

Book reviews

Stability and reactivity of crown-ether complexes; by F. de Jong and D.N. Reinhoudt, Academic Press, London, 1981, 163 pages, £12.80, \$31.00.

Selected articles from "Advances in Physical Organic Chemistry" are to be issued separately by Academic Press as a new series of paperbound volumes. This, the first volume of the series, appeared first in 1980, and the reprint had a London publication date of November 1981. It deals with an area in which there is much current activity, so from the publisher's viewpoint it is well-chosen for testing the market.

The article focusses principally on the reactions of anions in the presence of crown-ether complexed cations. A similar field was surveyed by C.J. Liotta in "Synthetic Multidentate Macrocyclic Compounds" edited by R.M. Izatt and J.J. Christensen, and both articles survey the reactions as well as addressing questions of reactivity. The present volume also includes coverage of complexes of crown-ethers with protonated amines, arenediazonium salts, and neutral molecules, and a chapter of 37 pages is devoted to the complexes of racemic salts with chiral crown ethers. These topics were not included in "Coordination Chemistry of Macrocyclic Compounds" edited by G.A. Melson (1979) nor in Izatt and Christensens' collection of reviews, so the present volume makes essentially comprehensive the coverage in book form of the literature on crown ethers up to the late nineteen seventies. Before proceeding to the organic applications, the article by De Jong and Reinhoudt commences with useful reviews of the thermodynamics and kinetics of crown-ether complex formation with metal ions, so the article as a whole provides an introduction to the physical principles as well as a survey of the applications.

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Gmelin Handbuch der Anorganischen Chemie — Handbook of Inorganic Chemistry, 8th edit., Rh — rhodium, Suppl. Vol. B1: Compounds of rhodium, Gmelin-Institut für Anorganische Chemie der Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V. and Springer Verlag, Berlin—Heidelberg—New York, 1982, xviii + 222 pages. 47 ill., DM720.- (ISBN 3-540-93464-2).

The last Gmelin handbook on rhodium and its complexes was published as long ago as 1938 and in the interim rhodium has become second only to platinum in terms of its industrial demand within the platinum group metals. The supplement volume on rhodium continues the high standard of the traditional Gmelin system with Part A involved with the element and Part B with a description of its