

monomers are reacted together. All these topics are covered in the book, which indeed is an exhaustive repository of information of all kinds on its subject.

The author has taken great pains to be comprehensive, and for this he deserves respect because many people in a similar position would have concentrated on their own work to a large extent. Indeed, it is rare to find such a complete discussion of a topic by its inceptor, giving credit to all those who have followed his lead and contributed to current knowledge of the subject. No one else could claim to bring the same level of authority to this topic, and probably no one else would have been so even-handed in reporting. It has to be said that a by-product of the desire to be comprehensive has meant that some sections of this volume are little more than catalogues; in fact, it might have been possible to present substantial sections of it, notably Chapter 12, in tabular form, but undoubtedly the book is all the more valuable as a work of reference for its inclusion of all the relevant material. A further example of the trouble that the author has taken on behalf of his readers is the addition of the *Chemical Abstracts* citation to references. (Even so, care should be taken in using the information presented: the classic paper on cyclisation by Stoll and Rouvé is attributed, on page 121, to Stoll and Rowe.)

As a compendium of the literature on cyclopolymerisation, it is hard to believe that this book could be surpassed. It could have been written in a more personal dramatic style but that is not the author's way. The price is in line with that of scientific texts in general, and this means that it will appeal to libraries (where it will certainly be indispensable) rather than to individuals. In summary, this is a 'horse's mouth' text that completely satisfies the need for a state-of-the-art statement on its subject.

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### Polymer Yearbook 9

R. A. Pethrick (Ed.)

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Philadelphia, 1992, 431 pages,  
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'Polymer Yearbook' is an annual series. The ninth volume is divided into three sections. The first one collects review articles from Russian researchers, the second one consists of a list of reports on different topics under the title 'Progress of polymer science in Japan' and the third section, 'Current awareness', a tradition

of this series, contains reports on several international and Russian conferences, held in 1990, and covering different topics in the area of macromolecular science and technology. In addition, an impression is given of the state of polymer science research in Russia, Korea and Eastern Europe and a list of recent publications in polymer science is presented.

The first section contains eight review articles. The first, 'Doping of properties of carbon- and hetero-chain polymers by organic silicon and silicon compounds', by L. M. Khananashvili, emphasizes the concept that the introduction of the above substances, even in small amounts, considerably modifies the technological and processing properties of the polymeric materials. In the second review, 'Biodegradable polymer-based drug delivery systems: the physicochemical aspects', by V. S. Livshits and G. E. Zaikov, several physicochemical parameters, such as crystallinity, molecular weight and its distribution, degree of crosslinking and drug content of the biodegradable polymers, which may influence the release rate from polymeric systems, are considered. In the other six review articles: 'The interrelation between relaxation properties and factors influencing polymer fracture' by V. E. Gul' and Yu. G. Yanovsky, 'The role of intermolecular interaction in polymer degradation processes' by E. F. Vainstein, 'The influence of stress on the kinetics of thermal and thermal oxidative processes in elastomers' by E. F. Vainstein, A. A. Sokolovskii and A. S. Kuzminskii, 'Kinetics of the changing products molecular-mass distribution in thermodegradation of associated polymers' by E. A. Baranova, E. F. Vainstein and O. F. Shlensky, 'Molecular-dynamic concept of the reactivity of polymers and solids in the light of PVT-effects' by A. L. Kovarskii, and finally 'Quantitative criterion of polymer hydrophilicity' by L. P. Razumovskii, A. L. Iordanskii and G. E. Zaikov, the authors interpret the main aspects of the above topics in terms of kinetics, thermodynamics and microscopic properties in order to find a rationalization and a prediction of the macroscopic phenomena.

In the second section, an impression of recent research in polymer science in Japan is given by 12 reports dealing with a wide range of topics such as conductive polymers as solid solvents, ionic polymerization, block and graft copolymers, solution properties of the polymers, polyaddition and polycondensation, polymeric biomaterials, physical properties and superstructure of polymeric solids, biopolymers, polymeric membranes, polymer dynamics and rheology, photo-sensitive polymers, polymer engineering and technology and finally silicon- and fluorine-containing polymers.

The third section presents reports on conferences, held in 1990 in Russia

and in other countries, devoted to macromolecular chemistry and to polymeric materials, as well as to more specific topics such as: stabilization and controlled degradation of polymers, combustion of polymers, modification of polyolefins, their processing, properties and applications, free radical processes in biological systems, complexes of organometallic compounds with polymers as catalysts, polymer blends, relaxation effects on polymeric materials and low-combustibility polymers.

In addition, an overview on 'Polymer science in Eastern Europe' is given on the occasion of the 1989 conference commemorating the 30th anniversary of the establishment of the Division of Polymers and Composite Materials of the Institute of Chemical Physics of the USSR Academy of Sciences.

A wide list of publications in polymer science is given, including selected books on polymers published in Russian in 1990. Selected titles of dissertation abstracts on polymer science are also reported, mainly covering 1988-1990. Finally, a compilation of journals in the area of macromolecular science is given.

In conclusion, this book is readable and comprehensive. It is useful for managers and academic professors but it is also aimed at students with experience in polymer science. In my opinion the book is good value for money. The only criticism I have is the poor quality of the figures in the first section.

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### Comprehensive Polymer Science: First Supplement

S. L. Aggarwal and S. Russo  
(Vol. Eds)

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'Lexicographer: a writer of dictionaries,  
a harmless drudge.'  
Samuel Johnson, 1755

My first traumatic essay at public speaking came in my last year at school with a requirement to respond to the toast 'Dr Johnson's old school' to an audience of academics and middle class professionals who had both eaten and drunk well, advantages not afforded to me at that time. In preparation for and performance of this ordeal I learned several valuable lessons. First, that the works of the