

Book review

Frontiers in free radical chemistry; edited by W.A. Pryor, Academic Press, New York, 1980, xiii + 385 pages, \$ 27.00

This book brings the proceedings of a symposium held in April 1979 at Louisiana State University in honor of the 50th anniversary of the Exxon Research and Development Laboratory in Baton Rouge. The topic of free radical chemistry was covered quite broadly, with four talks devoted to the theory of free radical reactivity, five to gas phase reactions, pyrolysis and cracking, three to fuel chemistry, oxidation, peroxides and inhibition and three to organic processes.

The only paper in this collection which will be of direct interest to organometallic chemists is the one on "Structural and Mechanistic Aspects of Metal Complexes in Free Radical Chemistry" in which J.K. Kochi reviews his extensive, long term research in this area, with emphasis on his own work which was reported in the last ten years. This excellent 57 page review focuses on four topics: structural types of metallo-radicals; interactions of free radicals with metal complexes; electron transfer and charge transfer processes; redox chain reactions in metal-catalyzed processes. It has become recognized in recent years through the work of Kochi and others that radical processes are far more important in organometallic chemistry than had been thought previously, and this review will be useful and instructive reading to all who are concerned with organometallic reaction mechanisms.

Direct photoreproduction of the manuscripts was supposed to result in rapid publication, but 18 months elapsed between the time the symposium was held and the publication of this book. This potpourri of aspects of modern free radical chemistry should find a place on chemistry library shelves.

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