

Book Reviews

Macromolecular Reviews

No. 10: The Chemistry of Unsaturated Ethylene-Propylene Based Terpolymers

S. Cesca

Wiley, New York, 1976, £8.90

The issue is devoted to a single topic namely, the chemistry of unsaturated ethylene-propylene terpolymers. The review covers essentially similar ground to an earlier comprehensive assessment by Baldwin and Ver Strate but with a greater concern for polymer synthesis and characterization and less on technological aspects such as vulcanization and vulcanizate properties. The treatment is conventional and logical and there are very few omissions in the references to published literature up to the end of 1973. References, incidentally, are in alphabetical order by author and are not numbered; there are about 600 of them!

The most important and original portions of the review are the sections on the

numerous termonomers which have been used, subclassified into dienes and trienes. Over twenty types of compound are dealt with, the emphasis being on mechanism of polymerization and effects on polymerization rate and polymer properties. There is also a useful summary on the microstructure and molecular weight distributions of the copolymers.

The general discussion on mechanism brings together a great deal of information, and the author valiantly attempts to summarize diverse and frequently conflicting reports, under headings attributed to coordinative, cationic and free radical aspects. Most readers will be grateful for the care which has been taken in assembling the information, but will remain confused since a coherent and all-embracing explanation cannot be found. The author's conclusions are restricted to a few cautious generalizations.

The style is clear and concise, but its condensation means it is more for the specialist than for the general reader. However, most workers concerned with poly-

merization, particularly of olefins by coordination catalysts, would wish to read this issue of Macromolecular Reviews.

W. Cooper

Polymers in Medicine

Edited by Richard L. Kronenthal, Zale Oser and E. Martin

Plenum Press, New York, 1975, \$33.00

This book is a collection of papers read at the Johnson and Johnson symposium 'Polymers in Medicine and Surgery' held in Morristown, New Jersey in July 1974. Those attending were both medical doctors and scientists and the papers are designed to give a broad understanding of the application of polymer science to medicine at a level suitable for the medical doctor whose knowledge of polymer science is limited to his own speciality and to the application of polymer science to that field. Likewise, it offers the polymer scientist/bioengineer/chemist a wider view of the many medical applications of polymer science.

The papers follow no common theme but fall into groups. (1) Up-to-date summaries of the role of polymer science in each of a number of medical specialities (eye surgery, urology, cardiac surgery and orthopaedics). (2) Papers that do little more than give in a few lines an account of the work programme and the people in a single large research institution. (3) A group of papers concerned with drug delivery systems, mostly involving a drug and an excipient, usually a polymeric material. These include statements of general principles and accounts of specific applications. (4) A number of papers are on more general topics such as biodegradation, blood compatibility and there is a particularly useful chapter on methods of toxicological assessment of polymers for human use. (5) The remaining papers are each centred upon a particular family of polymer (silicones, hydrogels, polyurethanes), and only these papers may be beyond the understanding of the clinician untrained in polymer chemistry. An especially useful paper in this group is 'Necessary Considerations for Selecting a Polymeric Material for Implantation with Emphasis on Polyurethanes' by Garth Wilkes, where some useful information on polymers precedes a useful account of urethane chemistry and the applications of polyurethanes to clinical problems.

The many aspects of the application of polymers to medicine recorded in this book, together with an ample bibliography, make it an excellent starting point for clinical doctors desiring to know more about the use of polymeric materials in their speciality. Equally it will give a good up-to-date background to the wider field for any scientist interested in the application of his science to medical practice.

D. Annis

Conference Announcement

Flow-Induced Crystallization Symposium

Midland Macromolecular Institute, Midland, Michigan, USA
22-26 August 1977

An international symposium on 'Flow-Induced Crystallization of Polymers' will be held at the Midland Macromolecular Institute, Midland, Michigan, 22-26 August 1977. The objective of the symposium will be to review critically this important field of interest to both academic and industrial laboratories. Primary emphasis will be placed upon keynote lectures. However, a small number of contributed lectures can be accepted. A one-page abstract should be sent to Mrs Julia T. Lee, Midland Macromolecular Institute, 1910 West St. Andrews Drive, Midland, Mi. 48640, USA, by the end of April 1977.

Conference Announcement

Nineteenth Canadian High Polymer Forum

Ottawa University, Ottawa, Ontario, Canada, 24-26 August 1977

The Nineteenth Canadian High Polymer Forum will be held at Ottawa University, Ottawa, Ontario, 24-26 August 1977. The Forum will cover all aspects of polymer science and should be interesting to people from industry, government and university laboratories alike. The Forum will include an invited lecture by Dr Paul Rempp, CNRS, Strasbourg, France, and invited papers on recent developments in the polymer industry. Those interested in contributing general papers are invited to submit titles, authors names and abstracts of 200-300 words to the Program Chairman, Professor J. Prud'Homme, Université de Montréal, Département de Chimie, C.P.6120, Succ. A, Montréal, Québec H3C 3V1, Canada. Abstracts are requested by 15 April 1977. Further details about registration etc. will be given in later notices available from Dr J. Roovers, Secretary Treasurer, 19th Canadian High Polymer Forum, National Research Council of Canada, Division of Chemistry, Ottawa, Ontario, T1A 0R9, Canada.