

Book Review

Dictionary of Inorganic Compounds

Edited by J. E. Macintyre, Senior Editor, published by Chapman & Hall, London, 1992, 6000 pp. in five volumes, £2750.00, ISBN: 0 412 30120 2.

This series of volumes represents a major achievement by the Editors in providing an invaluable reference for all scientists. This modern, authoritative and comprehensive work of reference will become primary source material for anyone interested in inorganic chemistry. The arrangement and layout of the material is uniform with that of the renowned *Dictionary of Organic Compounds*. As a chemist, I found the books to be very fascinating, extremely useful for reference in research and I would like to congratulate the Editors on producing a clear and systematic series brilliantly conceived and expertly produced.

The *Dictionary of Inorganic Compounds* contains physical, structural and bibliographic data on about 42000 compounds as well as providing synthetic routes and relevant hazard data. It includes: the elements themselves, fundamental inorganic compounds, coordination compounds, bioinorganic compounds, industrially important substances, laboratory chemicals and compounds of particular historical, physical, chemical or biological interest.

These books are undoubtedly of considerable importance for anyone interested in inorganic chemistry. As well as being used by inorganic chemists it will be extensively consulted by physical chemists, crystallographers, material scientists, mineralogists, geologists, organic chemists, biochemists and those working in the biological sciences, as it describes a wide range of compounds such as minerals and ores, starting materials, catalysts, synthetic reagents for organic and organometallic reactions. Special areas covered range from inorganic materials such as cluster boranes, high temperature superconductors, semi-conductors, refractories and ceramics, pigments and alloys through to bioinorganic compounds.

The *Dictionary of Inorganic Compounds* is extremely simple and practical to use. Its entries are easily located and no special effort is required to search the contents. The ordering by empirical formula makes it very straightforward to search. Organisation of entries is

such that it may inspire new fields of research or new methods of preparation. Four different indexes provide alternative access routes to the data. The *Index of Commonly Occurring Structural Types* covers non-molecular compounds under such headings. Each heading is accompanied by an artist-drawn ball and stick diagram showing lattice types. Entries for compounds not covered by this index carry a brief description of the structure in the entry itself. The *Name Index* lists in alphabetical order all names and then offers the user an alternative route of entry; it includes IUPAC, CAS, trivial, mineral and trade names, and often several different names for one substance. The *CAS Registry Number Index* includes in numerical order all Chemical Abstracts Service (CAS) Registry Numbers including some duplicated and replaced numbers. The *Element Index* lists in formula order under each element of the compounds containing that element.

The *Dictionary of Inorganic Compounds* provides detailed numerical and textual data as well as bibliographic references so that in most cases it is not necessary to consult further reference sources. It often proves to be a one-stop reference source, providing all the required information in a single publication. For the more specialised inorganic chemist, this dictionary provides a point of initial access to the primary literature, since each literature citation is labelled to indicate its main content. Reference tags include (among others): synthesis, spectroscopy and structural characterization, hazards, applications, electronic properties: that is to say the answers to the questions of practising scientists.

Thus the overall impression is that the series will be an essential purchase for chemical libraries.

Supplements to the *Dictionary of Inorganic Compounds* will be published each year; each supplement will have cumulative indexes covering the entries in previous supplements.

An Evaluation Pack containing a sample of the title free of charge is available on request from Steve Hawe at Chapman & Hall.

Mirto Mozzon
Università di Padova
Istituto di Chimica Industriale
via F. Marzolo 9
35131 Padua, Italy