know everybody I taught and not forget them. Students are the most important thing in teaching—their education is only secondary. Really, my hobby is people like them. Every person is different and they're all good."

It's corny in print or when anyone else says it, but when Joe Koffolt says it, he means it and you believe him. His students over the years have recognized this and responded to his warmth.

Probably there will never be another professor like Joe Koffolt at Ohio State or any other university. He's a product of his time, a time when people really believed in the essential goodness of mankind, a time when it wasn't unfashionable to say it out loud.

Joe Koffolt was born in Cleveland in 1902, the same year that Ohio State began its Department of Chemical Engineering. He lived on the city's West Side. His father, an Austrian immigrant, worked for the old Winton Motor Car Company. Joe attended Cathedral Latin High School where he had to memorize pages of Shakespeare and where he learned Latin and Greek.

At 14 he went to work for Union Carbide, Carbon Products Division, in Cleveland, shaping carbon brushes for electric motors. About this time he began smoking cigars. "I did it to look big since I was making big money—$12 a week," he explains.

By 1924 he had graduated from Ohio State, still smoking cigars but not much bigger, physically. His first job paid 43 cents an hour, with a possibility of advancement to 45 cents an hour. Three months later he was promoted to assistant department head at $180 a month.

Four years later, in 1928, he won a fellowship from Ohio State and his employer gave him a five-year leave-of-absence to do research. He earned his M.Sc. in 1929, stayed on as an assistant in the Department of Chemical Engineering, and earned his doctor of philosophy degree in chemical engineering in 1931. He has never left the department, and served as chairman from 1948 until 1968. His employer eventually revoked his leave-of-absence.

Joe Koffolt's high school education has stayed with him through the years. He still quotes from the classics from memory of his days at Cathedral Latin High School. He uses Greek as a private shorthand to jot down notes. His Latin, a little rusty, inspired the "Jewel Box" of the cartoon. Joe's "jewels" are the graduates of the Department of Chemical Engineering. The "jewel box" is the department's building.

Searching for some term to describe the graduates when he became chairman of the department in 1948, Joe remembered the Latin book he used in high school—Latin for Beginners by Benjamin L. D'Boe, Ph.D. He dug it out—Joe throws very little away—and found what he half remembered, the story of Cornelia and her jewels, a little exercise in translation.

Here, as he translated it in 1948, is the exercise: "Next to the home of Cornelia was a beautiful palace of Campania. Campania was not only proud and vain, but beautiful herself. She was always decked with many jewels. She was always bragging and showing off. 'Have you any jewels, Cornelia?' she asked. 'Where are your jewels?' Then Cornelia called her sons, Tibirius and Gaius, and said: 'My boys are the jewels. In fact, good boys are always jewels with the greatest sparkle and brilliance that any good woman can have.'"

He published his translation in the 1966 annual report to alumni but he made the mistake of including a copy of the original Latin text. Several of his jewels wrote back, pointing out errors in the translation.

The textbook included a steel engraving of the scene with Cornelia and her two sons looking at Campana displaying her jewels. Somehow, the engraving was copied and printed on the cover of the alumni report. But in place of Cornelia's Roman features, some-
JOE continued

one substituted Joe Koffolt's head, a bulbous nose and moustache, and, of course, a cigar in the mouth.

When Joe Koffolt became department chairman he began writing an annual report and sending it to all alumni. He still does it. In addition, he writes about 50 personal letters a month to alumni. At Christmas he mails more than 700 cards. He used to write personal notes on each one but... "I can't do that anymore," he sighs.

This extension of the close personal relationship he establishes with his students, helps explain why the department has probably the most loyal and active alumni group in the country.

The sun never sets on Joe's jewels—they're spread throughout most of the countries of the world—but wherever they are, they get the annual report. ('I can go anywhere and call an alumni meeting.' Joe boasts.) And even if the report or letters miss them, the alumni don't forget Joe Koffolt and his jewel box.

"Our support from industry is amazing," Joe says happily, naming donations of money, laboratory equipment, even a computer. Laboratory fees in the department are unchanged from what they were in 1924, mainly because industrial firms donate all the chemicals used in experiments.

Since 1958 he has gained for the department more than $300,000 in contributions. Joe and his jewels are credited with providing Ohio State with the modern building which houses the department and its laboratories—the jewel box, itself.

At the dedication of the building in May, 1960, some 450 of Joe's jewels gave him a prolonged, standing ovation before he could even take the cigar out of his mouth. His friendship with former students is so strong it has inspired the legend that they ask his permission before having children.

And, earlier this year, students voted him one of three outstanding teachers in the College of Engineering.

In his office at the front of the Chemical Engineering Building is a display case about evenly divided between mineral specimens—his other hobby—and mementoes from graduates. Along with man-made diamonds and rubies, crystals and other mineral specimens, are souvenirs like a Turkish hookah, a hand-painted plate from Iraq depicting a belly dancer in full flight, an ivory Buddha and a cigar mounted on a polished wood plaque. Also among the mementoes is a rosewood carving of the Chinese goddess of mercy.

Merciful or not, Koffolt ranks high both as a professional man and as a teacher. Under his leadership, the department became one of the best in the country and the professional status of the alumni is high.

Among the photographs on the walls of his office is a framed certificate titled "AlChE's Jewel." It reads: "In grateful appreciation for his lifelong devotion to Chemical Engineering, for his skill and patience as a leader and teacher, for his exemplary adherence to the highest ideals of a professional calling, the Council of the American Institute of Chemical Engineers offers this Testimonial to the indebtedness of the profession to a great Chemical Engineer." It is signed by all the members of the council.

"I'm slowing down," Joe tells his friends, and maybe he is after 40 years of teaching, but it's hard to imagine how he could be more active than he is today. At 68 he has two more years to go—"I'll retire at 70, God willing"—and he is filling the time with teaching, keeping in touch with his jewels and writing the history of the department.

And, when he does retire, he hopes to continue looking after his jewels—which is close to a full-time job by any standards. But if it doesn't keep him fully occupied, he'll find something else to keep him productive and busy.

Because it's as hard to imagine Joe Koffolt pottering around a rose garden or joining a club for old people as... as it is to imagine him without a cigar!

(The End)
The following article on Web Kay appeared in the July 1964 issue of News in Engineering Magazine published by the College of Engineering, The Ohio State University.

Dr. Webster B. Kay

T EETERED back in a chair from a scatter of papers on his desk, chemical engineering Professor Webster B. (Webb) Kay looks the part of a bespectacled academician, born-and-bred. . . . . instead of an oilman-turned-professor credited internationally with developing the ground rules of modern petroleum cracking processes.

Born 63 years ago in Indiana and transplanted early to Lima, Ohio (the center of the Buckeye State’s then-booming oil industry) Kay was just a teenager working after school in his high school’s chemistry lab when three Standard Oil of Indiana chemists devised a successful way to crack crude oil into gasoline.

Standard Oil’s discovery touched off a 20-year courtroom battle over patents in America’s fledgling petroleum industry, and set Kay and a handful of other chemists on the track of a still-unanswered question—why is a liquid a liquid, a gas a gas, and a solid a solid?

Reaching for a kidney-shaped wooden model in a corner of his fourth-floor office in the Chemical Engineering Building, Kay restates the old phase relationship question that has been central to his 42-year industrial and university research career: “What we’re trying to find out and explain now is why a solid can become a liquid, or a liquid become a gas, and how they differ.”

Then, with the wry toughness of an oilman: “We (Kay and his doctoral students—not just Kay) don’t have the answer. If we did, we’d probably get a Nobel prize.”

Winning the prize, to Kay, is “just daydreaming. But someday someone will come along who can objectively see all the information that has been collected up to now and there will be a Nobel-type of breakthrough. And what a breakthrough—you’d be able to sit down at your desk and use a computer to design compounds for any purpose, instead of searching for a compound that most closely suits your need.”

Could Kay himself be the winner? Laughingly he answers, “We might have an accident.”

T HIS summer, Kay and his five doctoral students are busily working toward the “accident”—hopefully they will be able to predict the thermodynamic properties of hydrocarbon fractions in the next few months, adding tremendously to the petroleum industry’s fund of knowledge and another step toward knowing all the properties of compounds.

An Ohio State chemical engineering graduate (1922), “Webb” Kay went to work in nuclear-electron addition research at the University of Chicago under Prof. William Harkins, identifier of elements by the revolutionary atomic weight system and a pioneer in nuclear fission.

From the University of Chicago to Standard of Indiana in 1926 was a short—but big—step. The step took Webb Kay from contemplative research to contention in the oil industry over whether a patent claimant could prove in court he knew enough about “cracker” phase transformations in crude oil to have invented a new process.

S TANDARD of Indiana based its claims on laboratory data collected by Kay and others using Standard’s equipment. Their goal: establish the phase relationships of chemical systems at high

(Continued)
Facult Sketch

temperatures and pressures, then use that data as ammunition to back up Standard’s courtroom arguments that you have to know when phases change in the cracking process to produce gasoline and other petroleum products.

"The only difference in some of the equipment in those court fights was maybe a valve design or the placement of some minor piece of the apparatus. We showed that the difference really was in optimum temperatures and pressures," Kay says.

The courts usually yielded to this form of logic, he adds, but sometimes it took a lot of convincing. Like the construction of a special piece of equipment in Standard’s labs “to illustrate the critical point in cracking, so the judge could see what we meant by the term.”

For sharp-eyed innovators who approached cracking in a fashion something less than scientific, Standard also had a dose of medicine.

“In those days, if somebody was building a cracker, and he was trying to decide how many distilling trays to put in, for example, he would have one suggestion to put in 12, and somebody else would suggest 20. They’d split the difference at 16, and if it worked, that was the basis for a new design.”

THE patent wars waned in the 1930’s, Kay recalls, and he continued working at Standard’s Whiting, Ind., research lab as a consultant. His equipment design data brought international recognition within the petroleum industry but “I was sort of getting into a rut—there were so many more problems that I wanted to work on.”

The solution came in 1947, with his appointment in Ohio State’s department of chemical engineering.

Kay is not only credited with developing the international ground rules of modern cracking processes... he even got into developmental work on napalm during World War II. (A disastrous explosion of a tankful of the stuff cost the lives of several of his colleagues, including a close friend. The blast missed Kay because he was busy at the time on another project and couldn’t attend the test session).

Kay’s work at Ohio State has also branched out to the Rocket Lab, where he conducted thermodynamics research on the detonation mechanisms of gaseous hydrocarbon-oxygen systems, and on the effects of helium, argon, and carbon dioxide additives to detonated hydrogen-carbon mixtures.
WALDRON D. SHEETS

Located on the campus some distance from the Chemical Engineering Building, in the Water Resources Center, is the office of Associate Professor Waldron D. Sheets, Chemical Engineer. Though he is seldom seen around the Department, he has had a great deal of influence over many chemical engineering students who performed their research under his supervision.

Professor Sheets was born September 9, 1903 in Willow, West Virginia. Upon graduation from Marietta (Ohio) High School in 1922, he began his collegiate career at Marietta College. Transferring to The Ohio State University in 1926, he entered this Department and received his Bachelor of Chemical Engineering Degree in 1931 and his Master's degree in 1932.

Upon graduation, his first job was with the Division of Engineering and later, with the Division of Sewage Treatment, City of Columbus. In 1940, he began his association with a commercial firm in Columbus. In 1943 he entered the U.S. Army as a Sanitary Engineer, rising to the rank of Major prior to his separation. At this time, he rejoined the firm he had left to enter the Army.

His first reassociation with his Alma Mater came in 1947 when he became a Research Engineer with the Engineering Experiment Station. He worked part time there and part time as a Sanitary Engineer with the Ohio Department of Health. Finally in 1950, he was appointed as an Assistant Professor with the University. He has continued with the University and was promoted to Associate Professor in October, 1958.

Professor Sheets has been highly interested in waste water treatment during his career and once served as Chairman, Ohio Water Pollution Control Conference. Additionally, he has been an active member of several professional societies, including the American Chemical Society and the American Society for Engineering Education. For his work in the water pollution area, he has received several honors as follows:

The J.W. ELLMS AWARD-1956, presented by the Ohio Water Pollution Control Conference.
The ARTHUR SIDNEY BEDELL AWARD-1959, presented by the Water Pollution Control Federation.
The SERVICE AWARD-1960, presented by the Ohio Water Pollution Control Conference.
A laboratory in the OSU Water Resources Center was named the W.D. Sheets Sanitary Engineering Laboratory, 1969.

Since 1948 Professor Sheets has been actively engaged in consulting work with several commercial firms in Ohio and with Ohio communities in the field of waste water treatment and sewage treatment.

His work with Chemical Engineering graduate students has been very commendable and the Department will certainly miss this highly competent and experienced colleague.
ALUMNI AWARDS

Centennial Achievement Awards were presented to distinguished alumni of The Ohio State University during the Autumn, 1970 Commencement activities. Among them were three of our deserving alumni. The following descriptions were taken from the commencement program:

CYRIL R. PORTHOUSE, Kent, Ohio
President, Pyramid International, Inc.; Vice President Questor Corporation
B.Ch.E. 1932, M.Sc. 1933, The Ohio State University

Mr. Porthouse is an industrial innovator and civic leader whose engineering ingenuity and creative business abilities have made Pyramid-International, Inc., the largest producer of infant feeding equipment in the nation. A sizeable integrated complex of related industries has evolved through his efforts, and he serves as director of eleven such corporations. Mr. Porthouse is a trustee of Kent State University and president and trustee of the Porthouse Foundation. He served on President Eisenhower's Youth Fitness Committee and is a member of the local, state, and national Chambers of Commerce.

EDWARD E. SLOWTER, Columbus, Ohio
Vice President, Battelle Memorial Institute
B.Ch.E. 1934, M.Sc. 1935. The Ohio State University

A research administrator, civic leader, and engineering innovator, Mr. Slowter has been associated with Battelle Memorial Institute since 1934. He has played a key role in the success and growth of Battelle through his technical and organizational abilities, for which he has become known internationally. He contributed importantly to the Battelle management group that assisted the Republic of Korea in establishing and operating the Korea Institute of Technology. He has done creative research on the effects of controlled atmosphere on alloy and carbon steels when new heat treating methods were emerging, and he holds several patents. Mr. Slowter has willingly served his profession and his community as an active participant in professional and civic organizations.

HARRY B. WARNER, Akron, Ohio
President, B.F. Goodrich Company
B.Ch.E. 1938, M.Sc. 1939, Ch.E. 1947. The Ohio State University

Mr. Warner is a distinguished chemical engineer, businessman, and civic leader with concern for urban renewal, hospital administration, and engineering education. Through technical and managerial leadership, he played a major role in making the B.F. Goodrich Company the largest producer of poly (vinyl chloride) resin, nitrile, and synthetic rubber. Mr. Warner, who has been with Goodrich since 1939, contributed importantly to the development of synthetic natural rubber, a milestone in rubber technology. He helped advance an international program for expanding technology and marketing plastics and rubber for forty foreign companies in one hundred countries. In addition to his many corporate responsibilities, Mr. Warner has been active in professional and civic affairs.
CONTRIBUTIONS TO THE DEPARTMENT OF CHEMICAL ENGINEERING

We are grateful for the many generous contributions by alumni and industry to the Department. This assistance has provided the money for a vital part of our program. Scholarships and fellowships are essential if we are to assist our most worthy students and to compete for the most outstanding. Modern facilities for teaching and research have become increasingly important. Contributions by alumni and grants-in-aid, scholarships and fellowships support by industry are a significant factor in our program and we offer our heartfelt thanks for your concern and help.

FELLOWSHIPS
1. American Oil Foundation
2. Dow Chemical Company
3. Diamond Shamrock
4. Eastman Kodak Company
5. Esso Education Foundation
6. Arno C. Fieldner Research Fellowship in Chemical Engineering
7. Lubrizol Corporation
8. Procter & Gamble Company
9. National Science Foundation
10. Louis A. & Lucille Roberts Memorial Fellowship
11. Shell Companies Foundation
12. Union Carbide Corporation
13. Federal Water Pollution Control Administration

SCHOLARSHIPS
1. Atlantic Richfield Foundation
2. Chemical Industry Council of Ohio
3. Goodyear Foundation
4. Monsanto Company
5. Rohm and Haas
6. Shell Oil Company
7. Standard Oil of California
8. Union Camp Corporation
9. Union Oil Company of California
10. Universal Oil Products Company
11. Dr. James R. Withrow Memorial Scholarship

*GRANTS-IN-AID AND OTHER CONTRIBUTIONS*

1. ALCOA
2. Dow Corning Corporation
4. B.F. Goodrich Company
5. Industrial Nucleonics
6. P.P.G. Industries (matching gift)
7. Rohm & Haas Company
8. Texaco Incorporated

*Many grants-in-aid are used for fellowships and scholarships

SPECIAL FUNDS

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<thead>
<tr>
<th>Scholarship/Memorial Fund</th>
<th>Development Fund Project No.</th>
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<tr>
<td>Dr. James R. Withrow Memorial Scholarship</td>
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</tr>
<tr>
<td>&quot;Class of Champions&quot; Chemical Engineering Memorial Fund</td>
<td>2388</td>
</tr>
<tr>
<td>Department of Chemical Engineering Equipment Fund</td>
<td>5659</td>
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DEVELOPMENT FUND PROJECT NO.
The list of interviewing companies for (1970-71) school year is presented below:

1. Allied Chemical
2. Aluminum Company of America
3. American Cyanamid Company
4. Ashland Oil & Refining Company
5. Atlantic Richfield Company
6. Babcock & Wilcox
7. Borg Warner Corporation
8. Celanese Corporation
9. Chemineer
10. Corning Glass Works
11. Diamond Shamrock Corporation
12. Dow Chemical Company
13. Dow Corning Corporation
14. E.I. du Pont de Nemours & Company
15. Eastman Kodak Company
16. Eli Lilly & Company
17. Esso Research & Engineering
18. Ethyl Company
19. Ferro Chemical
20. Firestone Tire & Rubber
21. Ford Motor Company
22. General Cable
23. General Foods Corporation
24. General Tire & Rubber
25. Glidden Durkee
26. B. F. Goodrich Company
27. Goodyear Tire & Rubber Company
28. Gulf Oil
29. Harvey Alumina
30. Hercules, Inc.
31. IBM Corporation
32. Johns Manville Products Corp.
33. Johnson Wax
34. Libbey Owens Ford
35. Lubrizol Corporation
36. Arthur G. McKee
37. Mobil Oil
38. Mobil Research & Development
39. Monsanto Company
40. National Aeronautics and Space Administration
41. National Lead Company
42. National Steel
43. Occidental Oil
44. Olin Mathieson Chemical Corporation
45. Owens-Corning Fiberglas
46. Owens Illinois, Inc.
47. Pan American Petroleum Corp.
48. Parke-Davis & Company
49. Penn Central
50. Pennwalt Corp.-Harchem Division
51. Charles Pfizer & Company
52. Phillips Petroleum
53. PPG Industries
54. Procter & Gamble
55. Shell Companies
56. Sherwin-Williams Company
57. A. E. Staley Manufacturing Company
58. Standard Oil of California
59. Standard Oil Company (Indiana)
60. Standard Oil Company (Ohio)
61. Sun Oil Company
62. Tennessee Eastman
63. Texaco, Inc.
64. Union Camp Corporation
65. Union Carbide - Chemicals & Plastics
66. Union Carbide - Food Products
67. Union Carbide - Linde Division
68. Union Carbide - Nuclear Division
69. Union Carbide - Film Packaging Division
70. Uniroyal
71. Universal Oil Products
72. U.S. Army Material Command
73. Westvaco
74. Youngstown Sheet & Tube
THE OHIO STATE UNIVERSITY  
DEPARTMENT OF CHEMICAL ENGINEERING

**Salary Offers for 1970-1971**  
(This is a partial listing only, as offers are slow this year)

Underlined salary offer accepted

**Bachelor of Chemical Engineering (4 and 5 years)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Plant Trips</th>
<th>Salary Offers</th>
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</thead>
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</tr>
<tr>
<td>2.</td>
<td>3</td>
<td>Going into the Navy</td>
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<tr>
<td>*3.</td>
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<tr>
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<tr>
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<tr>
<td>*6.</td>
<td>2</td>
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<tr>
<td>7.</td>
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<td>980</td>
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<tr>
<td>8.</td>
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<td>700 summer</td>
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*4 year program

**Combined Bachelor of Chemical Engineering and Master of Science**

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<th>Salary Offers</th>
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<td>1040, 1050, 1035, 1150</td>
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<td>2.</td>
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<td>3.</td>
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<td>1150</td>
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<td>4.</td>
<td>2</td>
<td>Going on to school</td>
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<td>1050, 1065, 950, 1168</td>
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<td>1050</td>
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<td>9.</td>
<td>2</td>
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<td>10.</td>
<td>2</td>
<td>1025, 1070</td>
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<td>16.</td>
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<td>17.</td>
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<td>20.</td>
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**Master of Science**

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<td>3.</td>
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<tr>
<td>4.</td>
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</tr>
<tr>
<td>5.</td>
<td>3</td>
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**Went back to Venezuela**

**Went back to India**

**Doctor of Philosophy**

<table>
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<th>No.</th>
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<th>Salary Offers</th>
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<td>1425, 1508</td>
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<td>1450, 1415, 1400, 1440, 1400, 1400, 1500</td>
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<td>1425, 1425, 1375, 1416</td>
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<td>4.</td>
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</table>
PLACEMENT OF ENGINEERING GRADUATES: MARCH, 1970 - MARCH, 1971

BACHELOR OF CHEMICAL ENGINEERING

Doyle R. Painter
E. I. du Pont de Nemours, Parkersburg, West Virginia

March, 1970

Lewis P. Clark
Dow Chemical, Midland, Michigan

Paul E. Cooke
Atlantic Richfield, Philadelphia, Pennsylvania

George E. Cressman
E. I. du Pont de Nemours, Newark, Delaware

Gary W. Good
no position, N. Canton, Ohio

Terry S. Groh
E. I. du Pont de Nemours, LaPorte, Texas

Gary Q. Johnson
U.S. Navy, Bainbridge, Maryland

Jay A. Kaplan
pursuing Masters degree

Michael L. Nevin
Dow Corning, Midland, Michigan

John D. Rensel
Firestone International, Akron, Ohio

Richard B. Strait
Vistron Corporation, Lima, Ohio

Frederick A. Teeters
Mobil Oil Company, Ardmore, Oklahoma

August, 1970

David C. Grulke
pursuing Masters degree

Michael S. Lerch
pursuing Masters degree

Robert W. Nixon
pursuing Masters degree

William P. Skinner
Dow Corning, Midland, Michigan

Danley B. Wolfe
pursuing Masters degree

December, 1970

Bradford F. Dunn
pursuing Masters degree

David R. Grove
pursuing Masters degree

Donald C. Haberkost
pursuing Masters degree

Charles A. Klingensmith
pursuing Masters degree

David O. Kutscher
pursuing Masters degree

James N. Stambolis
pursuing Masters degree

March, 1971

Charles S. Joublanc
pursuing Masters degree

MASTER OF SCIENCE

Benjamin Choy Moc
Universidad Nacional De Ingeniera, Lima, Peru, South America

James F. Dietz
Vistron Corporation, Lima, Ohio

Raul E. Fajardo
pursuing Ph.D. degree

Carlos G. Guttman
Arthur G. McKee, Brazil

Mukul M. Mehta
pursuing Ph.D. degree in Biochemistry

Gautam A. Patel
pursuing Ph.D. degree

Rosa Uy

Chung Moo Auh
Mobil Oil Company, Dallas, Texas

Jay A. Kaplan
pursuing a Ph.D. degree

Herbert Richard Lander
Hercules, Wilmington, Delaware

Steven E. Russell

August, 1970

David C. Grulke
pursuing medical degree at Duke University, Durham, N.Carolina

21
December, 1970
Bradford F. Dunn
E. I. du Pont de Nemours, Newark, Delaware
David R. Grove
Harvey Alumina, Virgin Islands
Americo Larez
Returned to Venezuela
Walter R. Nixon
Dow Chemical, Midland, Michigan
Arunkumar Patel
Returned to India
Danley B. Wolfe
pursuing a Ph.D. degree

March, 1971
Anthony H.K. Chen
pursuing Ph.D. degree
Hyun Sam Cho
Union Carbide, Buffalo, New York
Donald C. Haberkost
Packard Electric, Warren, Ohio
Charles A. Klingensmith
Celanese Corporation, Rock Hill, South Carolina
David O. Kutscher
U.S. Army, Ft. Belvoir, Virginia
Michael S. Lerch
Standard Oil of California, San Francisco, California
James N. Stambolis
pursuing a Ph.D. degree
Joseph L. Taraba
pursuing a Ph.D. degree
David P. Turtle
Edward T. Whalen

DOCTOR OF PHILOSOPHY

March, 1970
Michael L. McMllan
General Motors Corporation, Warren, Michigan
Heh-nien Yieh
B. F. Goodrich, Avon Lake, Ohio

June, 1970
Abd El Hafeez
University of Khartoum, Khartoum, Sudan

August, 1970
No graduates

December, 1970
No graduates

March, 1971
Sung Chung Pak
Research Associate, Ohio State University, Columbus, Ohio
# College of Engineering Enrollment

**Autumn Quarter 1970**

(Ranking identified with students' progress toward degree)

<table>
<thead>
<tr>
<th>College</th>
<th>New UVC</th>
<th>1st Year ENG</th>
<th>UVC Other</th>
<th>2nd Year ENG</th>
<th>3rd Year</th>
<th>4th Year</th>
<th>5th Year Reg.</th>
<th>5th Year Comb. Prog.</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td>Aero. E.</td>
<td>92</td>
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<td>33</td>
<td>69</td>
<td>54</td>
<td>75</td>
<td>47</td>
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<td>Agr. E.</td>
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<td>2</td>
<td>22</td>
<td>9</td>
<td>15</td>
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<td>Cer. E.</td>
<td>9</td>
<td>0</td>
<td>4</td>
<td>10</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>52</td>
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<td>Chem. E.</td>
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<td>8</td>
<td>46</td>
<td>43</td>
<td>28</td>
<td>11</td>
<td>26</td>
<td>232</td>
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<td>Civ. E.</td>
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<td>2</td>
<td>30</td>
<td>99</td>
<td>79</td>
<td>67</td>
<td>14</td>
<td>15</td>
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<td>Elec. E.</td>
<td>118</td>
<td>13</td>
<td>67</td>
<td>114</td>
<td>135</td>
<td>95</td>
<td>41</td>
<td>28</td>
<td>611</td>
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<td>Ind. E.</td>
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<td>24</td>
<td>59</td>
<td>60</td>
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<td>100</td>
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<td>16</td>
<td>20</td>
<td>11</td>
<td>2</td>
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<td>71</td>
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<td>18</td>
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<td>Und.</td>
<td>181</td>
<td>10</td>
<td>122</td>
<td>36</td>
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<td><strong>Total Engr.</strong></td>
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<td>36</td>
<td>333</td>
<td>539</td>
<td>532</td>
<td>462</td>
<td>212**</td>
<td>120</td>
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<td>Arch.</td>
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<td>123</td>
<td>77</td>
<td>57</td>
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<td><strong>Grand Total</strong></td>
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<td>3753</td>
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*Included in above totals:
Lima-2, Mansfield-1, Newark-1, WPAFR '77

*Includes 23 students registered in Advanced Professional Programs.
**Includes transition students previously on 5 year program.
LOST, STRAYED OR STOLEN ALUMNI IN CHEMICAL ENGINEERING

If you know the address of any of these, we would appreciate it very much if you would inform us.

1910
1. E.W. Gorman
2. C.G. Wood

1912
1. W.N. Lorentz

1913
1. A.N. Erickson
2. F.C. Smith

1914
1. W. J. King

1915
1. W.T. Kraner
2. H. Mitzen

1917
1. En-Ton-Lee Toma

1919
1. C.C. Keckler

1920
1. Yu Seng Tsen

1921
1. H.W. Hess
2. R.D. Kumajon
3. M.C. Reed

1922
1. V.R. Morris
2. C.Y. Pang

1923
1. A.F. Acosta
2. H.M. Davies
3. W.H. Miller
4. H.L. Moon

1924
1. Tien I. Chen

1926
1. F.C. Davis
2. J.A. Thompson
3. Cho Wu

1927
1. D.L. Bishop
2. Cheung Ying Chu
3. Wei Yang

1931
1. Mrs. H. Hsiang

1935
1. E.C. Painter

1937
1. R.V. Cobb
2. C.B. Cross

1940
1. G.D. Kane

1941
1. P.B. Keenan

1943
1. R.H. Collins
2. A.R. VanKleeck

1944
1. H.P. Kackenmester

1947
1. V. Khammiizadeh
2. L.E. Parker
3. J.K. Petry
4. H.L. Sturza
5. L.E. Thompson

1949
1. Huan-Yun Hsung
2. Morgan Jones
3. Chi-Tu Fan

1950
1. D.B. Barnes
2. E.H. Chao

1951
1. J.A. Bierlein
2. B.D. Blackie
3. J.P. Slattery
4. R.L. Wethern

1952
1. Hamid Al-Ahmad
2. Roy Choudhury

1953
1. R.F. Hoeckelman

1955
1. G.L. DePablo
2. R.C. Fischer
3. W.E. Kreiner

1957
1. A.C. Schulz

1958
1. N. Eliades (Pet. E.)

1962
1. F.A. Schurtz

1963
1. V. Beuk
2. B.D. Blackie
3. Frank Grosz (Pet. E.)
4. L.K. Schultheis

1965
1. V.L. DePaola

1968
1. A.Z. Kutlu
DECEASED CHEMICAL ENGINEERING ALUMNI
(Since last Alumni Report)

1912
Walter H. Weinberg

1915
Harold B. Taylor

1917
W. C. Gangloff

1920
Stuart A. Koegle
James M. Montgomery

1921
Vernon D. Campbell

1923
Elmer J. Fisher
Charles Waldo Portz

1926
Robert H. Albrittain

1932
Lt. Col. David G. Schepp

1933
Kenneth M. McLellan

1938
John W. McKinney
Harold W. Quigley
Robert E. Zulandt

1940
Henry J. Freudenberg

1941
William H. Wood

1943
George W. Minard

1950
Robert H. Swisher

Notified since last report (1971's)

Rew. A. Blank 1929
E. Slowter '35: Distinguished Alumnus Award-1960
Centennial Achievement Award-1970
R. Bates '48: Texnikoi Outstanding Alumnus Award-1966
H. Barnebey '33: Distinguished Alumnus Award-1968
H. Fenburr '35: Distinguished Alumnus Award-1967
A. Stiles '31: Distinguished Alumnus Award-1962
H. Warner '38: Texnikoi Outstanding Alumnus Award-1957
The Benjamin G. Lamme Meritorious Achievement Medal-1962
The Centennial Achievement Award-1970

MORE ALUMNI AWARD WINNERS
DISTINGUISHED ALUMNI AWARD—presented in Centennial Year, 1970

D. Arnold (1942), D. Garrett (1950)
B. Martin (1949), D. Stephan (1952)

1950: D. Hamilton, R. Scott
J. Hahn, D. Garrett
V. Reinhart, J. Quattlebaum
J. Flynn, President, Central Ohio Section, AIChE, presenting the National Student Contest Problem Award to D. Wolfe.

A. Syverson presenting the Bumm Scholarship Award of 1967 to B. Dunn. (B. Dunn, who was absent ACE Day, also received the AIChE National Student Contest Problem Award.)

R. Brokhey presenting the AIChE Professional Award to C. Joublanc.

J. Flynn presenting the AIChE Annual Scholarship Award to T. Cribbs.

E. Hensley presenting the M. W. Kellogg Design Award to J. Stambolis.
A. Syverson presenting the OSU Chemical Engineering Student Distinguished Service Award to D. Grove, who was absent on ACE Day.

A good turnout for Centennial Year celebration on ACE Day, 1970.

Another shot of Room 207

The "quiet" hour.
The "girls" with refreshments (Before)

E. Lynn (Alcoa Professor) explaining the plastics extruder to interested alumni.

"Ver-r-ry In-ter-est-ing"
The "Bearded B's" (R. Bates and R. Brodkey)

A serious discussion

"Hmmm - that soda pop is goo-od!"

"Now, this is how you do it"