### Dedication w

dence and the reception packed and shipped the orders for bleaching earth, refining cups and reprints. The number of orders did not require more staff time. Direct mail promotions usually were sent only to AOCS members and a few select outsiders (I remember that the entire staff would get together to stuff, label and affix postage to national meeting promotions). Those days are gone, due to the expansion of the number of technical publications and materials available for sale, and efforts to promote more widely the society and its programs and to communicate more effectively with our members and industry.

Support and administration The support staff, which 16 years ago included two secretaries and a receptionist, has grown as other areas of staff have grown, only at a slower rate. Automation has kept the growth rate below that of the staff in general. Currently, this staff includes four clerical support personnel, including one who coordinates the work of the group, and an administrator who, in addition to other duties, oversees the support services, mailing/shipping and building operations.

In general, growth of AOCS staff and the increases in other space needs can be traced directly to increased and improved program activity. That is the basis on which the new headquarters readily can be justified. The facility has been designed for efficient use by over

50 staff. Projections for these future positions are tied specifically to planned program expansion and enhancement-in publications, education, technical activities and membership services. This expansion will call for more of the strong member involvement on which the past success of the society has been so very dependent and which always seems to be available when needed.

The building was designed and built for AOCS and its programs. There is room for expansion of those. If the membership continues to be actively interested in the society, I will not have to worry about how I will ever fill the extra space.

### **AOCS** and its future Viewpoints:

In observance of the dedication of the AOCS headquarters building in Champaign, Illinois, some AOCS members were asked to speculate on the society's future role. Those participating were:
• George C. Cavanagh, consultant

(AOCS past president)

 Stephen Chang of Rutgers University (AOCS past president)

David Firestone, senior research chemist with the U.S. Food and Drug Administration (AOCS past president)

Nicholas Pelick of Supelco Inc. (AOCS past president)

J. Barry Rossell, section manager of the oils and fats section at Leatherhead Food R.A., Leatherhead, Surrey, England

 Aldo Uzzan, honorary general manager of the Institut des Corps Gras (ITERG), Paris, France

Others who have views on these topics may submit them to JAOCS for possible publication as Letters to the Editor in future issues.

What AOCS activities and programs do you think will/should become more significant in the next 20 years? Why?

Cavanagh: I believe international conferences covering specific aspects

of the fats, oils, surfactants, waxes, and protein and coproduct industries will become increasingly important for a number of reasons. For instance, agricultural products of the world lose their identity in the marketplace, with South American soybeans competing with U.S. soybeans and Malaysian palm oil competing with U.S. and European vegetable oils for market shares. World conferences enlighten potential users of fats and oils of their options for source material and identify the physical and chemical characteristics of products available for specific uses. The number and variety of these source materials continue to increase, thereby justifying the need for continuing well-planned world conferences. Also, biogenetics will see greater activity and assume greater importance. Almost every oilseed has some undesirable property. Plant geneticists can alter plants to reduce or eliminate these undesirable characteristics. or to increase or enhance desirable characteristics.

Chang: In order to maintain AOCS as a leading society in the field of fats and oils worldwide, we must balance the financially beneficial

trade association activities with more academic and scholarly programs. Traditionally, AOCS tends to neglect the education of oil chemists in academic institutions and therefore neglects its responsibility to educate future oil chemists and attract graduate students and their faculty advisors in the activities of the society. The prosperity of the society depends upon the creation of young oil chemists as members. I believe more emphasis should be placed on attracting graduate students and their faculty advisors to join AOCS.

Firestone: I think the society will expand its efforts in methods development, both to develop standard methods using state-ofthe-art instrumentation as well as simple, rapid methods for industrial use and for international trade. The society will turn more and more to scientists worldwide, as well as in the U.S. and Canada, to take part in the method development and method validation programs. Cooperation with other organizations will increase. New avenues will be sought to check and validate new and current methods because of the expense and time-consuming nature of current method devel-

### Dedication

opment procedures. Short courses and other educational programs, including discussion groups, should be expanded in various areas, including development of new crops and new materials, biotechnology in various aspects, surfactants and detergents, nutrition, regulatory aspects, chemistry and analysis, and protein products. Also, the production of monographs on various topics with timely contents should be expanded. The use of information processing equipment will continue to expand, to store and utilize data and information. The society must not lose sight, however, of retaining the annual meetings as informative and friendly forums attended by as many members as possible, coupled with continued efforts to make the journals continuing leaders in their field. I personally hope that the news section of the journal will not become divorced from the journal.

Pelick: AOCS should make a valiant effort to continue to modernize methods for the fat and oil industry until the methods book becomes state-of-the-art. I realize that much progress has been made here, but we have not caught up to the new technologies of today. The book should begin to include U.S. Environmental Protection Agency regulations and require-



ments specifically for the fat and oil industry and how these regulations and requirements can be met through current AOCS methodologies. Wastewater, air quality, hazardous waste management and anything else that might be of concern to the fat and oil industry should be included.

Rossell: I think AOCS should put more efforts into analytical method standardization on an international basis. It therefore should involve itself more directly with the International Standards Organization (ISO) and harmonize its methods with ISO. It also would be useful if it can motivate the American Standards Institute (ANSI) in this direction. The Smalley system should move toward recognizing or approving laboratories instead of individuals, as this is more realistic in terms of international analytical standardization.

Uzzan: AOCS' present programs and activities are very useful and seem well-balanced. However, industrialists as well as scientists and technicians will need more and more in our swiftly changing world, a "recycling" of knowledge and access to new knowledge. Thus, education should play a key role and should have a top priority. AOCS will need to consider increasing its activities in this area by developing its programs in short courses, seminars, reviews and books. Also, AOCS is becoming a multinational society. Even if its American members today represent a majority, it may be expected that their relative weight could be reduced shortly in the future. If so, AOCS will have to face its duties concerning this new membership. It is not a question of replacing the existing sister societies operating in other countries, but to better coordinate the activities and improve cooperation. The INFO newsletter already is a good tool of communication, but it may need to be developed and organized on a more professional basis. For example, the members of the multinational network could be provided with standardized rules for selecting and editing the news. In addition, AOCS annual meetings and world conferences should continue to be among its major activities; selecting pertinent programs, chairmen and speakers, as well as checking the quality of papers and presentations, should remain a top responsibility for members of the technical program and scientific committees.

What new activities or programs do you think AOCS should consider? Why?

Cavanagh: Videotapes should be made, emphasizing career opportunities in the numerous disciplines embraced by AOCS. These films could be made available to counselors in high schools and colleges to encourage intelligent young people to consider opportunities in the plethora of fields developing in oilseed, fats, oils, waxes, "fat-less" fats, and protein and coproducts industries. AOCS should assume a leadership role in establishing and defining a minimum acceptable standard for products and for plant effluent from oilseed and oil processing plants. If oils and fats originating from all parts of the world are competing for a

share of the market, then all participants in the game should be "playing on a level field." That is, the purity of the products, the sanitary processing conditions and the handling of pollutants resulting from the manufacturing of these products should at least meet a minimum acceptable standard.

Chang: AOCS has never defined what courses a person should take in order to be accredited as an oil chemist, or that a department of a university be accredited as qualified to educate oil chemists. Such activity has been actively engaged in by the Institute of Food Technologists and has been adopted by all the universities with food science and technology education. AOCS clearly has three kinds of members: those engaged in biomedical research, those engaged in the processing of fats and oils for food products, and those engaged in the area of soaps and detergents. If AOCS truly is the leading oil chemistry society, then it must establish a standard curriculum for each of these three groups of oil chemists. The society, if possible, should clearly define that if a university offers "such-and-such" courses, then a graduate student who took these courses can be accredited as an oil chemist. Of course, the content of each course also should be clearly defined. As I have written to

JAOCS before, a course in lipid chemistry for graduate students who will make a career in biomedical research should be entirely, or at least significantly, different from a course in lipid chemistry for those intending to engage in oil processing or food research and development utilizing fats and oils as ingredients.

Pelick: We as chemists need to clean up our act. As scientists, oil chemists have roles to play in the moral fiber of a society. One lies in the ethics and professionalism they bring to their craft; another is showing the responsibility to improve public image. We as an organization must make a strong commitment to our scientists in the development of excellent continuing education programs. Nobody can teach the fats and oils profession as well as we can. We should offer to train and upgrade chemists and technicians in fats and oils, lipids and related areas of our profession. It wouldn't hurt even to teach the improved methods of the book on a regular basis. We also should make an effort at public awareness of AOCS and its activities. Not improving the image of our profession, I believe, is lacking value from our very own organization, for which we had joined and supported loyally. There must be something that's good to say about "fat and oil chemists." We have a strong and vibrant, nearly

# Congratulations on your new home, best of luck in all your future endeavors.



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80-year-old society, but with little or no public image. Are we missing the boat? Even today in a hotel lobby, one asks, "What is an oil chemist?"

Rossell: AOCS might become an international advocate for the oils and fats industry, putting forward measured, considered, technical views to international bodies like the United Nations, etc., representing worldwide views, not just those of the American industry. In this respect, the society may con-

sider dropping the word "American" from its title. It could establish an office or bureau to advise members on the availability of research funding on a worldwide basis, but should not become a clearinghouse for allocation of funding from different sources.

Uzzan: It is difficult to foresee what new activities should be considered in the 20 coming years. Of course, online teletransmissions of data, images and sounds probably will change our communications

tools. Direct and personal contacts will prevail, and we may imagine that the annual meetings always will have the same, if not an increasing, success. But it is prudent to prepare ourselves to new types of written texts, their transmission and their storage. In addition, a speeding-up of scientific and technical progress may be expected, with new products for the final consumer and also new problems for the industry. Our society will need to show increased flexibility for adapting to this kind of situation.

## Four are Donor Council members

Approximately \$300,000 to help finance construction of the society's new headquarters came from the AOCS fund-raising campaign, "Building for the Future."

One individual and three corporations contributed \$25,000 or more each, qualifying as Foundation Donor Council members. As such, Stephen S. Chang, Archer Daniels Midland Co., Emery Chemicals and Kraft Inc. each will have a room named for them in the new building.

### Stephen S. Chang

AOCS member Stephen S. Chang and his wife, Lucy D. Chang, were the first contributors at the Foundation Donor Council level.

Chang joined AOCS in 1952 and served as AOCS president in 1970. A native of Beijing, China, Chang received his B.S. in chemistry from National Chi-Nan University in Shanghai in 1941. During World War II, he worked in a Chinese factory converting tung oil to gasoline. In 1947, he left China for the U.S. for graduate studies at Kansas State University. He received his M.S. degree in organic chemistry there in 1949, then moved to the University of Illinois, where he earned his doctorate in food technology in 1952.

He subsequently joined the faculty at Illinois as a research



Stephen S. Chang

associate, followed by employment with Swift & Co. and A.E. Staley Co. In 1960, he left private industry to become an associate professor of food science at Rutgers University, where he has been ever since. He was named full professor in 1962 and chairman of the department in 1977, a position he retained for nine years. In 1986, he chose to return to the food science faculty to concentrate on his research.

He has worked extensively in lipid chemistry and flavor chemistry of foods. This work has included identifying the soybean oil compounds responsible for objectionable beany flavor and defining the chemical reactions leading to formation of these compounds. He has developed techniques for purifying edible oils and patented a

process for producing an oil/water emulsion suitable for intravenous feeding. His studies have led to a manufacturing technique for odorless, tasteless antioxidants derived from rosemary and sage for preventing oxidation in triglyceride oils and essential oils. He has published more than 110 papers and book chapters and holds patents on flavor compounds, natural antioxidants and the flavor stability of foods. In addition, he has worked extensively to advance food science and technology education and research in Taiwan and China.

In honor of his donation, the main floor library of the new head-quarters will be named the Stephen S. Chang Room. A plaque naming both Chang and his wife will be placed on the wall in the building's main entryway.



Archer Daniels Midland Co. Archer Daniels Midland Co. (ADM) is a leading worldwide merchandiser of processed grain products and grains. ADM is a major producer of vegetable oils, bakery and pasta flours, fruit sugars from corn,