

The excellent treatment of solid state detector systems continues in chapter XVII, which deals with their application to quantitative analysis. The specialized subjects of light-element analysis and thin-film analysis are dealt with in the succeeding chapters. The importance of light-element analysis to mineralogy is obvious but that of thin-film analysis less so. However the increasing use of analytical electron microscopy in mineralogy makes even this chapter relevant to some mineralogists.

Despite the fact that any description of applications must become dated the final chapter serves as a useful indication of the wide range of problems to which micro-analysers have been applied. Mineralogy and more specifically meteoritics, fields in which the author is particularly experienced, take up the lion's share of this chapter. The book ends with a useful appendix on X-ray spectra.

This well-written book should be essential reading for all microprobe analysts; it has the added advantage of appearing at a time when no major changes in the technique can be foreseen.

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GADSDEN (J. A.). *The infrared spectra of minerals and related inorganic compounds*. London (Butterworths), 1975. 277 pp. Price £15.00.

This book aims to assist in the location of reference infrared spectra by listing on over 200 pages the wavenumbers of absorption maxima in selected published spectra of over 600 minerals and some 100 related compounds. Literature references (685 in all) are given for these and for a further 550 minerals and inorganic compounds. The remaining pages include subject and mineral name indexes, and a 30-page review covering applications, techniques, the more important papers dealing with each group of salts and minerals, and the general characteristics of their spectra. No line spectra are included.

The justification for this book therefore rests largely on the rather questionable value of the data compiled. The experienced eye can quickly match a recorded line spectrum with a standard, taking account of relative band intensities, band contours, and submaxima, but a similar match involving listed wavenumbers is slow and uncertain, and requires, as the author warns, reference to a line spectrum for confirmation. Now line spectra for over 80 % of the compounds for which data are listed appear in less than ten publications; 70 % are covered by the collections of Moenke and of Nyquist and Kagel alone. These will therefore be the first choice for the spectroscopist seeking to match an unknown spectrum.

Comparison with the multi-author Mineralogical Society Monograph 'The Infrared Spectra of Minerals' (in which the reviewer must declare an interest) shows that both give access to a common core of references containing spectra of about 700 named minerals; Gadsden covers more non-mineral compounds, and includes more post-1970 references. The Monograph's 500 pages of text allow a fuller treatment of theory and a more critical and complete discussion of each mineral class, but give data on only about 450 minerals, including 200 line spectra, many of which are new. Their prices to libraries are comparable, and reflect the new high levels now imposed by printing and paper.

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