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Heteropoly and isopoly oxometalates. By M. T. POPE. Pp. xiii + 180. Berlin, Heidelberg, New York: Springer-Verlag, 1983. Price DM 124.00, US \$49.30.

The author is not only an acknowledged authority and one of the most prolific workers in this complex field, but, in 1968, was co-author of the classic review on vanadates. With its comprehensive coverage of polyoxometallates as a whole, it is therefore inevitable that this present monograph will be regarded as the definitive work on the subject.

After a brief historical introduction, the available investigative techniques and preparative methods are critically described, followed by a survey of structural types, properties and applications. The isopoly- and heteropolyanions, along with their redox chemistry and organo derivatives, are then thoroughly reviewed, before concluding with more speculative suggestions about mechanisms of reactions and the likely direction of future work. Chemists – and crystallographers – aspiring to work in the field will be encouraged to know that the rather surprising paucity of *isostructural* polymolybdates and polytungstates has still to be satisfactorily explained! The monograph includes a useful appendix on the thorny problem of nomenclature.

The book is lucidly written, and the diagrams are carefully drawn, though the details of structures as complicated as these can only really be appreciated by using models. Access to the literature is facilitated by an extensive list of references (771).

Unfortunately the price is too high, and the subject probably too esoteric for the book to be widely purchased by individuals; but it is clearly a 'must' for libraries of inorganic chemistry.

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Minerals of the world. Compiled by P. LOF. A chart, 86 × 138 cm. Amsterdam, New York: Elsevier Science Publishers, 1983. Price Dfl 30.00, US\$13.00.

Two hundred pictures of mineral specimens have been assembled in a strikingly beautiful and brilliantly coloured array, well designed to fascinate even the viewer with little knowledge of mineralogy. The chart bears closer examination well, as its scientific value is also high. The specimens are grouped by chemical type (elements, sulphides, etc.) and have simple captions giving names and place of origin. Much more information about each specimen is given in a concise table on the right-hand side; this includes toxicity and economic value as well as standard physical properties. Along the bottom are line diagrams of crystal forms, most of which are cross-referenced to an appropriate example in the main chart. Both these diagrams and the table of properties are skilfully arranged to be easily read at close inspection without distracting from the overall appearance of the chart. Clearly something has to be omitted; what is

perhaps most noticeable is the lack of information about internal structure of minerals. Thus anatase, brookite and rutile are presented in an alphabetical listing of oxides, with no indication as to how they differ structurally from one another. One result of this specialization on external form is that the table of Bravais lattices does not relate clearly to the rest of the chart which is otherwise excellently self-consistent.

These are small criticisms of a magnificent wall chart, whose beauty will certainly help make it an effective teaching tool. Substantial discounts are offered for orders of ten or more.

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Books Received

The following books have been received by the Editor. Brief and generally uncritical notices are given of works of marginal crystallographic interest; occasionally a book of fundamental interest is included under this heading because of difficulty in finding a suitable reviewer without great delay.

Molecular ions: spectroscopy, structure and chemistry. Edited by T. A. MILLER and V. E. BONDYBEY. Pp. xi + 278. Amsterdam: North-Holland, 1983. Price US \$53.25, Dfl 125.00.

Structural studies on molecules of biological interest. Edited by G. DODSON, J. P. GLUSKER and D. SAYRE. Oxford: Clarendon Press, 1981. The price of this book [reviewed in *Acta Cryst.* (1983), C39, 141–142] has been reduced from £39 to £18.50.

Mathematical techniques in crystallography and materials science. By E. PRINCE. Pp. 192. New York, Heidelberg, Berlin: Springer-Verlag, 1982. Price DM 55, ca US \$25.60. A review of this book, by R. Diamond, has been published in the January 1984 issue of *Acta Cryst.* Section A, pp. 86–87.

Kinetics and equilibrium in mineral reactions. Edited by S. K. SAXENA (*Advances in physical geochemistry*, Vol. 3.) Pp. x + 273. New York, Heidelberg, Berlin: Springer-Verlag, 1983. Price DM 108.00, US \$41.90.

Nucleic acids: the vectors of life. Edited by B. PULLMAN and J. JORTNER (Jerusalem symposium of 1983). Pp. x + 578. Dordrecht: Reidel, 1983. Price Dfl 185.00, US \$74.00.

Modern syntheses of cobalt(III) complexes. By M. SHIBATA. (*Topics in Current Chemistry*, No. 110.) Pp. xi + 118. Berlin: Springer-Verlag, 1983. Price DM 68.00, US \$27.00.