

## Book reviews

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*Gmelin Handbook of Inorganic Chemistry*. 8th Edition. *Sb-Organostimony Compounds; Part 3, Compounds of Pentavalent Antimony with Six, Five, and Four Sb—C Bonds*, by M. Wieber, Springer Verlag, Berlin, 1982, xi + 204 pages, DM 624.

The content of this volume is accurately indicated by the title. Thus it deals almost exclusively with species of the types (where R is an organic ligand attached through carbon)  $\text{SbR}_5$ ,  $\text{SbR}_x\text{R}'_{5-x}$ ,  $\text{SbR}_x\text{R}'_y\text{R}''_{5-x-y}$ ,  $\text{R}_3\text{Sb}=\text{CRR}'$ ,  $\text{SbR}_4^+$ ,  $\text{SbR}_x\text{R}'_{4-x}^+$ ,  $\text{SbR}_4\text{X}$ ,  $\text{SbR}_3\text{R}'\text{X}$ ,  $\text{SbR}_2\text{R}'\text{R}''\text{X}$ ,  $\text{SbRR}'\text{R}''\text{R}'''\text{X}$ , along with some spirocyclic and binuclear species. For each compound the methods of preparation and properties are outlined, with all the relevant references. The literature is surveyed thoroughly up to the end of 1978, and there are many later references. The coverage appears to be admirably complete, and the presentation is of the usual very high standard.

The volumes in this series are very expensive on a cost per page basis, but they do provide a very large amount of accurate information, and can save the research worker a great deal of time in searching the literature, or in unwisely attempting preparations without making such a search. This volume will be invaluable to all those whose work involves organostimony compounds.

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*Reactive intermediates, Vol. 2:* edited by R.A. Abramovitch, Plenum, New York and London, 1982, xv + 599 pages, \$59.50.

This volume is reviewed here because it contains a substantial chapter (70 pages, 234 references) by Y.-N. Tang entitled "Reactions of Silicon Atoms and Silylenes". This presents a reasonably comprehensive and well ordered account of the subject, dealing successively with methods of generating silicon atoms, reaction modes of silicon atoms, modes of formation of silylenes, spectroscopic and thermodynamic properties of silylenes, and chemical properties of silylenes (some 37 pages appropriately being devoted to the last topic). The criticism I have is that there are no references later than 1979, and only two 1979 references, one of them to unpublished work by the author of the survey. Indeed, there are remarkably few references after 1976.

A chapter on radical cyclizations by intramolecular additions (e.g. the cyclization of 5-hexyl radicals, a reaction which organometallic chemists, among others, use as a mechanistic probe), by J.-M. Surzur will also be of