

Italy. The objective was to analyze current projects in large and small polymer companies and related studies in universities.

The introductory paper by E. Martuscelli discusses the university/industry relationship, and it is followed by a presentation made by H. F. Mark on the subject of "Polymer Science and Engineering Facts and Trends."

Six of the papers deal with the latest developments in commodity products and include excellent lectures by G. DiDrusco on Himont's Spheripol polypropylene process; by P. Corradini on novel Ziegler-Natta-type polymerization catalysts; by P. Somasundaran on polymer flocculation in mineral processing; by A. Luchini on composite materials with unsaturated thermosets; by A. Apicella on polymer composite processing; and by L. Mascia on high-energy radiation.

Future trends in engineering resins is the subject covered by E. E. Paschke; saturated polyesters is covered by P. Galli; and reactive polymers is dealt with by J. M. J. Frechet.

In the field of fiber technology, A. Keller reviews high-modulus, high-strength fibers from flexible chains; and E. Cernia deals with synthetic fibers and enzymic reactors. Research on the natural polymeric materials, polysaccharides, is discussed by V. Crescenzi and S. S. Stivala. Applications for synthetic polymeric biomaterials in medicine are covered by Allan S. Hoffman and by P. Giusti; and membranes as a growing use for polymers is the subject dealt with by H. K. Lonsdale.

It was to the merit of E. Martuscelli, C. Marchetta, and L. Nicolais that this outstanding conference on commodities versus specialties was arranged for and then published in book form; this book represents an excellent overview of the mutual development work coming from industry and academia. The book can be highly recommended, not only to those who were fortunate enough to participate in the Italian conference but also to all of us who wish to learn more about future trends in polymeric technology and science.

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Encyclopedia of Polymer Science and Technology, 2nd ed., Vol. 4, Mark, Bikales, Overberger, and Menges, Wiley-Interscience, New York, 1986, 832 pp. Price: .

You may pick any volume of Mark's Encyclopedia of Polymer Science and Engineering and you are not surprised how much information you will find. Whether you are a polymer scientist or a plastics engineer, this information will enrich your knowledge and answer your particular question.

It happened that I took Volume 4 from the book shelf and saw that the first four chapters dealt with composites and compounding, an area, which is growing rapidly, and converting simple commodity plastics into high-performance materials. Copolymerization is another technique to modify simple homopolymers into products having improved and more desirable properties. In this Volume 4, you will find excellent chapters on copolymerization, alternating copolymers, coupling agents, reversible crosslinking, and crosslinking with radiation, as well as on cyclopolymerization.

The content of the volume ranges from natural products, such as cotton and dextran, to diallyl polymers, cyclic imino ethers polymers, diacetylenes, and coordinate polymers. In recent months, superconductivity has gained wide publicity; and the reader will discover an appropriate chapter on cryogenic properties.

Critical phenomena, crystallinity depolymerization degradation, defects, and crazing are covered in other chapters. In the area of medical applications, contact lenses and dentures are discussed. In the field of polymer fabrications, excellent chapters are devoted to devolatilization, compression and transfer molding, computer-assisted design; and the volume closes with a comprehensive chapter on extruder dies.

After you have read the particular chapter in which you are interested, and after you have glanced through the remaining chapters in Volume 4, you will be impressed by all the wisdom and knowledge incorporated in this one volume. You will admire the editorial board and editors, who have selected the best author for each chapter.

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