

group in poly- α -amino acids and proteins. Although, aspects of the theory of molecular vibrations in polymers are introduced, their application by the uninitiated reader would require a much more detailed presentation. H. Susi also discussed, in the biopolymer field, the group frequency concepts, infra-red spectroscopy as an analytical tool, and the study of hydrogen bonding by infra-red spectroscopy.

In general I found this volume to be a useful source-book for the researcher, both for concepts and facts, particularly as not many other reviews of these subjects are available. However, I suspect that in the light of the vast expansion of this field of interest, the volume will date somewhat rapidly.

H. BLOCK

Polymer Science: Current Concepts and Civic Applications

Consulting Editor, FRANCIS W. MICHELOTTI. Annals of the New York Academy of Sciences, Volume 155, Article 2, 1969. 9 in. \times 6 in. 275 pp. \$11.50

SHOULD any bright and enquiring young mind demand to know what polymer science is about, then this volume is the one to recommend, for not only does it provide a compact outline of polymer research in a number of currently interesting areas but it will undoubtedly serve as a stimulus and source of inspiration for many a potential polymer scientist.

To say merely that the reviews and summary research papers in this volume were presented by eminent authorities at a conference held in New York in May, 1967, and to list the titles, would be to do it less than justice. The whole collection manages to convey admirably the keen sense of excitement that pervades a rapidly developing subject, and in spite of the rather prosaic titles of some of the papers, their contents illustrate perfectly the kind of thinking, the wide range of disciplines and the different methods of approach that polymerists must now become involved in. Juxtaposition of some direct research reports with current state-of-the-art reviews adds distinctly to the overall impression of vitality. By its commendable decision to also include contributions on civic applications the Academy afforded a gentle, but timely, reminder that polymer scientists too have social responsibilities.

Particularly stimulating articles are those on Telecommunications (Baker), Mechanical Properties and Dislocation Theory (Williams) and Polymer Science in the Prevention of Air Pollution (Gregor, Heller and Mark): noteworthy exemplars of the methods and techniques of polymer research are the papers of Kennedy and Canter (Copolymerization of Isobutene with Butadiene and Isoprene), Metz and Ballantine (Gamma Radiation-induced Ionic Vinyl Polymerization), and Sauer (Morphology and Structure of Polymer Crystals).

In each of the other contributions the authors have succeeded in showing how their particular interests serve to illuminate some more general aspect of polymer behaviour. In order of appearance the remaining topics covered are: Cation Radicals in Polymer Synthesis (Ledwith), Anionic Polymerization (Szwarc), Esterolytic Activity of Copolymers Containing Imidazole Groups (Overberger *et al*), Stereospecific Polymerization of Olefins (Tornqvist), Microtacticity (Bovey), Non-covalent Interactions in Solution (Nemethy), Polymers in Dilute Solution (Berry and Casassa), Conductive Polymers (Lupinski), Optical Studies of Polymer Films (Stein), Polymer Science and Water Pollution Prevention (Teot), Polymers in the Automotive Industry (Weiss), Polymers in Building Construction (Lauren).

Anyone who wonders where polymer science is going cannot afford to neglect reading these papers.

P. F. ONYON