

The problem of stickies in the reuse of waste paper and paper manufacturing is discussed in depth from different viewpoints. Components of the waste paper that contribute to the stickies during the process, stickies formation in paper recycling due to hot melt and pressure sensitive adhesives, and alternative processes for optimization of the recycling paper process in order to avoid the stickies are all covered.

Finally, an overview and conclusions are presented with some consideration of the future of the European paper industry, wood as a renewable raw material and plans for the future.

The book shows the results of the experiments, but does not present an experimental approach. It is rather a book for those who want to be informed about what is happening in the area, but not for practical guidance. Also, it does not contain a subject index, which would have facilitated readers' searches for specific topics.

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**Polymer Science Dictionary.** Mark S.M. Alger. Elsevier Applied Science, London, 1989. xii + 532 pp. ISBN 1-85166-220-0. Price £110-00.

As defined by the author, polymers are substances whose molecules consist of many parts or units. They are formed by the process of polymerisation of a monomer or of more than one monomer (for a copolymer). Man-made polymers are known as synthetic polymers, whereas those produced biologically, whether in the natural field or by laboratory-directed processes, are known as natural polymers, biological polymers, or just biopolymers. Some prefer to believe that in general

jargon the term polymers only applies to synthesis, and that the term macromolecules must be applied to those molecules. By and large, the properties of synthetic and biological polymers are different, being hydrophobic and hydrophilic, respectively. This book focuses particularly on synthetic polymers.

Polymers of all types (particularly synthetic polymers) gained acceptance because they have enabled the cheap fabrication of articles which had been previously manufactured from more expensive alloys. Today a number of polymers are available commercially and their properties have been optimised to suit particular application. The plastics, rubbers, fibres, coatings, paint and adhesives industries are all based on polymers.

The *Polymer Science Dictionary* is the first publication devoted to explaining the terminology of polymer science with coverage of polymerisation, polymer structure, properties and individual polymer types as well as some biopolymers: proteins and polysaccharides.

This book could be considered an encyclopaedic dictionary due to the large numbers of entries ( $\approx 6000$ ). There are explanations of what terms mean, together with any necessary background, as they are used in the polymer literature. For the most important polymers, entries give values of the main mechanical properties to facilitate general comparison among such polymers.

The *Polymer Science Dictionary* uses Standard International (SI) units throughout; in addition, where other units are commonly used in the polymer literature, these are also included. It is recommended as a very useful reference and browsing book to anyone involved in polymer research, development and production.

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