Polyethylene oxide and polyvinyl alcohol in common with the cellulose ethers give strong flexible water-soluble films and some information is disclosed on the preparation and possible uses of the films. The data relative to polyethylene oxide are quite detailed in this respect.

The chapters on polyacrylic acid derivatives including polyacrylamide cover a broad spread of information and deal very effectively with different methods of polymerization and the physical and chemical properties of the types available. The somewhat unusual polyvinyl pyrrolidone, a fall-out from the high pressure acetylene chemistry of REPPE is also well described.

The final chapter is entirely new to this second edition and describes some different ethylene imine polymers. These materials which are cationic and react in some ways similarly to simple amines have only recently become available commercially. A number of application areas including adhesives, ion exchange resins, photography and textiles are specified.

This volume makes no pretence of being a theoretical treatise and its practical approach should be of value to anyone concerned with the everyday problems of thickening, binding or emulsifying aqueous systems.

H. BATES

Applied Spectroscopy Reviews, Volume I

Edited by E. G. BRAME Jr. Marcel Dekker: New York, 1968. 6 in. × 9 in. 456 *pp.* $16.50

THIS is the first volume of a continuing series covering '. . . the entire field of spectroscopy . . . applied to the various fields of science . . .'. The reviewer can see no point in publishing a series having such wide terms of reference, especially as duplication of effort has already resulted from the proliferation of much more specialized series dealing with recent advances. The articles in volume one are of a high standard and spectroscopists will regret that personal copies will be a luxury on account of the low fraction of material that will be of direct interest to them. Chapter 1 is entitled 'Atomic fluorescence spectrometry' and is a short comprehensive account of this new development in flame photometry. Basic theory is presented and useful comparisons are made with cognate methods. The next chapter, 'Integrated intensities of adsorption bands in infra-red spectroscopy' points out the difficulties encountered in measuring absolute intensities and gives a useful compilation of data (including a correlation chart) for a wide variety of structural units. Chapter 3 is an interesting account of 'Internal reflection spectroscopy': this is an aid useful to infra-red spectroscopists working with solid or liquid samples. The following chapter 'Methods and applications in the examination of small samples by high-resolution n.m.r.' is an excellent exposition of the optimum conditions required by microcells, spectrometer settings and signal enhancement techniques in the pursuit of high sensitivity. Chapter 5 covers developments in 1965 and 1966 in 'Chemical far infra-red spectroscopy' in the areas of instrumentation and techniques but it deals mainly with applications to organic and inorganic compounds in this 300 to 10 cm^{-1} region. Chapter 6 will be of the most interest to readers of *Polymer*, namely, 'The examination of polymers by high-resolution nuclear magnetic resonance'. This is a useful collection of experimental methods and of configurational data obtained for a wide variety of polymers. The following chapter, 'Infra-red spectra of adsorbed molecules' is a review of techniques and vibration spectra observed for molecules adsorbed on metals and on metal oxide surfaces. The final chapter on 'Instrumentation, special characteristics and applications of soft X-ray spectroscopy' describes methods of X-ray excitation, dispersion and detection and also includes data on inorganic materials.

L. H. SUTCLIFFE

Treatise on Coatings, Volume I. Film-Forming Compositions, Part 2

Edited by R. R. MYERS and J. S. LONG. Marcel Dekker: New York, 1968. 6 in. × 9 in. *xl*+434 *pp.* $28.75

THIS book is the second out of three comprising Volume II of what is going to be a monumental, comprehensive, but very expensive reference work on Paint Technology. The work