## Book review

*Advances in Inorganic Chemistry and Radiochemistry. Vol. 15*; ed. by H.J. Emeléus and A.G. Sharpe. Academic Press, New York and London, 1972, vii + 451 pp., $24.00.

This volume is remarkable for the high quality of its articles. The authors are active researchers and write clearly and authoritatively about their specialities.

In the first article, "Secondary Bonding to Nonmetallic Elements" N.W. Alcock quantitatively discusses crystal structure phenomena that, a few years ago, would have been considered subtleties too difficult to rationalize, *i.e.*, intermolecular distances that are shorter than Van der Waals distances. The second article, "Mössbauer Spectra of Inorganic Compounds: Bonding and Structure," was written by G.M. Bancroft and R.H. Platt and is the longest article in the volume. The emphasis is on the correlation of the isomer shift and quadrupole splitting parameters with structure and bonding in inorganic compounds. Naturally, most of the applications involve compounds of iron and tin. In the third article, "Metal Alkoxides and Dialkylamides," D.C. Bradley shows that the metal alkoxide field, which he last reviewed in 1960 (D.C. Bradley, *Prog. Inorg. Chem.*, 2 (1960) 303), has undergone an enormous expansion. He also describes the versatility of metal dialkylamides, $M(NR_2)_x$, which seem to occupy a position between metal alkoxides and metal alkyls. The fourth article, "Fluoroalicyclic Derivatives of Metals and Metalloids," was written by W.R. Cullen, who limits the discussion to the preparation and properties of compounds containing alicyclic fluorocarbon rings $\sigma$-bonded to elements other than carbon, nitrogen, oxygen, and the halogens. The article is an updating of an earlier review (W.R. Cullen, *Fluorine Chem. Rev.*, 3 (1969) 73). In the last article, "The Sulfur Nitrides," H.G. Heal makes it clear that this relatively small field still has plenty of exciting activity. He shows that new sulfur nitrides can now be synthesized on a rational basis, as illustrated by his own synthesis of the fused-ring nitride, $S_{11}N_2$.

The striking impression that I received upon perusing this volume is that inorganic chemistry is now much more quantitative than it ever was, and that methods for the determination of molecular structure play a dominant role in systematizing chemical properties.

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