

Jack K. Crandall

“Retired” is an inappropriate descriptor for Jack Crandall. Now, nearly three years after his official retirement date, he continues to serve as advisor and acting associate chair of the chemistry department. After a remarkably successful career as researcher, mentor for graduate students, and teacher of numerous undergraduates, Jack has unselfishly devoted his considerable administrative talent to promoting the chemistry department to alumni, industry, and friends.

Jack was born near Filmore, California, where he lived until going to Berkeley to pursue a degree in chemistry, thus forsaking a career in baseball. He won a prestigious National Institute of Health predoctoral fellowship to pursue graduate work in organic chemistry at Cornell with Jerry Meinwald. He also won an NIH postdoctoral grant to work with Bill Johnson at Stanford, devising reactions that model the complicated but key “zipper” multicyclization reaction in the biosynthesis of steroids.

In 1964 he started his independent research career at IU by examining a number of interesting reactions, including intramolecular -ene processes and the base induced elimination of epoxides to make allylic alcohols. This latter reaction is the standard method to produce substrates for the asymmetric epoxidation reaction, a process for which a Nobel was recently awarded.

Jack continued to work on epoxides as well as oxidations of highly unsaturated compounds and on small rings to produce an amazing variety of materials as a result of thermal, photochemical, and acid catalyzed reactions. He also pursued organometallic induced cyclization reactions as well as structural analyses utilizing carbon and oxygen nuclear magnetic resonance spectra. Finally, he addressed synthetic approaches to interesting natural products utilizing the methodology developed in his laboratories. His research efforts resulted in more than 100 publications in highly respected, refereed international journals.

In addition to his research activity, Jack chaired the committees of more than 40 graduate students, and served on countless others in the best traditions of the scholar-mentor. He was demanding of careful experimentation, detailed descriptions, and good grammar. He drew the best from students. He was supremely skeptical of results and interpretations and insisted on replication and careful analysis. Moreover, he assessed the standard interpretations of chemical pathways based on classical physics as merely “mnemonic devices.” Always aware that chemical mechanisms can only be disproved, he constantly, and correctly, challenged his students and colleagues on their interpretation of data.

Jack’s contributions to the teaching responsibilities of the chemistry department included lecture and laboratory classes in undergraduate organic chemistry. His concern for laboratory skills led him to generate a lab manual that was in use for more than 15 years and a syllabus for an advanced lab that changed little since his original effort.

With the support of a 1995 Active Learning Grant, Jack developed Web-based instructional modules for use in beginning organic chemistry laboratories. The modules helped students to visualize and become comfortable with the techniques they would be employing in lab procedures.

But most of all Jack will be remembered for his graduate class on interpretation of spectra. Using the Socratic method, he cajoled and sometimes intimidated generations of IU organic graduate students and an occasional undergraduate in an effort to hone their skills in puzzling out structures that matched the spectra provided. While some students may have been terrorized by his approaches, the results were gratifying and never cost Jack the admiration and respect of his students and colleagues.

Besides his scholarship and teaching activities, Jack served for 13 years as chair of the graduate admissions and graduate standards committees in the department, and was in addition associate chair to three different chairmen. In these roles he often served as negotiator *par excellence*, saving the department countless days and unwarranted distraction. His commitment to the department also included many years of scheduling associate instructors for a plethora of laboratory courses and discussion sections, a task that consumed a week out of each semester and was executed with a degree of concern and fairness that demands recognition. In addition he wrote and administered grants, such as the Graduate Assistance in Areas of National Need program (three times), and he still continues to establish greater communication with graduates of the chemistry department. Jack has been honored by an Alfred P. Sloan Research Fellowship, a John Simon Guggenheim Fellowship, and by a Fulbright Research Scholarship. In addition he has been an exchange scientist in the National Academy of Science–Yugoslav Council of Academics joint program, and worked with colleagues at various academic institutions in Zagreb. He was also the recipient of IU Teaching Excellence Recognition Awards in 1997 and 1998, and in 2001 he received the Leo F. Solt Distinguished Service Award of the University Graduate School.

Among Jack’s many other accomplishments are his skills in the French language, culture, and cuisine. He spent sabbaticals and summers collaborating with outstanding chemists in various prestigious

institutions around France, and, in more recent years, even gave chemistry lectures in the local tongue. And though his mother was an excellent chef of Mexican morsels, Jack's kitchen and garden provide rich, outstanding French fare. His choice of wines often includes a Pouilly Fuissé or a Côtes du Rhone. However, Jack is not a total Francophile as his tastes in cars are more Germanic and Swedish, and he relishes a good California cab with a reasonable price tag. An avid sports fan, Jack retains season tickets to IU basketball and has endured many seasons of IU football. In his earlier days he could be caught, literally, playing pitch and catch on the lawn to the west of chemistry.

To the great benefit of the chemistry department Jack remains in Bloomington with his wife, Judy, who is an administrative assistant in the department. His daughter, Laura, a talented textile artist, grew up in Bloomington under his watchful eye and now lives happily married in New York State. In summary, Jack has had a significant impact on his colleagues. Ever ready to become involved and promote scholarship and teaching through administrative and individual effort, Jack has set an example which few can match. In addition to his many research and teaching triumphs, Jack personifies the best tradition of the infrastructure which is necessary for the survival of an organization.

Joseph J. Gajewski