

Periodic Table of the Elements, VCH Verlagsgesellschaft, 1986. DM.9.80; £3.50.

This new presentation of the Periodic Table is an excellent production, which all chemists should have in their possession. It is in the form of a two-sided cardboard chart, 28 × 20 cm in size, embedded in strong plastic. It presents the elements (109 in all) from left to right in Groups 1 to 18 according to the new IUPAC proposal, but also shows for each group the old IUPAC numbering and the chauvinistic American numbering. By using both sides, the compilers have been able to present an almost unbelievable amount of valuable information for each element, namely its symbol, atomic weight, atomic number, name (IUPAC), physical state at room temperature, its isotopes (with their natural abundances, and with half-lives of radioactive species), first ionization energy, density, melting point or boiling point, oxidation states in its compounds (with the most important indicated), electron configuration, atomic radius, covalent radius, ionic radius (with oxidation and coordination number indicated), Van der Waals radius, reduction potential, electronegativity (Allred and Rochow) and, where relevant, its biological importance. According to the publishers some 2500 items of information are presented, approximately 25 for each element.

The strongly made chart should stand up to years of regular use, even in the laboratory, and is a bargain. I recommend it very highly.

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Landolt-Börnstein. Numerical Data and Functional Relationships in Science and Technology. New Series. Group III, Vol. 10. Structure Data of Organic Crystals. Subvol. b, C₁₆-C₁₆₈. Springer, Berlin etc. 1985, 652 pages, DM 1470.00, ISBN 3-540-13932-X.

This book represents the second and last subvolume of Volume 111/10, which deals with structure data for organic compounds. It covers compounds containing 16 to 168 carbon atoms, along with indexes, for both sub-volumes 10a and 10b, based on (a) the names of all 5151 compounds dealt with; (b) structural types of cyclic compounds; and (c) Chemical Abstracts Registry Numbers.

For each compound the formula and name(s) are listed, along with the Chemical Abstracts Registry Number, the literature reference, the space group, the cell dimensions, the density, the number of formula units in the unit cell, the volume of the unit cell, and, where relevant, the *R'* value and comments on, e.g., the colour and form of the crystals, solubility, optical data, melting or boiling point, and the structural formula of the molecule.

The volumes dealing with structure data are possibly the least useful of the Landolt-Börnstein series these days, with the increasing on-line availability of much more detailed structural information, but the series as a whole deserves a place in any library seeking to offer a comprehensive information service to physical scientists.

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