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Book review

Gmelin handbook of inorganic chemistry, 8th Edition. *Te — Tellurium, Supplement Volume A2: Physical Properties, Electrochemical Behaviour. Chemical Reactions*, Springer-Verlag. Berlin, Heidelberg, New York, 1983, xvi + 395 pages, DM 1285. ISBN 3-540-93470-7.

This is the fifth volume of the Gmelin Handbook to deal with the chemistry of tellurium (System Number 11) since the main volume was published in 1940, and the second to deal with the properties of the element itself. The material of this new volume is organised in terms of the crystallographic properties of the element, its mechanical and thermal properties, its electrical and magnetic properties, its optical properties, the electrochemical properties of tellurium solutions, the properties of its molecular cations, and the chemical reactions of tellurium. This last section includes the adsorption of gases, reactions with non-metals (H_2, O_2, N_2, the halogens, S, Se, B, C, Si, P and As), reactions with metals, reactions with non-metal compounds and acids, reactions with metal compounds, and reactions with alkali hydroxide solutions in the absence or presence of oxidants or reductants. Perhaps the most fascinating section to the organometallic chemist is the chapter describing the novel molecular cations, $[Te_4]^{2+}$ and $[Te_6]^{2+}$: the chemistry of these remarkable catenated complexes is only in its infancy, and is comprehensively and accurately summarised.

The six authors (L. Berg, V. Haase, I. Hinz, G. Kirschstein, H.-J. Richter-Ditten and J. Wagner) have succeeded in producing a volume truly worthy of the series, and the literature is surveyed upto the end of 1981. The production is, as always, immaculate, and this volume is particularly well illustrated; a feature which brings alive the section describing the crystallographic characterisation of the element. Although of limited appeal to the organometallic chemist, this volume is indispensible to any library (and, unfortunately, its cost probably restricts it to library purchase) attached to an active inorganic chemistry department.

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