

**Fred Basolo (1920–2007)**

Fred Basolo<sup>[\*]</sup>, the Charles E. and Emma H. Morrison Professor of Chemistry, Emeritus, at Northwestern University died on February 27, 2007, at the age of 87. He was born on February 11, 1920, in the small southern Illinois coal-mining town of Coello, the youngest son of Italian immigrants. He always credited his



parents for teaching him through their example the values that served him well throughout his life, the most important being honesty, dependability, and hard work. He received a Bachelor of Education degree from Southern Illinois Normal University (now Southern Illinois University) in Carbondale, Illinois, where his professors, particularly James Neckers, urged him to go to graduate school. Fred did so and earned his PhD (1943) at the University of Illinois with John Christian Bailar, Jr., with studies on the coordination chemistry of platinum complexes.

From 1943 to 1946, Fred worked at Rohm and Haas on then-classified projects for the war effort; one of these was to develop a synthetic mica. Fred had always loved teaching, though, and in 1946 he signed on as an instructor at Northwestern University. He remained associated with the chemistry department at Northwestern for more than 60 years and helped build a consistently top-ranked program in inorganic chemistry.

Fred made major contributions to almost every area of modern inorganic chemistry.<sup>[1]</sup> In addition to seminal work in both organometallic and bioinorganic fields, he will long be remembered for landmark research that elucidated the mechanisms of ligand-substitution reactions of metal complexes in solution. Much of the work on mechanisms was done in collaboration with Ralph Pearson, who also joined the faculty at

Northwestern after the war. By combining forces, Fred and Ralph pioneered a new way of thinking about inorganic reactions; indeed, every inorganic chemistry textbook features their work on associative and dissociative ligand-substitution processes.

In his later years, Fred would often recall fondly his trips abroad and the many friends he made around the world. We particularly remember his stories of his trips to Italy; he was very proud that he could speak Italian. Of course, as Fred himself pointed out, his Italian was learned from his parents, poor farmers from northern Italy, and this *piemontese* was a very different dialect than that spoken in Rome, Florence, or Milan! Nevertheless, Fred was able to communicate and the warm reception from his Italian colleagues meant a great deal to him.

Even after he retired, Fred still appeared at Northwestern's Technological Institute (or "Tech") practically every day. He worked mornings in his office, joined the faculty for their regular brown-bag lunch, took in the Friday inorganic seminar, and then headed home. Fred could be found at Tech on Saturday mornings, too, actively participating in the weekly "BIP" meeting. For Fred's students and co-workers at Northwestern, some of the most lasting memories are associated with BIP and Fred's role in those meetings. BIP (**B**asolo–**I**bers–**P**earson) began as the joint group meeting of the Basolo and Pearson groups, and when Jim Ibers later joined the faculty, his group joined in too. Eventually, BIP became a forum for informal research discussions among all of Northwestern's inorganic groups. Fred was first and foremost a teacher: he reminded generations of students at BIP that you can never prove that a mechanism or theory is correct, only that it is wrong, and that balancing chemical equations never goes out of style! One of Fred's favorite pastimes was to bet students who predicted the results of some experiment that the outcome would not be what they thought. The amount of the bet was always 25 cents. Although he did not necessarily provide a substitute prediction, Fred loved to emphasize that one should be open to unexpected outcomes. Fred often won, and one of his favorite "awards" was a

plaque with a quarter on it that former student Steve Strauss gave him on his seventieth birthday.

Fred was honored many times over the course of his long career. Among his awards was the Gibbs Medal, which he proudly displayed as it was given by his home section (Chicago) of the American Chemical Society (ACS). He also won several national ACS awards, including the Priestley Medal, and he served as President of the ACS in 1983. He was elected to the National Academy of Sciences in 1979 and as a Foreign Member of the *Accademia Nazionale dei Lincei* (Italy) in 1987. He received many honorary degrees, notably including one from the University of Turin, in his parents' native Piedmont region of Italy. He was a regular at the Inorganic Gordon Research Conference, which he co-founded in 1951, and he served as Chairman of the GRC Board of Trustees in 1976. He trained 58 PhD students and 66 postdoctoral fellows, and countless others benefited from his suggestions and mentoring.

Fred was exceedingly proud of his four children and eleven grandchildren. He loved to tell of their most recent accomplishments, and he was particularly pleased that his children all became educators. His beloved wife and constant supporter, Mary, who joined him for many of his trips over the years, died in 1997.

Fred wrote in the preface to his autobiography, "*Think of the enviable time I have had, watching inorganic chemistry grow and reach its current status and importance.*"<sup>[2]</sup> In fact, inorganic chemistry grew the way that it has because Fred did more than just watch. Not only did his research into inorganic reaction mechanisms change the course of a field but, perhaps more importantly, he was a wonderful teacher, mentor, and friend. His students and co-workers, his faculty colleagues at Northwestern, and so many others who came to know Fred over the years enormously benefited from his support, encouragement, and wise counsel.

Harry Gray, John S. Magyar  
California Institute of Technology

[\*] Photo taken by Mitch Jacoby/C&EN.

[1] *On Being Well-Coordinated: A Half-Century of Research on Transition Metal Complexes. Selected Papers of Fred Basolo* (Eds.: F. Basolo, J. L. Burmeister),

World Scientific Publishing: River Edge, NJ, **2003**.

[2] F. Basolo, *From Coello to Inorganic Chemistry: A Lifetime of Reactions*,

Kluwer Academic/Plenum Publishers: New York, **2002**.

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