carbonylation (G.K. Anderson and J.A. Davies, 25 pages) and olefin carbonylation (D.M. Fenton and E.L. Moorehead, 11 pages) complete the book. The last two chapters might be expected to overlap with the hydroformylation chapter. In fact, they do not, but it is not clear to this reviewer what the authors' terms of reference were. The former chapter deals with non-redox olefin carbonylations as well as alcohol carbonylations. The latter very short chapter has some 69 references and deals with redox olefin carbonylations as well as non-redox carbonylations. It is not obvious that two independent contributions were necessary.

This is a useful compendium, well presented though not without error. It will be of considerable value to synthetic organic chemists and of some general interest to organometallic chemists. It will be an asset to a library, but probably not worth the expenditure to the individual organometallic chemist.

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Gmelin Handbook of Inorganic Chemistry. 8th Edition. *Sn — Organotin Compounds, Part 12. Tripropyltin- and Tributyltin-Oxygen Compounds;* by H. Schumann and I. Schumann. Springer-Verlag, Berlin etc., 1985, x + 266 pages, DM 997, ISBN 3-540-93521-5.

This book represents the twelfth in a series on organotin compounds which began to appear in 1975. It deals only with tripropyl- and tributyl-tin oxygen compounds, the literature coverage extending to the end of 1982. For each compound methods of preparation, physical properties, reactions, and, where appropriate, biological activity are clearly summarized, and occasionally reports are critically evaluated. Much of the information is in the form of well organized tables; for example, Table 26 consists of 12 pages of information (with some 85 references) on n-Bu_3SnO_2CR compounds in which R = alkyl or cycloalkyl. Much of the book is, as would be expected, taken up with accounts of organyloxides and carboxylates, R_3SnOR' and R_3SnO_2CR', but nitrites, nitrates, sulphinates, sulphonates, etc. are included, as are species such as R_3SnX with X = $OSiR'_3$, $OGeR'_3$, $OHgR'$, $OTi(OR')_3$, $OZr(OR')_3$, OSeR.

The account is authoritatively presented and gives the impression of completeness and accuracy. The important information is provided, and little if any trivial information is included.

The English is exceptionally good ("Drs. Clark and Grant" are thanked for reading the English text), and it is pleasing to see the form "converted into" used rather than the more common but incorrect 'converted to'. (It would have been better, though, for the form "IR pictured" to have been replaced throughout by "IR depicted", which does often appear.) The general presentation is of the usual very high quality expected for Gmelin volumes, and thus it is surprising to find that occasionally some two to four lines are (randomly, not for emphasis) printed in exceptionally dark type, a puzzling feature which

I have noted in other volumes in the series, and which must trouble the perfectionists concerned with their production.

All the Gmelin organometallic volumes are very valuable, but this one is likely to be heavily used, and is very strongly recommended.

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Landolt—Börnstein. Numerical Data and Functional Relationships in Science and Technology. New Series, Group III, Volume 10. (Eds. K-H. Hellwege and A.M. Hellwege). *Supplement to Volume 111/5, Structure Data of Organic Compounds Sub-volume a:* $C_1 \ldots C_{15}$. Springer-Verlag, Berlin, etc., 1985, xxi + 634 pages. DM 1150. ISBN 3-540-07834-7.

This addition to a highly regarded series is concerned with the structure data and some additional relevant information for all organic compounds containing 1 to 15 carbon atoms whose (complete or partial) structures, determined by X-ray diffraction, were reported in publications appearing in 1969—1972. It is a supplement to Vol 111/5 which appeared in 1970.

As usual the presentation is in the form of tables, which for each compound give empirical formula, the name, the space group, the cell dimensions, the measured density, the X-ray density, the number of formula units in the unit cell, the formula weight, the volume of the unit cell, and, where relevant, some additional information (e.g., colour, solvent used for recrystallization). Some 3017 compounds are listed.

Readers of this journal should not be misled by the title of the volume under review. Many, probably the majority, of the compounds are inorganic species containing organic ligands, including simple compounds such as carboxylates (e.g. $Bi(OCH)_3$, $Si(O_2CMe)_4$) and many chelate complexes. There are also numerous organometallic compounds (e.g. EtNa, $(Me_3Th)_4$, $(C_5H_5)Fe(SiCl_3)_2(H)(CO)$).

The volume has been compiled (by G. Schudt-Weitz and I. Strell) and produced with thoroughness we have come to expect from Landolt—Börnstein. Excellent though these compilations of X-ray structural data are, however, one must begin to ask whether their continued production can be justified in the light of the availability of on-line information from various data bases. These printed volumes necessarily suffer from being relatively out of date, from presenting only crystal data and not details of the molecular structure, and from enabling a reader to looking up only individual compounds by their empirical formulae rather than permitting a search based on structural type. Since anyone requiring structural information has to look up the paper cited, I wonder whether the present type of compilation could not be reduced to a simple list giving for each compound the formula, name and reference — with the advantages that would entail in the ease of production, with a reduction in the gap between publication and inclusion and in the cost.

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