

interactions between solute and protein bound to the support matrix). Copious examples of separation systems are described together with information on the production of the CSP. The inclusion of a 17-page index listing the commercially available supports, their applications towards compound types, the use of ion pair agents to enhance resolution and the specific preparation of tailor-made CSP, provides a wealth of information to make this volume a useful addition in the chromatographers library.

As a result of the wide range of chemical species involved in chiral supports, this volume will be of interest to the inorganic and organic chemists in addition to the analysts from chemistry, biochemistry, food, pharmaceutical, biotechnology, agricultural and environmental industries. The contributors and editors have combined to produce an excellent volume which should become a milestone in this particular aspect of the development of chromatography.

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Technology In The 1990's: Utilization Of Lignocellulosic Wastes.

Edited by B. S. Hartley, P. M. A. Broda and D. J. Senior, The Royal Society of Chemistry, London, 1988, viii + 163 pp. ISBN 0 85403 313 0. Price: £32.50.

Lignocellulosic wastes is a collective term that embraces a very broad range of materials, in many countries. The effective utilization and disposal of lignocellulosic wastes is still a worldwide problem. Many agricultural residues have been used for different purposes, however, so far their wastes (lignocellulosic materials) which are valuable resources, have not been used sufficiently.

This volume examines how the lignocellulosic wastes of today can be tomorrows valuable resources, if much more scientific and technological effort and adequate investment is made now. It emerges strongly that biological, physical and chemical technologies must be combined to satisfactorily utilize the various materials available in different parts of the world.

The discussion on biological degradation of lignocellulosics, one of the most controversial areas in this field, emphasizes the genetic

engineering of fungal cellulases and ligninases. But wider perspectives for the future are also covered. For instance, the feasibility of the fermentation of lignocellulosics will be dependent on the amount of substrate surface available for biological attack, and this can be enhanced by mechanical pretreatments, such as the steam-explosion processes, in which scaled-up experience already exists. Similarly, chemical processes involving relatively non-extreme conditions of temperature and pressure, kept continually in view by industry, are also covered.

Despite the lack of a subject index, much useful information on biological and chemical processes and the utilization of lignocellulosic materials are packed into this volume.

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