Josef Michl Wins the 1994 IAPS Award

Josef Michl is extremely deserving of the IAPS Award in Photochemistry. As a former collaborator of Josef Michl, I appreciate Josef's broadness of chemical knowledge. He is truly a master chemist, not only of photochemistry, but in many other areas as well. My writing of this congratultory letter has been made much more difficult by the appearance of Josef Michl's autobiographical sketch in the November '92 issue of this Newsletter. Since Josef has already done such an excellent job of summarizing the significant events in his chemical life, I can only add some of my own personal reflections of what makes the award winner such a deserving receipient.

I first came to know of Josef's work through his now famous article in Topics of Current Chemistry in which he summarized his theoretical interpretation of the location of potential energy minima of excited states, the locations of funnels, and barriers on excited state surfaces (*Topics Curr. Chem.*, **1974**, *46*, 1). This work was cited in almost all publications which I was reading at the time and, in my opinion, still stands as the landmark work in this area. When I was looking for a postdoctoral position a few years later, I was very familiar with Josef's work on a variety of matrix isolated species. One day, I happened to read a JACS communication concerning the NMR spectra of matrix- isolated species (*JACS*, **1978**, *100*, 8038) and I knew where I wanted to go for my postdoctoral studies. What impressed me most about Josef was the level of his scientific contributions in comparison to his youthful age. A few months earlier, the now infamous issue of JACS had appeared in which the Michl group (and by implication, Josef) explained everything that anyone could ever want to know about MCD from the front cover to the back cover of a single issue (*JACS*, **1978**, *100*, 6801-6898). This confirmed my decision that Josef's group was the place to postdoc. However, Josef must have recognized something different about me upon my arrival in Utah, since I never did a single experiment which related to either low temperature NMR or MCD during my tenure with him.

All mentors utter expressions (i.e., "isms") to their students that mean absolutely nothing to the mentor, but make significant impacts upon the students. I would like to repeat a couple of these expressions (which I will refer to as Josefisms), because they reveal quite a bit about his character. The first Josefism was heard shortly after my arrival in his laboratory. Josef was congratulating one of the group members about their recent research results to which he said "That result did not arise from luck. Good people make their own luck." I have repeated this expression many times to my own students and colleagues because these words are so perfect. These words certainly apply to Josef Michl himself, as attested to by this award.

The next Josefism impacted me the most because of the work that I and many others have had to do in his labs. One day, Josef looked me directly in the eye and told me that "No experiment should not be done just because it is impossible to do." The implication of this Josefism was clear. I had to do the experiment. Period. In order to convey the difficulty of the experiment, I must give a short description of what was required. Josef and I had contrasting theories concerning the kinetic behavior of our (Our is used loosely in this sentence) methylene-bridged 1,8-perinaphthyl biradical. Resolution of whose theory was correct required that the concentration of this biradicaloid species be measured concurrently by both ESR and UV-vis absorption methods. After a minimum of three months of work to assemble the required experimental equipment (an experiment which took all of my available time), I was finally able to steal a UV-vis spectrometer from another group and move it into the small room where the ESR was housed. The room was so crowded that I had to crawl through the table carrying the UV-vis spectrometer in order to operate the ESR spectrometer and to move the cryostat from one instrument to the other. Fortunately for me, the fire marshall could not see behind the closed locked door which was necessitated because the experiment had to be performed in the dark. The result of the experiment was predictable in that Josef's theory was the correct interpretation of the experimental data. My only consolation was satisfaction that I could crawl through a dark obstacle course for and entire weekend without wrecking any equipment.

The final Josefism that I would like to relate concerns Josef's thoroughness in checking all details of his publications. Those who have worked in his group know that all projects require only "two more experiments". When I started my first (and what was to be my only) project, I was told that there were only "two more experiments" to complete the work necessary to begin writing the manuscript on the above mentioned biradical. Josef asked me if I would be so kind as to complete these "two experiments" for the

previous postdoctoral student whose time in the group had expired. In return for the postdoctoral student's training, I would not have my name on this paper. As a young and naive student, I must have misunderstood what Josef meant by "two experiments", since I made steady progress during my two year tenure with Josef as evidenced by our reports at National ACS Meetings, etc. After obtaining my current position in 1983, I turned the project over to an aspiring graduate student who has since earned his Ph.D. degree on this project. Interestingly, this work has never been published and Josef communicated to me within the past month that there were only "two more experiments" to be done before he will write up this work. This degree of thoroughness makes his hundreds of publications even more amazing, since I can personally attest that all manuscripts emanating from his group receive the same degree of thoroughness and internal review as this piece of work.

In closing, I must again cite Josef not only for his photochemical work, but also for his multitude of other work. As Editor-in-Chief of Chemical Reviews, he has made the journal into his own image. He has been elected into the United States Academy of Sciences. He was recently well-toasted and well-roasted at a 50th birthday party celebration while he was still at the University of Texas. The IAPS award is only another in the long and continuing string of awards that I am sure that Josef will receive in his distinguished career.

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