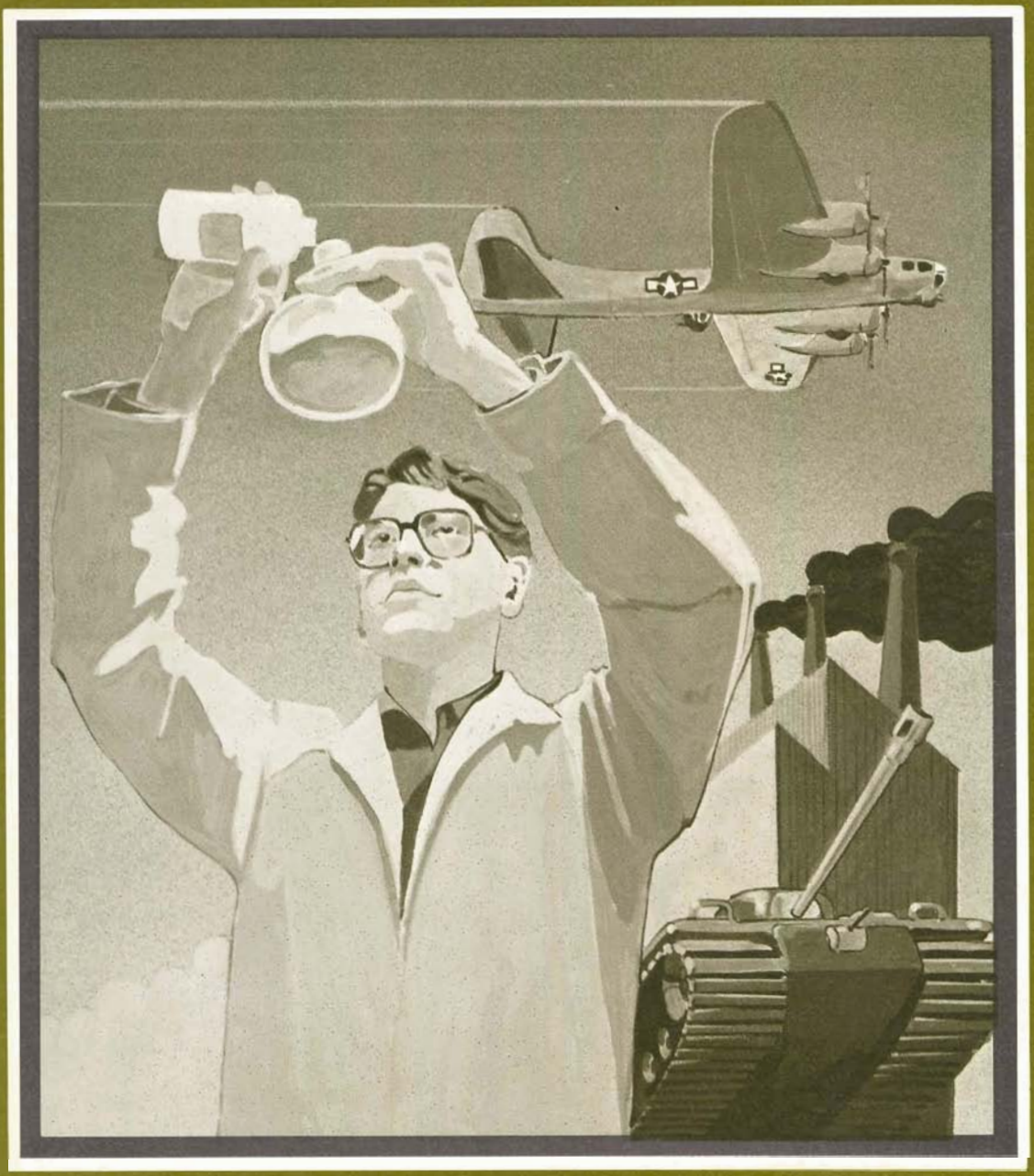
OKCHE

SCHOOL OF CHEMICAL ENGINEERING AND MATERIALS SCIENCE THE UNIVERSITY OF OKLAHOMA

Summer 1978



THE WAR YEARS

Historical Issue–Part II

CONTENTS

Summer 1978

In doing research for Part II of the history of the School of Chemical Engineering and Materials Science, we found much valuable material in the *Sooner,* which is published by the University of Oklahoma Association, and the *Sooner Shamrock,* official publication of the College of Engineering. We thank the editors, present and past, for their invaluable assistance.

So often, time is measured in milestones rather than years.

This issue of OkChE begins with one of the biggest turning points of modern history. It was an event that touched the lives of many of us personally. Ever after, our reminiscences would be divided in terms of "before the war," or "right after the war."

World War II had a second impact on those of us who are proud to be called chemical engineers. The challenge of this national emergency pushed chemical engineering out of its youth and into maturity. It was *the* event that altered the professional lives of us all.

Yesterday, December 7, 1941 — a date which will live in infamy — the United States of America was suddenly and deliberately attacked by naval and air forces of the Empire of Japan.

Franklin Delano Roosevelt

Many of us remember hearing those words on the day following the Japanese attack on Pearl Harbor.

At the University of Oklahoma, grim-faced students and faculty members filled the Field House, listening intently to the broadcast of President Roosevelt's war message to Congress.

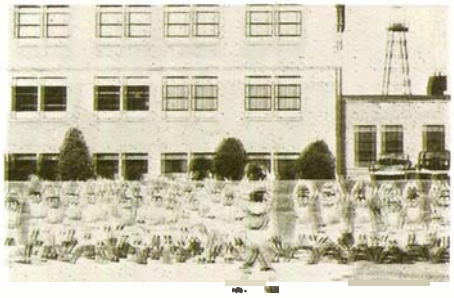
Not long after that somber December 8, a recruiting office was set up in the Armory to serve members of the University community who wanted to enlist in the armed forces.

The entrance of the United States into World War II had a profound effect on OU and its School of Chemical Engineering, recalls former faculty member Laurance S. Reid, now an internationally known consultant with headquarters in Norman.

"Numerous ROTC juniors were commissioned at once, so that student ranks were decimated," said Reid."Mark Townsend, then a student and now a distinguished David Ross Boyd professor of chemical engineering, was commissioned in May 1942.

"Many faculty people from the College of Engineering held reserve commissions and were called up. All others presented themselves and received various assignments — mostly deferred.

"Research was intensified," Reid added, "and virtually all faculty members were consulting on various wartime efforts to provide an ade-

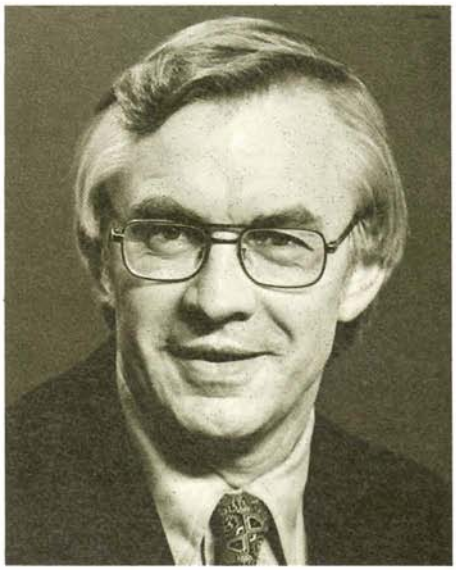


quate energy supply for the great effort and to provide substitutes for materials cut off by the war. There was much activity in gas and oil processing, synthetic rubber, pipeline design, and on-the-spot manufacture of fuel for pipeline pumping engines in remote locations."

A few months before the U.S. entered World War II, Joseph A. Brandt, then director of the Princeton University Press, was chosen to succeed President William Bennett Bizzell when he retired. Brandt, a sandy-haired, quick-witted scholar with a diversity of intellectual interests, was the first OU graduate to be named to the presidency.

In spite of the catastrohpic burdens on education brought about by the war, Joe Brandt was able to accomplish an amazing number of things during his brief tenure — from August 1, 1941, until January 1, 1944, when he resigned because the University's budget, already drastically low, was cut.

"In the midst of the near impossibility of acquiring federal assistance, a serious drop in enrollment (hastened by the lowering of the draft age to 18), the take-over of large dormitories on campus by Army and Navy personnel (making it extremely difficult for many students to find adequate housing), the absence of young members of the teaching staff who had gone off to war, and



During the time span we cover in this issue of *OkChE,* there have been only three deans of the College of Engineering. Internationally recognized as one of the Grand Old Men of the engineering profession, the late William H. Carson (left) succeeded the first dean, James H. Felgar, in 1937 and served for 25 years. Gene M. Nordby (center), who was vice president for administration and finance when he left OU in 1977 to go to Georgia Institute of Technology, was dean from 1962 until July 1970, when William R. Upthegrove (right) returned to the campus to take the post. Upthegrove had been a member of the engineering faculty from 1956 to 1962 and then did research for International Nickel Company and taught at the University of Texas.

any number of hair-graying problems and disheartening setbacks, Brandt instituted the first in a series of changes that resulted in the University's rebirth as a democratically run institution." (*Sooner,* September 1965)

Among Brandt's most meaningful and controversial changes were those which gave faculty members more opportunity to participate in matters of University policy. Another big achievement was his work in founding the OU Research Institute (forerunner of the Office of Research Administration), which was set up to help faculty members obtain research support from business, industry, and the government.

"Research is the heart which pumps the blood of life into industry," Brandt said in 1942. "The engineer and the scientist working in his laboratory on the campus on problems that, to a layman, might seem most abstract will in reality be laying the foundation through his discoveries for the employment of thousands of persons in the future. . . . During the war, the University must give its every nerve to the war effort. Yet, in doing so, we must not forget that on universities devolve many of the problems of peace."

Diversifying Research

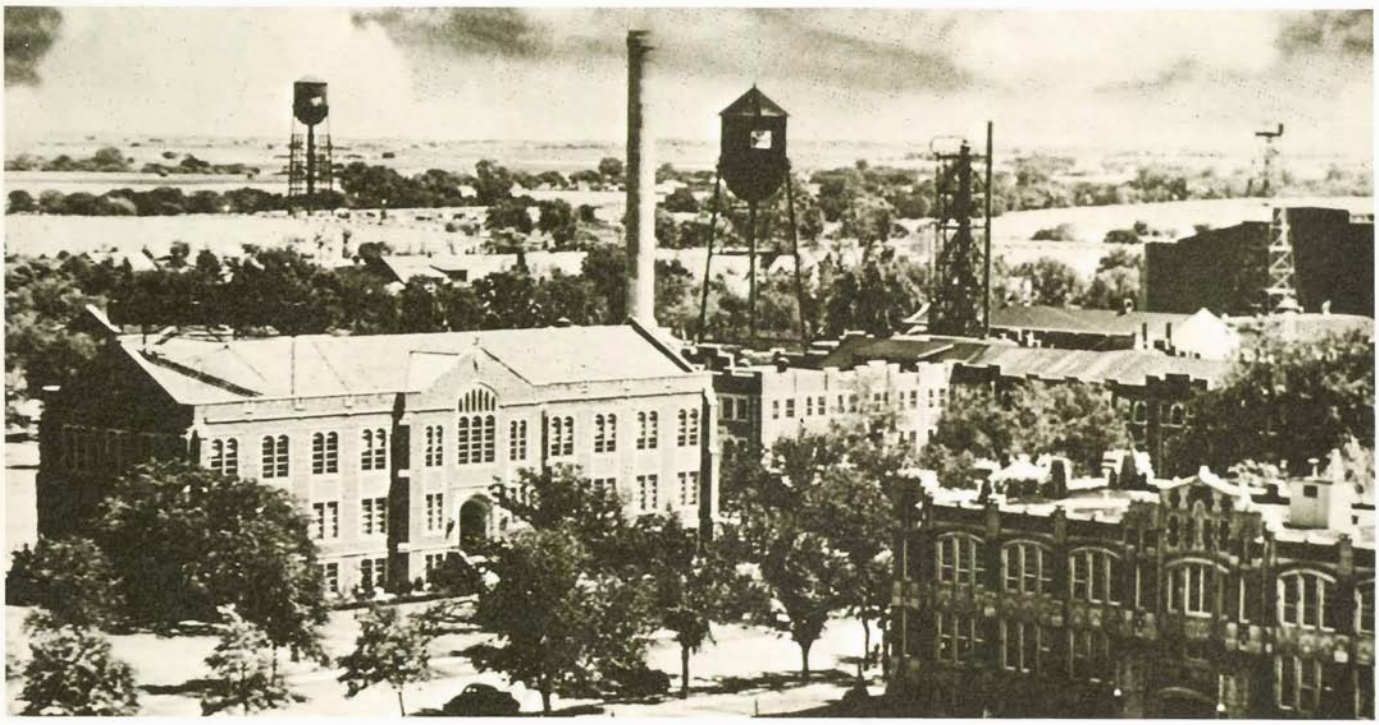
In the September 1943 issue of the *Sooner Shamrock,* Dr. R. L. Huntington, chairman of the School of Chemical Engineering, described some of the wartime research of his faculty and students.

"The problems which are being studied have been selected for the following reasons: their contribution to the war effort, the value to industry both now and in the future, and the contribution to the store of fundamental engineering knowledge as a whole," Huntington wrote.

One of the projects involved heat transfer research by Earl McReynolds and Pope Proctor. Natural gas research was conducted by Huntington and his graduate students who had received fellowships from the American Gas Association and several major gas companies.

Under the direction of Robert A. Hardin, two groups of seniors were trying to develop better plastics. Professor William T. Tiffin was directing several metallurgical engineering students in the development of improved steel alloys.

One point which Dr. Huntington made is especially significant today: "In view of the importance of the petroleum industry to Oklahoma it is only natural that our School should center its research program on studies and problems related to the production, refining, and transmission of crude oil, natural gas, and their products. . . . At the same time it is recognized that Oklahoma may have to look toward other sources of income than petroleum in the not too distant future, hence a policy is being adopted of diversifying research so as to include those studies which may be



Remember when the skyline behind the engineering building was broken by the outline of an oil drilling rig, cracking plant, water tower and smoke stack? The former home of the School of Geology is in the right foreground.

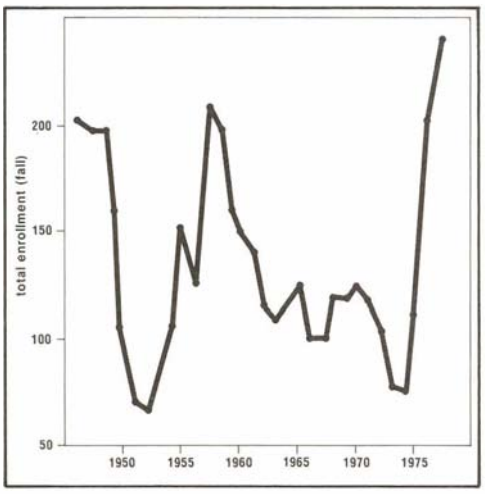
of value to other industries."

As the United States became engaged in combat with Japan, Germany and Italy, engineering students were caught up in the patriotic fever which swept the country. They wanted to enlist. Both Dr. Huntington and Dean William H. Carson of the College of Engineering reminded them frequently of the nation's critical need for skilled engineers and urged them to continue their education.

Many students did join the war effort, however, either in the armed services or in industry. Engineering enrollment dropped from 1,536 in 1941-42 to 330 in 1943-44. More than 10,000 OU alumni, students, former students, and faculty and staff members served in the armed forces before the war ended, and among them were 553 casualties.

When Joe Brandt resigned and became director of the University of Chicago Press, Dr. George Lynn Cross, then head of the OU Graduate College, was named to succeed him. Cross, a botanist, once stated: "I am not a college president by profession. I am a scientist, retooled for administrative responsibilities during World War II — a time when there was a serious shortage of personnel."

He certainly seemed to get the hang of being an administrator. He was president for a quarter of a century — a record at a major state university — and the Cross years were notable for their stability and progress.



The chart above indicates the fluctuation in undergraduate enrollment from the mid-forties to the present. Graduate enrollment during the 1940s varied from 5 to 21 students. This increased to 20-40 graduate students during the 1960s, and 25-51 in this decade. Another change in the general demographics: before 1975, a maximum of eight women (and sometimes none) were enrolled in CEMS. We presently have 32 women students.

Postwar Problems

During the closing months of World War II, Cross' work centered on problems the University would face in the postwar period, when an enrollment of more than 10,000 students was expected.

In 1945, his second year in office, there were only 274 people in the graduating class; before the war, classes often passed the 1,000 mark.

As the *Sooner* explained: "But most of the male graduates who should have been in commencement exercises were away on fighting fronts, and some of the few who were here wore khaki service uniforms under their caps and gowns. The 1945 class was made up chiefly of women, most of whom were the fighting men's wives, fiancees, and widows. The College of Engineering, perhaps OU's most widely known division, had ten graduates; the law school had four. Former commencement exercises were held in the Field House; this one was in the fine arts auditorium, with plenty of room to seat the entire class, its families and friends."

By 1947, enrollment hit a new high

Colver (1970-73), followed by Canfield as acting director in 1973-74, and Kenneth E. Starling as director in 1974-75.

Which brings us to September 1, 1975, when Samir S. Sofer, the present head honcho, took office.

Among his research specialties are biotechnology and biochemical engineering; his professional experience includes three years as a process designer for Celanese Chemical Company.

"The faculty members are beautiful; they are person-oriented."

Sofer's chemical engineering degrees are a B.S. from the University of Utah (where he won a Phi Beta Kappa key), the M.S. from Texas A. & M. University, and a Ph.D. from the University of Texas at Austin.

A U.S. citizen born in 1945 in Teheran, Iran, Sam Sofer loves tennis and is an incurable jogger. Most important of all, he has continued to foster the camaraderie which is such a fine part of the CEMS tradition.

Our spirit of comradeship involves students as well as faculty. This Spring, reports Sofer, some 30 undergraduates volunteered to work at least 10 hours a week in the CEMS laboratories on problems ranging from the energy crisis to better detection of cancer-causing materials.

They will receive no academic credit for their extra efforts, but they're learning to work on their own (under faculty supervision) on types of serious research that most schools don't permit undergraduates to do.

Sure, this adds to the professors' work loads. But as Sofer is quick to point out: "The faculty members are beautiful; they are person-oriented. It takes a lot of their time. But the students show remarkable dedication — you'll always find some of them in the labs on weekends and holidays — and this is an opportunity that will help them when they become graduate students or go to work."

That's an upbeat note, if ever we heard one, and a great way to end our history of the School of Chemical Engineering and Materials Science.

Great Moments in CEMS History

Who says engineers don't have a sense of humor? It's a lie.

As we noted elsewhere in this issue, the files of the *Sooner Shamrock* proved to be a gold mine of information about our history.

And then there were the jokes that appeared wherever needed to fill up a page. You all remember those jokes. Sheeeeesh!

Occasionally the reader found a chuckle or two in an article which (as far as we know) was intended to be dead serious. In May 1960, for example, the *Shamrock* carried a two-page feature on Dr. John E. Powers, then chairman of the School of Chemical Engineering, hailing him as Professor of the Month.

An excerpt — the italics are ours — follows:

"He received the 'best presentation award' at the national meeting of the American Institute of Chemical Engineers in 1955 for his paper 'Separation of Liquids by Thermal Diffusion.' This paper presented an experimental and theoretical analysis of thermal diffusion sufficiently broad in scope to make possible engineering designs of the thermal diffusion separation process.

"The effectiveness of his presentation of a fairly involved subject was achieved by his discussion of a unit for a commercial process.

"The unit was five feet high with ¼-inch plate spacings, had very attractive energy requirements with high separation efficiency, *but was 82 miles long. Even though this particular design had one unattractive portion,* a fundamentally sound basis for engineering this kind of separator had been established for the first time."

(Editor's Note: In justice to Professor Powers, it's only decent to add that his theories for predicting the behavior of thermal diffusion columns were a major step forward in the field, and industry provided thousands of dollars to sponsor his research at the University.)

"UH, JUST ONE LITTLE THING, POWERS..."

Siblings Share CEMS Education

The CEMS brother and sister acts (l. to r.) starring Daniel and David Ruble, Jeff and Connie Carroll, Jon and Roger Voeller.

When they were tykes, no doubt they shared toys and games and maybe even boots and sweaters. Now they're sharing a significant experience — an education which will prepare them for careers in chemical engineering. The half dozen students pictured represent three sets of siblings enrolled in CEMS.

Brotherly duos have popped up before, but this year's crop is extraordinary, especially since one of the pairs is a brother-sister combination. (No doubt a sister-sister team will come along soon!) We thought you would be interested in knowing more about these obviously superior families which are producing several chemical engineers per generation. Meet the Rubles, Voellers, and Carrolls.

David and Daniel Ruble are natives of Texas, David (21) having been born in McAllen, and Daniel (19) in Dallas. David reports living in eight different cities before he reached fifth grade in school. Their father was in military service during the Korean conflict and is now an executive with Southwestern Bell Telephone Company in Tulsa. Both young men graduated from Tulsa Memorial High School with outstanding accomplishments both in and out of the classroom. David was senior class treasurer, lettered in track and football, and was sports editor of the yearbook. Daniel was active in student government, the National Honor Society, and two bands. In his senior year, he received a National Merit Letter of Commendation.

Both Rubles were University Scholars and received Chemical Engineering Program of Excellence Scholarships. They joined Alpha Tau Omega social fraternity and AIChE. They have similar reasons for choosing their major. David: "I'm pretty good at math and science." Daniel:"Chemistry is the most interesting of all fields of science." They both list backpacking as a favorite recreation, too.

The **Voeller** brothers, **Roger and Jon**, also grew up in Tulsa, having arrived there from a different direction than the Texans. Jon and Roger were born in Manhattan, Kansas, where their father was attending Kansas State University. They graduated from Tulsa Edison High School, where Roger (the elder) received an American Airlines National Merit Scholarship and was named a University Scholar. He changed from a chemistry major to a chemical engineering major two years ago "because of a better job market." He'll get his B.S.Ch.E. this spring and hopes to return for an advanced degree after some experience in industry. Roger's hobbies include backpacking, skydiving, and parachuting.

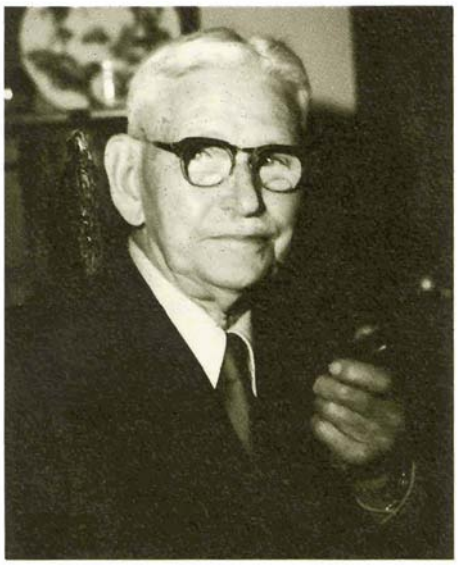
Jon, who was involved in student government and the pep club at Edison, is likewise a Merit Scholar and University Scholar. He is a Program of Excellence Scholar as well. One of the highlights of his 19 years was a visit to Greece last June, during which he visited historical sites.

Although **Connie and Jeff Carroll** are two years apart in age, they'll be graduating together in 1980. Connie, who just turned 22, graduated as valedictorian of her Fairfax High School class. She enrolled at OU as a pre-dental student, majoring in chemistry. After transferring to another school for one semester, she returned to the University, reconsidered her major, and switched to CEMS. "I haven't decided yet what particular area of chemical engineering I wish to go into," she says. For the present, she's concentrating on study sessions with brother Jeff, who is delighted to have her as a classmate.

Jeff was president of his high school class at Fairfax and ranked third scholastically. He still found time to quarterback the school's Class B state championship football team and go out for basketball and track. During his second semester at OU, Jeff decided on chemical engineering and leaped into AIChE activities. Away from Carson Center, Jeff reports interest in water skiing, tennis, volleyball, and "sports in general."

It's clear that the old cliche "two heads are better than one" is true in the cases of David and Daniel, Roger and Jon, Connie and Jeff. With siblings of such academic promise and social diversity, another slogan could be coined at CEMS — Seeing Double Is Beautiful!

Albert E. Gartside Remembers



It's always heart-warming to hear from our alumni, and you'll understand what a special pleasure it was to receive the following letter from the first chemical engineering graduate of the University of Oklahoma. He is Albert E. Gartside, Class of '13, who lives at 924 Wild Cherry Lane in St. Louis, Missouri.

"I want to tell you how much I enjoyed your Historical Issue-Part I. It brought back many memories, because I was there.

"When I entered OU in the fall of 1909, I had read about chemical engineering courses in Eastern universities, but none was available there at that time. However, Dean Felgar and Dr. DeBarr got together and made one. It included practically all the courses in chemistry and mathematics, the basics of all branches of engineering plus some additional in mechanical, physics, some geology and mineralogy, and of course English and German. Undoubtedly it was this course that Dean Felgar referred to in the last paragraph of the third column on page 3, as I was the only one at that time.

"I have many pleasant memories of old friends of that period — Dean Felgar and Dr. DeBarr of course, Guy Y., Bob Calvert, Harold Bozell, E. P. R. Duval, Darling, and many others whose faces are clear but names a bit hazy. Art Shead was a close friend from high school days, but his career was slowed because he had to make his own way entirely, a great guy. There were no government subsidies in those days.

"After graduating in 1913 I received a Metallurgical Research Fellowship at the University of Utah, a joint venture of the state and the U.S. Bureau of Mines. There I received an M.S. in Metallurgy.

"Admittedly my course was far short of modern courses, as I well know, because a son and grandson are chemical engineers from Washington U. (St. Louis) and Cornell respectively. However, through magazines and books I kept up with advances in the art and was able to compete with any of them. I started old *Chem. & Met.* while in school (believe it was just *Chem.* then) and took it until several years after I retired in 1955.

"During the last ten years or so of my career I was head of a Cost Engineering Department which dealt with the economics of present and proposed chemical processes in large-scale plant production.

"I am enclosing a copy of my diploma as evidence."

No evidence was needed, for his "famous first" is part of the official records of the University. And if that weren't enough, he was also the subject of a feature article in a 1957 copy of the Sooner Shamrock. *The author, Don Verhines, noted that after Mr. Gartside received his master's degree, he did metallurgical work for several years. He returned to chemical engineering about 1921 and remained in this field until his retirement.*

When we replied to Mr. Gartside's letter, we requested permission to share it with OkChE *readers, and also asked him for a recent photograph to use with the article. The picture arrived promptly, and an accompanying note ended as follows:*

"In spite of the many years that have passed, I am still very much interested in Oklahoma City, where I lived for 13 years, and especially in OU."

OkChE Board Meeting Held

The annual meeting of the OkChE Board of Directors was held October 21, 1977, at the University.

Directors in attendance were Richard G. Askew, Vice President, Phillips Petroleum Company; Zane Q. Johnson, President, Gulf Science and Technology Company; Garman Kimmell, President, Kimray, Inc.; William P. Orr, President, C. E. Lummus; Charles Perry, President, Perry Gas Companies; Sam Sofer (ex-officio member), Director, School of Chemical Engineering and Materials Science; Robert Vaughan, Professor, California Institute of Technology; and J. Frank Wolfe, Manager, Production Operations Division, Exxon Production Research Company.

The meeting agenda included status reports in the following areas by CEMS faculty: overview of the state of CEMS by Sam Sofer, undergraduate program by Carl Locke and Mark Townsend, undergraduate laboratory by Jay Radovich, research by Sam Sofer, and alumni and industrial relations by Ken Starling.

Action taken by the Board included approval of 1978-79 OkChE expenditures of $8,000 for student scholarships and up to $8,000 for improvements in the unit operations laboratory (provided matching funds can be obtained).

The Board was encouraged by the number of students enrolled in the School and by the external financial support for research. Concern was expressed about the growing workload — caused by the increasing numbers of students — and about the decreasing fraction of U.S. graduate students. The Board encouraged renewed efforts to obtain improved financial support from the University of Oklahoma as well as from national industries.

Charles Perry announced the renewal of the Charles Perry Challenge Grant for 1978.

Tracy and Bob: Best of the Best

The way we see it, every CEMS student is outstanding, in his or her special way. But every year we're faced with the difficult task of selecting the Best of the Best — students whose qualities of leadership and whose range of talents have distinguished them within the University community. For 1978, our nominees for Outstanding Senior in the College of Engineering were Robert Purgason and Tracy Snyder.

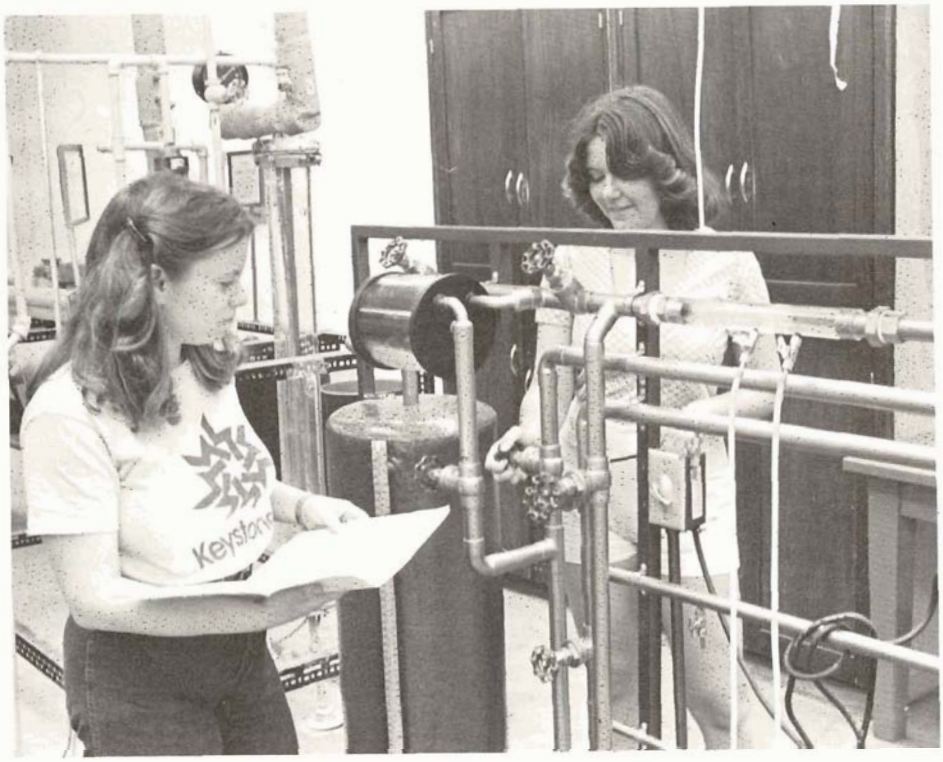
An engineering education came naturally to Bob. His father and his older brother are mechanical engineers. Bob began reaping honors during his high school years at Memorial High School in Tulsa. He has capped that with an illustrious college career. His list of activities and honors earned him an entry in the current edition of *Who's Who Among Students in American Universities and Colleges.* All the while Bob took part in this vigorous extracurricular life, he managed to maintain a grade point average in his major that hovered just beneath the 4.0 mark. After graduation in May? "I would like to work in a natural gas or gas liquids company as project and evaluation engineer."

Both Bob and our female nominee, Tracy Snyder, are members of Tau Beta Pi, and Tracy was recipient of the AIChE scholarship last year. Past president of the Society of Women Engineers, she is also on the CEMS Student Advisory Board.

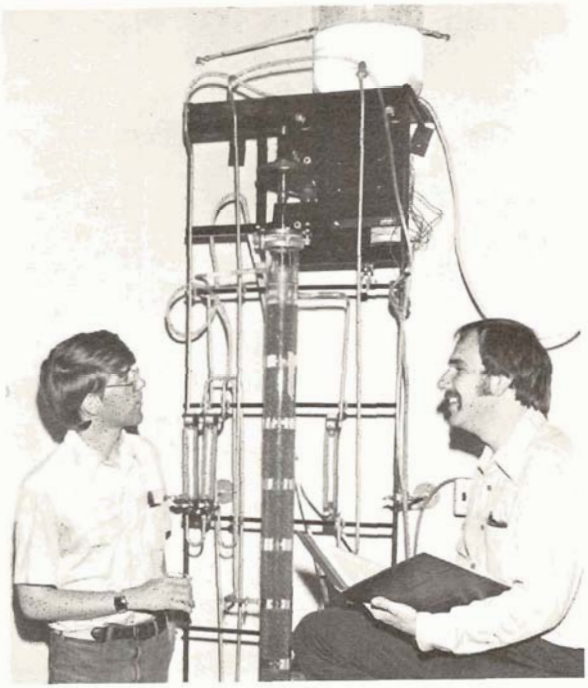
Music is a major interest of this top twosome. They play guitar, and Bob has been a member of OU's Student Entertainers.

Well-rounded young people? No doubt about it. Tracy lists her favorite recreation as football, basketball, badminton, softball, tennis, and "especially racquetball." After commencement ceremonies in May, the young graduate from Idabel plans to work in industry (research and development) or attend graduate school.

Renewed for '78! Perry Challenge Grant Is Success



Two hours of lab courses will be added to the chemical engineering curriculum, thanks to new equipment provided by Perry Challenge Grant funds. The first two pieces have already been installed in the Unit Operations lab, at a cost of $5,500. Maureen O'Brien, Tulsa, and Shiela Stuckey, Shidler, check out the fluid flow system, while Chris Root, Norman, and Gary Lawrence, Okemah, get acquainted with the liquid-liquid extraction column. An additional $30,000 will be spent on equipment in preparation for the new fall offering.



As we noted in the *OkChE* magazine published at this time last year, Charles Perry/Perry Gas Companies, Inc., provided a Challenge Grant to OkChE which would match your contributions dollar for dollar up to $10,000 during the period from October 1, 1976, through September 30, 1977. The program was a tremendous success and has been renewed.

Contributions totaling $9,489.67 were received from 110 individuals during the first Challenge Grant period. With the matching funds from Charles Perry and $1,926.67 in matching funds from employers, the income to OkChE totaled $20,906.01. This was a wonderful response from alumni and friends of the School of Chemical Engineering and Materials Science.

The Challenge Grant funds have come at a time when the School has a critical need for them. The rising costs of the University physical plant operation, particularly for energy-consuming operations, have caused a real belt-tightening.

One of the most important things which we must do to maintain our quality program is to improve our undergraduate laboratory, and part of the Challenge Grant funds will be used in seeking matching funds for laboratory improvement.

Some of the funds will be used for scholarships for undergraduates. In addition, we will continue to support special student activities such as the Engineering Open House and to provide partial funding for students traveling to technical meetings.

The School is fortunate that Charles Perry has issued a new challenge: For the period from October 1, 1977, through September 30, 1978, Charles Perry/Perry Gas Companies, Inc., again will match individual contributions up to $10,000.

With the reminder that many employers match tax-deductible contributions, you are urged to consider the benefits of a contribution to your School.

CEMS Faculty

In preparing the following list of CEMS faculty members who served within the period we cover in this copy of OkChE *— from the beginning of World War II to the present — we did our best to make it accurate. Please forgive any sins of commission or omission. Even though we're engineers, we're only human.*

Lyle F. Albright, 1951-1955
Arthur W. Aldag, 1973-present
Lloyd G. Alexander, 1950-1953
Robert J. Block, 1963-present
John M. Campbell, 1948-1969
Frank B. Canfield, 1962-1974
James H. Christensen, 1971-1974
Alfred Clark, 1971-1978
C. Phillip Colver, 1964-1976
Andrew Cosgarea, Jr., 1962-1965
Orrin K. Crosser, 1955-1966
Raymond D. Daniels, 1957-present
Donald Finn, 1964-1965
Larry W. Fish, 1968-1971
Frank Calvin Fowler, 1943-1951
Robert A. Hardin, 1937-1966
Jerry A. Havens, 1967-1968
James Lee Huitt, 1948-1951
Richard Lee Huntington, 1933-1966
R. Craig Jerner, 1965-1969
George Johnson, 1947-1948
Shelton M. Johnson, Jr., 1943-1944
C. T. Langford, 1929-1941
Lloyd L. Lee, 1976-present
Carl E. Locke, 1973-present
Michael L. McGuire, 1964-1969
Robert H. Perry, 1962-1965
John E. Powers, 1956-1963
John M. Radovich, 1976-present
Laurance S. Reid, 1940-1943, 1945-1969
George Franklin Russell, 1943-1945
Cedomir M. Sliepcevich, 1955-present
Sam S. Sofer, 1974-present
Kenneth E. Starling, 1966-present
William T. Tiffin, 1935-1945
William H. Tonn, Jr., 1943-1947
Mark Townsend, 1955-present
Chorng-Horng Twu, 1977-present
William R. Upthegrove, 1956-1962, 1970-present
Frank P. Vance, Jr., 1942-1945
Jesse S. Walton, 1941-1944
Eric Weger, 1962-1963
J. Reed Welker, 1965-present

What Happened To . . . ?

Our mail to the following people has been returned by the post office. If you have information about their current addresses, please let us know.

Robert L. Avinger, Merritt G. Brigham, Henry Hua Chao, Tom T. Charng, Jin Chian, Carlton A. Chin, Philip C. Chu, Mark D. Coldiron, Randall L. Couch, Raghunath V. Date, Lloyd E. Dean, Harley R. DeVore, Murth S. Duvvuri, Ferial Faramarzi, James R. Fleming, Robert E. Gibson, Craig Harvey, Warren Huang, Clayton P. Kerr, Paul David Diewit, Deral Duane Knight, Frederick A. Kuhn, Leonard H. Milacek, Thomas G. Oakwood, John C. Ray, Kenneth E. Sanders, Robert Alan Sims, Lawrence E. Sizemore, Teddy C. Smith, B. R. Tipton, Jr., Lloyd E. Trimble, Harold R. Wesson, Stuart D. Whitford, and Sun-fu Yang.

The CEMS faculty discovered a way to shake off the January doldrums and get the spring semester off to a good start — a let's-get-better-acquainted party with students. At left, Arthur Aldag, Jr., is obviously pleased that Oklahoma's worst winter in years is over. Lloyd L. Lee, right, and Kenneth Starling, above, circulate among the student guests.

Alumni News

Annette L. Bunge, Lafayette, Calif., is a research assistant in the Chemical Engineering Department at the University of California at Berkeley and is working toward a Ph.D. After her junior year at OU, she transferred to SUNY, receiving a B.A. degree in 1976. Paul S. Bunge (Mech.Engr.'75) is working for Coastal States Gas Corp. in Hercules, Calif.

David Fields, Jr., B.S.'51, is president of the Fields Co., Inc., which has started Phase II of its $6.1 million industrial park in Pinehurst, N.C. The company also builds and leases industrial buildings.

Norman W. Gaines, B.S.'58, is employed by Union Carbide Corp. in South Charleston, W.Va., as engineering manager, environmental protection.

Lawrence E. Gammon, B.S.'75, is a systems engineer with Pullman Kellogg in Houston, Tex.

J. Scott Heller, B.S.'72, is a mechanical design engineer with the Ethyl Corp. in Baton Rouge, La. Formerly with GATX Corp., he joined the Ethyl staff in July 1977. Heller wrote that he and Pat Selvey, Skokie, Ill., had chosen March 25, 1978, as their wedding date.

Loy G. Horn, B.S.'23, retired in 1965 from Standard Oil of California (Chevron Research), El Segundo, Calif., where he was a butadiene specialist. "Wife in poor health, so I spend much time with her," he writes."Also listen to my grandchildren (college age) tell us how to run the world. (Gee, I hope it works.) Golf now and then."

Miguel G. Ibarra, B.S.'71, has been working since graduation for Yacimientos Petroliferòs Fiscales Bolivianos, the Bolivian oil company. He is assistant to the project manager for the lube oil plant Y.P.B.F. is building in Cochabamba. Last fall he spent five weeks in Houston, Tex., attending a training program in planning-scheduling and costs control.

Neal J. Mosely, B.S.'43, graduated from Wayne State University Law School in 1950. He recently left more than 25 years of corporate patent law practice to enter private practice of law, specializing in patents and trademarks. His office is in Houston, Tex.

D. T. Neill, B.S.'56, M.S.'57, Ph.D.'68, is a professor of engineering at Idaho State University in Pocatello.

James H. Richards, B.S.'40, has been employed for 21 years by McDonnell Douglas Astronautics Co.-West. He is manager, program operations, SIRCS program, at the Missile and Space Systems Center in Huntington Beach, Calif. He and his wife, Betty, a junior high school teacher, live in Los Angeles. Their son is a graduate of California State University at Northridge, and their daughter attends the University of Washington.

Michael J. Riddle, B.S.'70, is a research engineer with Exxon Chemical Co. in Baton Rouge, La. He received his Ph.D. from the University of Wisconsin-Madison in 1977.

George T. Snyder, B.S.'40, who is employed by Mobil Oil, has been transferred from Beaumont to Houston, Tex., and is going on a loan assignment with Aramco in Saudi Arabia.

Ronald Spencer, B.S.'63, is manager of engineering-contracting sales for the Trane Co. in Tulsa, Okla. He serves as vice president of the Northeastern Oklahoma Chapter of ASHRAE.

John H. Waller, B.S.'61, is general manager of the tinning division of Chase Brass and Copper Co., South Bend, Ind. He adds a note: "For two OU graduates of the Wilkinson Era, my wife, Lou, and I find the irony of moving to South Bend overwhelming."

Frank P. Williamson, B.S.'50, lives in Houston, Tex., where he is project manager for Panhandle Eastern Pipe Line Co.

IN MEMORIAM: Mrs. John C. Anderson has informed us of the death of **John C. Anderson**, B.S. in Chemical Engineering, Class of '41.

ATTENTION: CEMS ALUMNI(AE)

We are planning to list all CEMS graduates and their current addresses in future issues of *OkChE*. Our tentative publishing schedule is as follows:

July 1978	Up to 1945
January 1979	1946 to 1962
July 1979	1963 to 1978

If you have any information about your current activities that you would like for us to include, please write.

Bearded up for the 1978 Engineers Week are (from top) Carl Locke, Jay Radovich, Sam Sofer.

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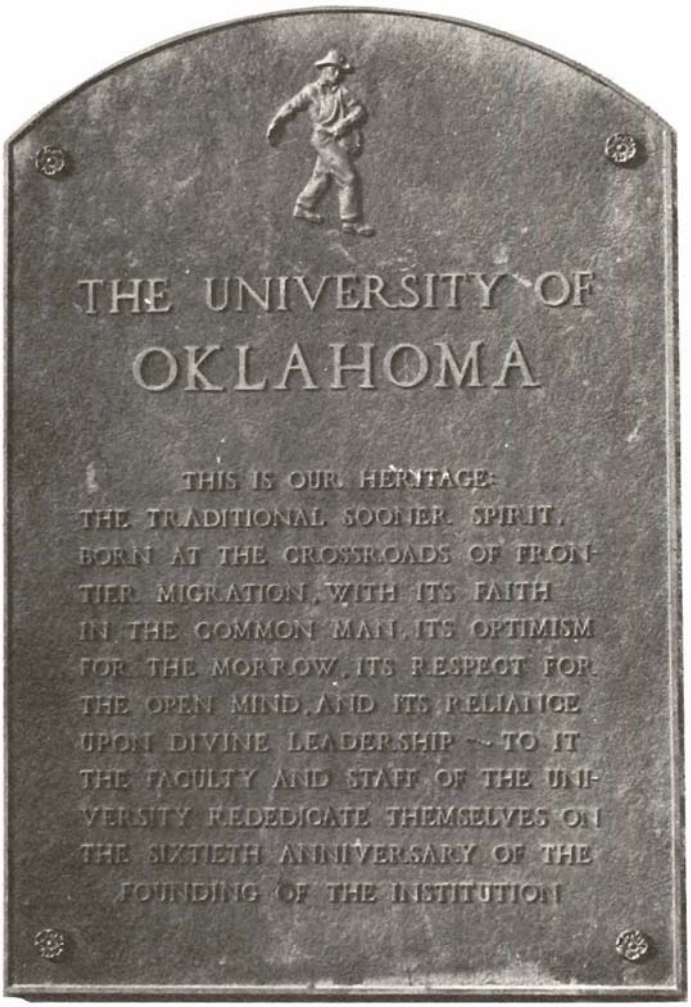

This is our heritage
The traditional Sooner Spirit,
Born at the crossroads of
frontier migration, with
its faith in the common
man,
Its optimism for the morrow,
Its respect for the open
mind,
And its reliance upon
divine leadership.

—E. E. Dale (written for the University's 75th anniversary in 1965)