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**Structure reports. For 1974, Vol. 40B.** General editor J. TROTTER. Section editor, G. FERGUSON. Pp. viii + 1227 (in two parts, viii + 1–582 and 583–1227). Price Dfl 320. **For 1975, Vol. 41A.** General editor J. TROTTER. Section editors, L. D. CALVERT and J. TROTTER. Pp. viii + 477. Price Dfl 150. **Sixty year index 1913–1973, A. Metals and inorganic compounds.** Editor J. TROTTER, assisted by C. A. BEAR, J. M. BREE and S. J. RETTIG. Pp. ix + 229. Price Dfl 80. **Sixty year index. Supplement for 1974–1975. A. Metals and inorganic compounds.** Pp. 47. Editor J. TROTTER. Price Dfl 10. **Sixty year index 1913–1973. B. Organic and organometallic compounds.** Editor J. TROTTER, assisted by J. M. BREE and S. J. RETTIG. Pp. x + 437. Price Dfl 190. **Strukturbericht. Cumulative index for volumes 1–7 (1913–1939).** Editor J. TROTTER, assisted by J. M. BREE. Pp. vi + 91. Price Dfl 50. All published for the International Union of Crystallography by Bohn, Scheltema & Holkema, Utrecht, The Netherlands.

It was no small decision to agree to write a review of seven volumes made up of xli + 2508 pp. in all. So, one must take a deep breath and plunge in head-first. I do not pretend to have looked at all of the xli + 2508 pp. No typographical errors were noted.

The Structure Reports Commission of the IUCr is to be commended taking the bit in their teeth, pulling up their bootstraps, and valiantly trying to bring *Structure Reports* up to date. Thus Vol. 40B, for 1974, is stated as being published in 1977 (1976, by error, in part 1). This is a distinct improvement over the six-year lapse for Vol. 23 and the nine-year lapse for Vol. 30B, to choose from but two earlier volumes at random. It should not be expected that the yearly volumes of *Structure Reports* appear within a year, and a three-year lacuna is not unacceptable.

These volumes continue to be a most important and indispensable part of any crystallographic library. No practising crystallographer can afford not to have them at her (or his) fingertips. Although many, if not most, crystallographers have a tendency to reference their own previous publications, the availability of *Structure Reports* can and should broaden horizons for them.

Vol. 40B (organic and organometallic compounds) is a monumental undertaking. Approximately 1900 compounds are treated, the vast majority being crystal structure determinations by X-ray or neutron diffraction. For each of these are given: unit-cell data, space group, measured density (calculated densities are no longer given, an unfortunate omission), number of reflections used, refinement method, atomic positions, and final value of *R*. For large molecules the individual positional parameters are not presented; readers interested in these, and in thermal vibration parameters must consult the original literature. Bond distances, bond angles, and hydrogen-bonding modes are usually presented in figures, which are liberally used. Many of the figures are stereo pairs, a very useful feature.

At the end of part 2 there are 160 pp. of compounds which had, for some reason, been omitted from previous volumes.

This is followed by a 13 p. list of molecules, with structural data and references, which have been studied in the gas phase by electron diffraction or microwave spectroscopy.

On the other hand, not everything came up roses. Too many of the figures have been reduced to a point where it is impossible to discern the numbers in them without the aid of a magnifying glass. Some of the figures are defectively reproduced, with incomplete atoms and cracked bonds, as if they had been etched on pieces of bread. Some of the molecular drawings which occur opposite the empirical formulas at the start of each report are crudely hand-drawn. Hermann–Mauguin symbols are used exclusively for space groups, but Schönflies for molecular symmetries.

Gone, alas, are the days of critical abstracting of the earlier years of *Structure Reports* when the abstractors inserted their own pithy comments in [ ]; the most notable example of this which springs to mind is on p. 445 of Vol. 12, where the abstractor [MFP] discreetly pointed out, that 'By an error, the  $\sin \beta$  term appears to have been omitted in the denominator of the equation used to calculate the density. If this term is included the calculated density becomes 1.71, and not 1.56 as stated. The observed density is 1.51', thus effectively demolishing the structure of polyglycine proposed by Astbury. Present-day abstractors merely abstract, with their eyes more on the calendar than on whether what they are reading is reasonable. The balance between speed of publication and reliability of the publications is sensitive; this kind of decision cannot be left to a computer which, after all, does only what it is told to do. Nowadays, few people care how many mistakes appear in the literature; the only concern is how much of their work appears in the literature, regardless of quality or accuracy.

Vol. 41A (metals and inorganic compounds) is only about 40% as long as Vol. 40B; only about 100 compounds are in the formula index. Is this because it is inherently more difficult to determine the structure of an inorganic compound? Probably not. More likely it is because it is easier to get funding to study organic substances (for 'organic', read 'health-related'). The general format is the same as that in earlier volumes. The metals (and alloys) section is alphabetical in arrangement. It comes as a surprise to find salts, such as  $\text{Ti}_2\text{S}_3$  (as  $\text{S}_3\text{Ti}_2$ ) or  $\text{BaS}_2$  in this section. In the second section, inorganic compounds, salts are put together into related groups where possible, e.g. chlorides, oxides, phosphates, silicates, etc. The figures appear to be generally of higher quality than those in Vol. 40B. It is annoying to have some simple salts in the text and in the name index only by their uninformative mineralogical names, e.g. mercallite, anhydrite, celestite, and thenardite for, respectively,  $\text{KHSO}_4$ ,  $\text{CaSO}_4$ ,  $\text{SrSO}_4$ , and  $\text{Na}_2\text{SO}_4$ . At the end are two pages of molecules, the structures of which were determined by electron diffraction or microwave spectroscopy studies of the gas phase, followed by three pages of 1975 references to preliminary notes, fuller accounts of which will appear at a later date, and then 27 pages of structures which were omitted from previous volumes.

The *Sixty-Year Index* of organic and organometallic compounds is well organized. There are three sections: (1) organic classified index (255 pp.), in which the compounds are grouped by chemical formula followed by the name according to the 91 classes of *Molecular Structures and Dimensions*; (2) organic formula index (86 pp.), in which the formulas, without names, are given in the usual ascending