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Book review

VIBRATIONAL SPECTRA AND STRUCTURE, VOLUME 7, J.R. DURIG, ED.,
ELSEVIER SCIENTIFIC PUBLISHING CO., AMSTERDAM, 1978, xv + 388
PAGES. DFL. 146.00, \$63.50.

This most recent addition to "Vibrational Spectra and Structure" contains four articles. The first, by C.J. Wurrey and A.B. Nease, provides a thorough review of the literature (327 references) on the vibrational spectra of compounds containing a three-membered ring. It constitutes about 60% of the book. Chapter 2, by T.C. Rounds and H.L. Strauss, treats the spectra of several medium rings, defined as "six, seven and eight-membered alicyclic ring molecules". The spectral region considered is mainly the low frequency range of the "out-of-plane" ring-deformation vibrations ($100-600\text{ cm}^{-1}$). The contribution of vibrational analysis to the tricky problem of the conformations of these rings is thoroughly explored.

The third and fourth chapters, "Normal Coordinates and the Vibrations of Polyatomic Molecules" by J.F. Blanke and J. Overend, and "Extremal Properties of Molecular Constants", by N. Mohan and A. Müller, respectively, are devoted to the theory of the analysis of vibrational spectra and the molecular properties obtainable therefrom. The first treats certain fine points of this analysis and the second the relationships between the error limits on the experimental data and those on the molecular constants derived therefrom.

The value of this book to the research chemist depends obviously on the extent of his or her interest in the topics discussed. For most chemists this interest will not be great enough to surmount the barrier of the book's formidable purchase price and they will probably consult it in their libraries.

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