



## Preface

## Special issue on Reaction Mechanisms in honor of Professor Ralph Pearson on the occasion of his 90th birthday

In the late 1990s, Barry Lever suggested to me that it was time for a special volume of *Coordination Chemistry Reviews* on Inorganic Reaction Mechanisms and we used that volume as an opportunity to honor my colleague Professor Emeritus Ralph G. Pearson on the occasion of his 80th birthday. Now, more than 10 years later, we have the opportunity to generate another such volume, this time in honor of Ralph's 90th birthday (January 12, 2009). As many will know, Ralph was a faculty member of the Northwestern University for about 30 years before moving to the University of California, Santa Barbara in the mid-1970s, with which he has been associated for over 30 years as well. He formally retired from UCSB in 1989, but has continued to be professionally active since then, coming into his office in the Department of Chemistry and Biochemistry daily for several hours to work on theoretical projects. During the past decade this work has resulted in eight publications in international journals, mostly with him as the sole author. Although he walks more slowly now, and with a cane, Ralph's sense of humor stays sharp and he is always a good source for off-beat, and sometimes a bit off-color, jokes.

As I noted in the earlier issue, the field of Inorganic Chemistry owes a great deal to Ralph, both as a participant in seminal research and as an organizer and interpreter of information. For example, several generations of chemists learned their kinetics from various editions of Pearson's book "Kinetics and Mechanism" (with Arthur Frost and later John Moore) and were educated in the nuances of metal complex reaction mechanisms from Fred Basolo and Ralph Pearson's two editions of "Mechanisms of Inorganic Reactions". His work on hard and soft acids bases continues to have a broad influence.

I asked him recently for some words of wisdom and he reminisced that he used to offer the following advice to departing graduating students.

- (1) "Be certain of the identity and purity of the compounds with which you are working."
- (2) "When presenting a seminar or talk: Never put too much information on any slide and never talk longer than a micro-

century." (PCF: I remember another piece of advice from Ralph: "an empty bladder is more important than a full slide tray".)

- (3) "For those interested in an academic career, it is important to go to meetings and present papers even if you are not invited. Harry Gray used to claim that my advice was that" all publicity is good publicity; "however, I'm not sure I ever told him exactly that. Harry also has claimed that Fred Basolo's advice was to pay no attention to what I say."

Ralph also commented that as a retirement strategy it is a very good thing to be a theoretical chemist, and that he has concentrated on this since he retired. "I'm able to do the kind of work I'm interested in and get just enough support from the Department to do it". He also commented that his motivation throughout his career has been "to improve" himself. When approaching a scientific issue, he wasn't interested in finding some absolute truth but to understand the issue to his own satisfaction. "Sometimes even coming up with the wrong theory helped me understand. After deciding I understood something, I was satisfied and wanted to move on to something more interesting. Spending a lot of time proving or disproving my theory really didn't really interest me." In this context, he also quoted Mark Twain (from *Life on the Mississippi*): "There is something fascinating about science. One gets such wholesale returns of conjecture out of such a trifling investment of fact."

As always, Ralph is fun and interesting to chat with.

When I suggested to various individuals that the current special issue of *Coordination Chemistry Reviews* was under consideration, the response was enthusiastic, and this issue includes 12 articles from former students and present colleagues as well as other interested individuals from around the world. The range of interest is broad, although focusing mostly on reaction mechanism chemistry. These articles sample topics of importance to marine and bioinorganic chemistry, actinide compounds, homogeneous catalysis mechanisms, low temperature rapid scan techniques, the mechanisms of electron transfer processes, photocatalytic CO<sub>2</sub> reduction, hydrogen storage, etc. The breadth of such topics illustrates the breath of Ralph's influence on chemistry today.



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