

*Gmelin Handbook of Inorganic Chemistry*. 8th Edition. *S — Sulfur. Supplement Vol. 4a/b: Sulphanes*, Springer-Verlag, Berlin, 1983, xxi + 500 pages, DM 1598.

This book is a double volume of Gmelin, with more pages than usual. Part 1, taking up 388 of the 500 pages, deals with hydrogen sulphide, and part b is concerned with the higher sulphanes  $H_2S_n$  (data are presented for compounds with  $n = 2-8$ ), thiothianyl hydride,  $H_2SS$ , hydrogen sulphide radicals [i.e.  $HS_n$  radicals ( $n = 1-4$ ),  $H_3S_2$  radical, and  $H_nS$  ( $n = 1-6$ ) radicals], and hydrogen sulphide ions [ $HS^+$ ,  $H_2S^+$ ,  $H_2S^+ \cdot nH_2S$ ,  $H_2Sn^{n+}$ ,  $H_3S^+$ ,  $H_3S^+ \cdot nH_2S \cdot mH_2O$ ,  $H_3S^{2+}$ ,  $HS_2^+$ ,  $H_2S_2^+$ ,  $H_nS_2$  ( $n = 2-5$ ),  $HS^-$ ,  $H_2S^-$ ,  $H_3S^-$ ,  $HS_n^-$ ,  $H_2S_2^-$ ,  $H_3S_3^-$ , and  $H_2S_4^-$ ]. The preparation, physical properties, and chemical reactions of the various species are summarized. The outline of the reactions of hydrogen sulfide with inorganic and some organometallic compounds (e.g. with organosilicon and organophosphorus halides) will be of special interest to some readers of this Journal.

The authors (W. Behrendt, U.W. Gerwarth, B. Heibel, A. Kubny, P. Kuhn, and H. Vanecek) have done the thorough job we expect of Gmelin contributors, and as usual the volume is very well produced. Also as usual the price is very high (in fact, at ca. £405 or \$600, this is the most expensive book I have ever reviewed), but unavoidably so, one feels, given the nature of the task involved, and it would be a great loss to inorganic and organometallic chemistry if economic considerations ever led to discontinuance of this fine series.

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*Gmelin Handbook of Inorganic Chemistry*. 8th edition. *Sn — Organotin Compounds. Part 10: Mono- and Diorganotin—Sulfur Compounds, Organotin—Selenium and Organotin—Tellurium Compounds*. Springer-Verlag, Berlin, etc., 1983, xi + 352 pages, DM 993.

The rapid growth in organotin chemistry (there are about 1000 publications in the field each year at present) has meant that the Gmelin treatment of organotin compounds has had to take up several volumes. The first such volumes in this eighth edition, began to appear in 1975; Volumes 1–3 dealt with mononuclear tetraorganotin compounds, Volume 4 with mononuclear organotin hydrides, and Volumes 5–8 with mononuclear organotin halides and pseudo-halides. Volume 9 began the treatment of mononuclear organotin sulfides, selenides, and tellurides, which is completed in Volume 10, which deals with sulfides of the types  $R_2Sn(SR')_2$ ,  $R_2Sn(SR')(SR'')$ ,  $RR'Sn(SR'')_2$ ,  $\overline{R}Sn(SR')_2$ ,  $RSn(SR')_3$ ,  $RSn(SR')_2(SR'')$ ,  $R_2SnX(SR')$ ,  $RR'SnX(SR'')$ ,  $RSnX(SR')_2$ ,  $RSnX_2(SR')$ , and  $RSnXY(SR')$ , along with the few known mononuclear organotin—selenium and organotin—tellurium compounds. The compilation was by H. Schumann and I. Schumann, who have surveyed the literature to the end of 1980. There is a clear formula index. A list of books, monographs,