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Book reviews

Gmelin Handbook of Inorganic and Organometallic Chemistry. 8th Edn. F. Perfluorohalogenoorgano Compounds of Main Group Elements. Supplement Vol. 6. Aliphatic and Aromatic Compounds of Nitrogen (continued), Springer-Verlag, Berlin, 1991. xiv + 283 pages, DM 1480. ISBN 3-540-93633-5

This supplement is concerned with aliphatic or aromatic perfluorohalogeno compounds of nitrogen bonded to halogens, S, Se, Te, P, B or metals or to a pseudohalogeno (CN, NC, NCO, NCS, NCN) or azaalkene group, or of nitrogen in a tertiary amino group. It provides accounts of such compounds first made since the appearance of the relevant Main Volumes (Parts 8 and 9) and additional information on compounds dealt with in those volumes.

The material is organized under the headings: perfluorohalogenoorgano nitrogen-halogen compounds; perfluorohalogenoorgano nitrogen-sulfur compounds; perfluorohalogenoorgano compounds with P–N, Se–N, Te–N, B–N, and metal–N bonds; perfluorohalogeno pseudohalides; perfluorohalogenoorgano nitrenes and azaalkenes; tertiary perfluorohalogenoorganoamines. (The section perhaps of most immediate interest to readers of this journal, *i.e.* on compounds containing nitrogen linked to metals or metalloids, occupies only 16 pages, with about half of those devoted to derivatives of phosphorus.) For each compound the method(s) of preparation, the physical properties, and chemical reactions are outlined, much of the data on physical properties appearing in tables.

The coverage is not as up-to-date as in some recent Gmelin volumes, systematic searching of the literature having ceased at the end of 1985, although there are some later references. The formula index refers to material not only in this volume but also that in the related Supplement Volume 5.

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Advances in Sonochemistry, Volume 2, T.J. Mason (Ed.), JAI Press, London, 1991, x + 322 pages, £54 (hardcover). ISBN 1-55938-267-8

The second volume in this annual series follows the example of the first in that it covers a wide range of the uses of ultrasound in chemistry. Volume 1 in the series contained Chapters on some of the now more familiar aspects of sonochemistry while this new volume has Chapters on some of the less obvious, but nonetheless useful and important, aspects of the field.

The contributors and their contributions are as follows: P. Kruus, Sonochemical Initiation of Polymerization; P. Riesz, Free Radical Generation by Ultrasound in Aqueous Solutions of Volatile and Non-Volatile Solutes; R.A. Pethrick, Ultrasonic