

Briefly this is a book which will be of primary interest to theoretical chemists, but inorganic and organometallic chemists will also find it a useful source of new ideas, and unexpected comparisons. As always in this series the book is well produced, with good illustration and few typographic errors. The series has now reached its 150th volume and fortieth anniversary; it remains an excellent source of timely reviews which should be accessible in all major chemistry libraries.

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*Gmelin handbook of inorganic chemistry*, 8th edition, *Sc, Y, La-Lu — Rare Earth Elements*, Springer-Verlag, Berlin, etc., *Volume A6a, Y, La, and the Lanthanoids. Geochemistry: Sedimentary Cycle. Metamorphic Cycle*, xi + 424 pages, DM1903, 1988. ISBN 3-540-93571-1. *Volume A6b, Y, La, and the Lanthanoids. Geochemistry: Hydrosphere. Atmosphere. Cosmo- and Geochemical Cycles. Balance*, xi + 207 pages, DM 989, 1988. ISBN 3-540-93548-7.

The two-part volume under review here completes the Gmelin coverage of the geochemistry of the lanthanides which was started in Volume A5 (1981; in German). It is only fair to state at the outset of this review that neither of these volumes is likely to be of more than passing interest to any reader of *J. Organomet. Chem.*, and their primary importance is clearly to geochemists. Indeed, it is not even worth listing in detail the contents of these volumes, except to state that Volume A6a considers the sedimentary and metamorphic cycles for lanthanides within the lithosphere, and Volume A6b deals with the lanthanides in the hydrosphere and the atmosphere, and concludes with a discussion of geochemical and cosmochemical cycles. However, as general background books (and, perhaps more importantly, for reference when teaching), these volumes are not without their points of interest. The second volume (A6b) is of the most general interest, in that the occurrence of the lanthanides in sea water and in the atmosphere has direct chemical consequences, and removal and precipitation techniques are discussed.

Both volumes show the technical excellence of production which is expected of the Gmelin Handbook, and the authors (R. Ditz (A6a), B. Sarbas (A6a and A6b), P. Schubert (A6a) and W. Töpper (A6a and A6b)) have performed an exhaustive task. One minor point of criticism: in the combined text length of 631 pages, there are only six Figures. The use of graphical representation for some of the data discussed would have made the text and arguments more accessible - one rather got the feeling that Figures were only included where they had been used in the literature, and that the overview that combining data and creating new graphical presentations would have given was missing.

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