

*Carbohydrates, School of Chemistry, The University of
Birmingham, Edgbaston,
Birmingham B15 2TT, UK*
E-mail address: jfkennedy@chemistry.bham.ac.uk

* Corresponding author. Tel.: + 44-0121-414-4385; fax: + 44-0121-414-4384.

0144-8617/00/\$ - see front matter © 2000 Elsevier Science Ltd. All rights reserved.
PII: S0144-8617(99)00209-X

Supramolecular Materials and Technologies

Vol. 4; D.N. Reinhoudt (Ed.); Wiley, New York, 1999, viii + 309 pages, ISBN 0-471-97367-X

There are many varied applications for supramolecular structures in modern chemistry. This could be due to the fact that the design of new molecules and the assemblies of these molecules is most often function driven. "Supramolecular Materials and Technologies, Volume 4" illustrates the achievements and advances that supramolecular chemistry has made in many fields, from organic chemistry to materials science, and from analytical chemistry to molecular biology.

This text describes many of the applications that have actually been achieved in three decades of supramolecular chemistry. Initially, developing applications in molecular recognition (receptors that selectively recognise ionic species) was the objective. Now, the first applications in molecular recognition are established techniques in analytical chemistry, separation science and medicine. More recently, developments towards using molecular recognition as a tool, and developments in material design (based on increased understanding of weak forces between macromolecules) have taken place. Three aspects of the latter's development have been covered: nano-structures (formed from self-assembly of smaller molecules), dendritic structures, and polymers.

The contents of this volume include the following: self-assembling systems on scales from nanometres to millimetres (design and discovery); dendritic architectures; supramolecular structures with macromolecules; chemosensors (synthetic receptors in analytical sensing applications); selective ion recognition with durable sensors; ion separation in membrane and solid phase extraction systems; and porphyrin- and expanded porphyrin-based diagnostic and therapeutic agents.

"Supramolecular Materials and Technologies, Volume 4" is representative of the field of supramolecular technologies. It includes numerous tables and illustrative figures, as well as comprehensive indexing. Extensive references at the end of each chapter are also present. The book is good as far as it can go, but clearly there is a lot more to be discovered about

the structure–function relationships of molecules before structures can be tailored to functions.

J.F. Kennedy*

N. Turan

*Birmingham Carbohydrate & Protein Technology Group,
Chembiochem Laboratories, The University of Birmingham
Research Park,
Birmingham B15 2SQ, UK*
E-mail address: jfkennedy@chemistry.bham.ac.uk

* Corresponding author. Tel.: + 44-121-414-4385; fax: + 44-121-414-4384.

0144-8617/00/\$ - see front matter © 2000 Elsevier Science Ltd. All rights reserved.
PII: S0144-8617(99)00210-6

Pharmacognosy, Phytochemistry, Medicinal Plants (2nd ed.)

Jean Brueton; Lavoisier Publishing, Paris, 1999, 1136 pages, ISBN 1-898-29863-7, £133.00

In the last few years the level of interest in plants with perceived or potential health benefits has increased significantly. The market for herbal medicines in Europe during 1995 was reportedly almost four billion pounds spent on plant-based pharmaceuticals. Novel additions to the therapeutic arsenal have included anticancer, antimalarial and antiretroviral agents; there have been major advances in natural and semi-synthetic substances. The vast amount of information available on natural products in the areas of pharmacognosy, phytochemistry and medicinal plants requires an encyclopaedic reference source.

Pharmacognosy, Phytochemistry, Medicinal Plants (2nd ed.): describes primary and secondary classes of metabolites and the drugs from which they originate. Topics covered include the phytochemical distribution, biosynthesis, extraction and quantitation, and biological aspects for each class. The index encompasses over 3000 entries, and 500 references provide an excellent basis for any literature search. Successive chapters treat compounds of primary metabolism, phenolics, terpenoids and steroids and alkaloids. The result is a comprehensive compilation that includes a phenomenal amount of botanical, chemical, analytical, pharmacological and therapeutic data. The second edition has over 200 more pages than the first English edition published just four years ago.

This book is truly a *tour de force*, an 'encyclopaedia' covering the three title topics: it is clearly written, and the presentation of the material is first class. It cannot be recommended too highly for students, teachers or anyone who uses plant resources in pharmacy, botany,

food technology, cosmeticology and many other related fields.

J.F. Kennedy*

M. Thorley

*Birmingham Carbohydrate & Protein Technology Group,
Research Laboratory for the Chemistry of Bioactive
Carbohydrates, School of Chemistry, The University of
Birmingham, Edgbaston,
Birmingham B15 2TT, UK
E-mail address: jfkennedy@chemistry.bham.ac.uk*

* Corresponding author. Tel.: +44-0121-414-4385; fax: +44-0121-414-4384.

0144-8617/00/\$ - see front matter © 2000 Elsevier Science Ltd. All rights reserved.

PII: S0144-8617(99)00211-8

Szycher's Dictionary of Biomaterials and Medical Devices

Michael Szycher, Technomic Publishing Co. Inc., Lancaster (PA), 1992, 264 pages, ISBN 0-877-62882-3, US\$ 89.95

The field of biomaterials and medical devices is interdisciplinary: it includes polymer chemistry, biochemistry, metallurgy, medicine, pharmacology and physiology. The result of interfacing these disciplines is to confront biomaterials scientists with an array of terminology from numerous fields which needs to be understood in their research, development and manufacture of medical devices. There is a clear need to have a comprehensive, stand-alone

reference source that will obviate the need for several dictionaries.

Szycher's Dictionary of Biomaterials and Medical Devices: provides a single source of many definitions from the various interdependent disciplines involved. The book covers technically esoteric terminology used in biomaterials, with definitions that are clear, concise and informative. Useful appendices cover polymers used in medical applications, classification of drug-related devices and a listing of critical devices. The quick reference, easy-to-use presentation of definitions is both meaningful and applications-orientated.

This book is a well-written, comprehensive, one-stop, essential reference. It is highly recommended for anyone working in the biomaterials and medical devices field, including medical doctors, engineers, ceramicists, metallurgists, biochemists, biotechnologists and biomedical engineers.

J.F. Kennedy*

M. Thorley

*Birmingham Carbohydrate & Protein Technology Group,
Research Laboratory for the Chemistry of Bioactive
Carbohydrates, School of Chemistry, The University of
Birmingham, Edgbaston,
Birmingham B15 2TT, UK
E-mail address: jfkennedy@chemistry.bham.ac.uk*

* Corresponding author. Tel.: +44-0121-414-4385; fax: +44-0121-414-4384.

0144-8617/00/\$ - see front matter © 2000 Elsevier Science Ltd. All rights reserved.

PII: S0144-8617(99)00212-X