

Book review

INORGANIC COMPOUNDS WITH UNUSUAL PROPERTIES - II

(Advances in Chemistry Series No. 173), R. B. King, ed.,

American Chemical Society, Washington, D. C., 1979, xii + 418 pages, \$43.50:

This volume is a collection of thirty one research articles from a February, 1978 symposium at the University of Georgia whose purpose was "to stimulate communication between scientists concerned with the synthesis, characterization, and reactivity of inorganic, coordination, and organometallic compounds and scientists concerned with applications of these compounds in molecular catalysis and in the conversion, production, and storage of energy". All of the articles could be viewed as fitting within this purpose and most of the articles deal directly with the topics mentioned above. Many of the articles represent summaries of recent, essentially state-of-the-art research accomplishments, but few communicate really new material that could not be found in other research articles by the various contributors. But the collection of timely articles included in this volume does bring together some interesting contributors; in photochemical energy storage, for example, F. K. Fong, H. B. Gray, and D. G. Whitten, with their collaborators, have articles on their latest photoredox chemistry. R. Pettit and his collaborators have an article on their use of $\text{CO} + \text{H}_2\text{O}$ in place of H_2 in catalytic reductions, while the three articles by P. C. Ford, R. B. King, and D. J. Darensbourg and their colleagues have the phrase "water gas shift reaction" in the title and are concerned with the catalysis of $\text{CO} + \text{H}_2\text{O}$ to $\text{H}_2 + \text{CO}_2$. The organometallic catalytic chemistry of CO is rounded out by an article by C. P. Casey on mechanistic work relating to CO reduction to hydrocarbons. These articles on catalytic chemistry of CO along with the more physical studies detailed by K. J. Klabunde (CO interaction with oxides) and by M. Dartiguenave (CO/phosphine Ni(II) complexes) comprises the field having the greatest in depth coverage in this volume. But as with most books of this kind, the fields covered better represent the interests of the thirty or so contributing researchers than any one central theme. The field covered is too broad for this book to represent an in-depth treatment of any of it. Rather, the articles are contributed by some very good individuals working on different aspects of the various fields. Inorganic and organometallic chemists should glance through the Table of Contents to find out what kinds of inorganic compounds the

symposium organizers feel have "unusual properties", keeping in mind that this volume is the sequel to INORGANIC COMPOUNDS WITH UNUSUAL PROPERTIES - I (Advances in Chemistry Series No. 150), published in 1976. Libraries should purchase this new volume for their reference shelves; individuals should be aware that reprints of particular articles are often available from individual authors, if \$43.50 is too much a sacrifice for the entire bound collection.

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