

Book review

Gmelin handbook of inorganic chemistry, 8th edition, *Sc, Y, La-Lu Rare Earth Elements. Part C9: Compounds with Se*, Springer-Verlag, Berlin, Heidelberg, New York, Tokyo, 1986, xxi + 528 pages, DM 1991. ISBN 3-540-93525-8.

This is the twenty-eighth volume which the Gmelin Institute has published concerning the chemistry of scandium, yttrium and the rare earth elements (System No. 39) to appear since the main volume was published in 1938: it is the ninth dealing specifically with the chemistry of the simple compounds. It is devoted to their compounds with selenium and, in detail, it describes the binary selenides (both gaseous and solid), the ternary oxide selenides {most commonly, M_2O_2Se }, the selenites $\{M_2(SeO_3)_3\}$, the selenates $\{M_2(SeO_4)_3\}$, the diselenite nitrates $\{M(NO_3)(Se_2O_5)\}$, the selenide halides $\{MSeX \text{ and } M_2SeX_4\}$, the ternary selenide sulfides, sodium selenides $\{NaMSe_2\}$, Group 1 (M') selenites $\{M'M(SeO_3)_2\}$ and Group 1 selenates $\{M'M(SeO_4)_2\}$ of scandium, yttrium and the lanthanides. The largest section (411 pages) on binary selenides features the fascinating europium selenide and thulium selenide systems.

This volume is a gold mine of physical data for the lanthanide selenides (etc.), with references up to and including 1984. The authors (H. Bergmann, H. Hein, P. Kuhn and U. Vetter) have performed a gargantuan task in constructing this invaluable compilation, and are to be congratulated for their admirable work. The text meets the expected high standards of clarity which we all take for granted when books are produced by the Gmelin Institute, and this volume is clearly and helpfully illustrated. It must be said, however, that this is a volume for the magnetochemist and the solid state physicist, rather than the organometallic chemist (who should refer to the excellent up-to-date coverage in Parts D1-D6, all published between 1980 and 1986). Nevertheless, it should be in all libraries attached to institutes in which the chemistry of the *f*-block elements is studied, whether industrial or academic.

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