

ing chapter on "The Scientific View", Dr Bolt provides numerous examples of British anthropologists whose pronouncements on subject races differed little in content from those of racist apologists for imperialism. Indeed, at least one distinguished Victorian scholar in this area (James Hunt) was quite explicit on the need for further anthropological studies as an aid to consolidating the Empire's rule in the colonies. Although the author is well aware of the ideological component of her subjects' work, her separation of the "scientific view" from the rest of her material suggests a too optimistic judgment about the later attempts of life scientists to free themselves from racial prejudice. Reference to the early history of the Eugenics Society would have been a useful corrective here, not to mention the recent and continuing Jensen controversy.

Yet in all fairness it must be said that the attitude of scientists is a subject subsidiary to Dr Bolt's chief interest, namely the description of Victorian public opinion on the subject of race. Until recently there has been a dearth of detailed historical studies on this question. Along with Victor Kiernan's *The Lords of Human Kind*, her book provides us with the kind of background data necessary for an understanding of both Victorian and contemporary race relations. That it can illuminate such important subjects as the British reactions to the American Civil War, the Jamaica Revolt and the Indian Mutiny goes without saying.

After what must have been a long and arduous period of investigation, the author, somewhat surprisingly, ducks the task of providing a conceptual framework for explaining her material. Presumably there will be a number of armchair theorists who will be only too eager to do this for her. But I think this is a pity, since her knowledge of the sources will necessarily be unrivalled in terms of depth and subtlety. Instead she leaves us with what really are platitudes about the relationship between mental rigidity and prejudice and about the need for "common sense" about race. Dr Bolt's evidence is so much weightier than her conclusions that we can only hope for later theoretical reflexions on her part.

P. G. WERSKEY

Raman Spectroscopy

Raman Spectroscopy: Theory and Practice, Vol. 2. Edited by Herman A. Szymanski. Pp. ix+221. (Plenum: New York and London, 1970.) \$17.50.

THIS book follows a first volume published in 1967 which included a series of chapters written individually by experts on the theory of the Raman

effect, the spectra of solids, Raman intensities and the impact of the laser on Raman spectroscopy. Volume 1, although useful, suffered very badly from lengthy delays in production and therefore the advent of the second volume has been awaited with some anticipation. The second volume contains a series of chapters by such distinguished contributors as L. A. Woodward, A. C. Albrecht, H. W. Schrotter and R. E. Hester. Most of the authors are new to the series, only Dr Woodward and Professor Hester having contributed to the previous volume.

The first chapter, on vibrational selection rules and polarization by Dr Woodward, maintains the excellent scientific and literary standard set by him in his introduction to the first volume. As an account of the principles behind structure determination, based on the comparison of infrared and Raman spectra, this chapter will certainly become a classic reference since it not only surveys the method but emphasizes the advantages and limitations inseparable from this type of work. Developments in the theories of vibrational Raman intensities are reviewed clearly and concisely in a chapter by Dr J. Tang and Professor Albrecht. Since there is a dearth of reviews in this area, Tang and Albrecht's contribution is most valuable. This chapter is followed by one on Raman spectroscopy with laser excitation by Dr Schrotter. In a volume published in the 1970s this seems a little out of place, for by 1967 it was clear that the discharge lamp was no longer to be considered seriously as a Raman source. Fortunately, Dr Schrotter gives a considerable amount of experimental technique in his article and this is certainly useful, if a little dated. The second part of his chapter, however, which sets out to describe some of the experiments feasible as the result of the use of the laser as a source, although good reading, is not intended to be a review and would seem to be a sermon aimed at the converted.

Dr L. A. Blatz contributes an article describing experiments aimed at determining low frequency Raman spectra of liquids. This area of study has been completely revolutionized experimentally by the use of laser excitation and in particular by the use of single mode argon ion lasers operating at 5145 Å and iodine vapour filters, yet these techniques are not discussed and the chapter is largely of historic interest. In particular, little or no detail on Rayleigh wing, Brillouin or laser-beat spectroscopic methods appears and this is indeed disappointing as a critical review in this area is urgently required.

Professor Hester's contribution on Raman spectra recorded at high and low temperatures is reasonably topical and

contains a considerable amount of experimental information and a number of examples of the applications of the techniques described, for example, to molten covalent inorganic compounds and salts and also to powders and crystals at low temperatures. The final chapter on poor scatterers by Dr E. Steger is a little mysterious; much of the experimental information is obsolete or is covered elsewhere in the book while the short review section simply contains a random selection of examples of the spectra of compounds with weak bands or of dilute solutions.

I found this book disappointing because it seems to have suffered the fate of its predecessor and taken too long to prepare. Further, the editor does not seem to have edited the manuscripts provided, or to have guided his contributors. One cannot criticize an author in this type of work for being unaware that he is repeating information contained in another chapter but the editor should have spotted these duplications. Further, it is by no means clear what the editor intended to achieve in his book. At a cost of over £5 it is hard to recommend this volume to personal buyers but it would make a useful addition to a good scientific library. It is tacitly assumed that further volumes in the series will appear eventually; let us hope these can be produced quickly, that an attempt will be made to update obsolete articles in earlier volumes and that the editor will wield a heavy pencil.

P. HENDRA

Organic Electrochemistry

Electrochemical Reactions in Non-aqueous Systems. By Charles K. Mann and Karen K. Barnes. (Monographs in Electroanalytical Chemistry and Electrochemistry.) Pp. viii+560. (Dekker: New York, October 1970.) \$34.50; £16.40.

IN the past decade, there has developed a clear need for an authoritative and well balanced text on organic electrochemistry to provide a common base for both the organic chemist and the electrochemist working in this area. Unfortunately, neither this book nor the other recent texts by organically inclined authors come close to filling the gap. Indeed, this volume is concerned essentially with the electrochemistry of organic compounds in non-aqueous media; the single final chapter on inorganic compounds provides insufficient justification for a wider claim. An introductory chapter on the interpretation of electrochemical measurements is included to help readers who have insufficient backgrounds in electrochemistry. It is too short to be of much value in this respect, and its main utility is in