

generally obtainable from routinely collected data sets, but it will be useful for specialists.

The section on basic structural features contains much material of interest mainly to chemists concerned with organic and organometallic compounds, but it does include a section on incommensurate and commensurate modulated structures which will certainly be of interest to mineralogists, and the section on precautions against radiation injury ought to be required reading for all users of radiation.

What, then is missing? Mineralogists are concerned largely with crystals formed long ago and far away, and there is almost no mention on crystallography at controlled temperatures or pressures, although of course electron diffraction involves vacuum technology. Such work requires as much, if not more, skill and attention to detail as RTP experiments, and plays a large part in the study of minerals. Site occupation and solid solutions are not discussed, nor kinetic experiments to follow continuous processes, although synchrotron radiation is certainly capable of such research.

'Crystallography' in this context only involves interaction with radiation, excluding radiography, and excludes all other techniques such as goniometry or spectroscopy which give information about crystals, but in the areas which it has chosen to cover, it is a tour de force, and a must for anyone seriously interested in crystal structures and in how they are determined. The 1935 title is still the most accurate description of this international series.

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Ferguson, G. and Trotter, J., Eds. *Structure Reports 1990 vol. 57A Metal and Inorganic Compounds*. Dordrecht, The Netherlands (Kluwer Academic Publishers Group), 1992. vi + 339 pp. Price Dfl. 150.00 (\$82.00; £46.00).

The avowed aim of the I.U.Cr., in whose name this series is published, is to present critical accounts of all crystallographic structure determinations of metals and of inorganic compounds. Details of the arrangements in the volumes, symbols used etc., given in Volume 53A, though occupying only two pages, are not reproduced, which seems an absurd omission, considering the blank areas in the first few pages. [Further details concerning the metals section are to be found in 47A, V11, but mineralogists may be spared this further excursion into other volumes.]

Most of the entries have illustrations of the structure and tables of co-ordinates, interatomic distances and bond angles, apparently photocopied from the original paper, since the typographic styles differ widely. This may prevent the introduction of errors, but the quality of some of the illustrations, *at least in this review copy*, is extremely poor, about ten being seriously defective (e.g. pp. 20 and 307).

On the positive side, mineralogists will find new information from complete structural analyses on nearly a thousand inorganic compounds from ahlfeldite to zirconium vanadium silicates, most with R-factors of 5% or better, including some obtained from neutron powder data or synchrotron radiation, and covering topics as diverse as copper oxide superconductors and the compressibility of stishovite. The structures are grouped as elements, boron hydrides, carbonyls, P-N and S-N compounds, halides, cyanides, oxides, double oxides, hydroxides, sulphides, borates, carbonates, nitrates, phosphates, arsenates, sulphates, perchlorates, iodates, silicates and silicate minerals. An equivalent section with a similar classification scheme deals with some 500 metals and metal compounds.

In the absence of editorial information, it is not clear whether comments in the text are those of the authors or of the editors. For example $Ce_4Pt_{12}Sn_{25}$ [p. 18] 'high thermal parameters for Sn(3) may indicate disorder of this site', is not bracketed, whereas $Al_{12}CuLi$ [p. 14], (Li sites are not well determined) is bracketed. Of course the R-factor is a useful indicator of general quality, but as there are no thermal parameters and no c.s.d. values, we cannot tell, and as the authors' names are not given, it is not easy to seek more information in abstracting journals.

All this may sound like carping criticism. Abstracting is a thankless task, and we should all be grateful to those who undertake it for the common good, but this series comes with the imprint of the international organisation concerned with setting and maintaining high standards of crystallographic publishing, and states that its purpose is to present *critical* accounts of structure determinations. It may be felt that R-factors of 2-3% speak for themselves, but the entries in this volume are now so terse that while they do indeed alert the reader to the fact that structural work has been published on a particular compound, they seldom provide any critical assessment, and as far as minerals are concerned, no provenance. It is nice to have some new information on clinopyroxene, but did they make it or find it, and if so where?

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