particles, DNA-like polyelectrolyte adsorption onto polymer colloids, amino-containing latexes as a solid support of single-stranded DNA fragments and their use in biomedical diagnosis, covalent immobilization of peptides onto reactive latexes, preparation and applications of silicone emulsions, colloidal particles, poly (alkylcyanoacrylates), preparation of biodegradable particles by polymerization processes, supercritical fluid processes for polymer particle engineering.

The chapters present original works, fresh results, new methodologies, and several applications of colloidal particles in biomedicines. In this way, this volume is a good manual for all kinds of subjects related with colloids in the biomedical field.

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**Abdelhamid Elaissari, editor. Colloidal Polymers Synthesis and Characterization, Marcel Dekker, Santa Barbara, CA, USA, 2003 (xiii + 453pp., £99.00, ISBN 0-8247-4304-0)**

Although emulsion polymers have been known as a products for over a half century, it is surprising to note that growth in the volumes used by industry worldwide has continued to rise and is still estimated at 6% a year up to 2005. The introduction of seeded polymerisation techniques in the 1960s, associated with more advanced monomers feeding programs, made possible not only to improve control of the particle size characteristics but also toad interestingly on the morphology and internal structure of particles. These seeded techniques paved the way for new innovation applied in industry from 1965 to 1970 so as to create rubber toughened plastics, thanks to graft copolymers such as acrylonitrile butadiene styrene (ABS) and methyl methacrylate butadiene styrene resins (MBS).

Polymerisation in dispersed media is increasing from both practical and fundamental points of view. The need for well-defined dispersion has led to the production of diverse types of particles. The specialty chemicals industry is particularly interested in a large number of uses involving the elaboration of latexes with specific characteristics, such as narrow size distribution, and often-surface fictionalisation.

Free radical polymerisation is widely utilised technology to prepare synthetic polymers in aqueous colloidal dispersion form. It is by far the most commonly used process in industry; manufacturers find that it has a large number of technical advantages and economic advantages. The synthetic latexes, which are obtained from polymerisation reaction vessels, can be processed on the production site to separate the polymer, dry it, and then market it in various dry forms.

Further, a selection of extended reviews and detailed papers are included in order to give an overview of related fields. In this way, this book examines the following points: synthesis of reactive polymer colloids, physico-chemical and colloidal characterisation of prepared latexes and biomolecules-polymer colloids interactions.

The main objective of this book is to report on the preparation of polymer colloids by presenting original processed and innovative materials leading to original properties. The goal of this book is to present recent result and information on polymer colloids beginning with their preparation and biomolecules interactions and going further into a study of some of their finer biomedical applications.

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**Victor A. Vinci and Sarad R. Parekh, Handbook of Industrial Cell Cultures: Mammalian, Microbial and Plant cells, Humana Press, Totowa, NJ, 2003 (536pp., ISBN 1-58829-032-8)**

Mammalian, microbial and plant cells are traditionally used for the manufacture of products derived directly or semi-synthetically from cellular metabolites. These cells are increasingly used as the cellular machinery to express the recombinant proteins of considerable economic and therapeutic value. Supporting the production of novel therapeutics in mammalian, microbial and plant cells is an impressive array of new methodologies from the field of molecular genetics, proteomics, genomics, analytical biochemistry, and screening. For an industrial bioprocess, manipulation and propagation of cells in order to elicit expression of a product is followed by the recovery, analysis, and identification of these products.

In *Handbook of Industrial Cell Cultures: Mammalian, Microbial and Plant cells*, a diverse team of researchers, technologists, and engineers describe, in simple and practical language the major current and evolving technologies for improving the biocatalytic capabilities of mammalian, microbial and plant cells. The authors present state-of-the art techniques, proven methods, and strategies for industrial screening,

cultivation, and scale-up of these cells, with examples of both their industrial application and their future potential. Special emphasis is given to solve the critical issues encountered during the discovery of new drugs, process development, and the manufacture of new and existing compounds. Other topics include recombinant protein expression, bioinformatics, high throughput screening, analytical tools in biotechnology, DNA shuffling, and genomic discovery. The authors all have proven track records in the successful implementation of commercial-scale processes.

This Handbook will prove especially useful not only to those involved in biotechnology as a broad discipline, but also assist experienced practitioners in perfecting the special art of the industrial cell culture. Many scientists currently in the field find their carriers transitioning across work with mammalian, microbial, and plant bioprocesses; thus they are very much in need of a book linking these disciplines in a single format, which may be also suitable for teaching.

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**Severian Durmitriu, Polysaccharides, Structural Diversity and Functional Versatility, 2nd ed. University of Sherbrooke/Marcel Dekker, Quebec, Canada/New York, USA, 2005 (xvii +1204pp., £155.00, ISBN 0-8247-5480-8)**

Polysaccharides are the macromolecules that belong to the means components of life. Together with nucleic acids and proteins, the polysaccharides determine the functionality and specificity of the species. Oligosaccharides and polysaccharides are biopolymers commonly found in living organism, and are known to reveal the physiological functions by forming a specific conformation.

Polysaccharides have received little such promotion even though they are widely distributed throughout nature and highly organized structure. In this way, polysaccharides as natural polymers are by far the most abundant renewable resource. In contrast to petroleum-based synthetic polymers, plant polysaccharides are sustainable materials synthesized by the sun's energy and fully biodegradable in the original states. Thus, with decreasing supply of oil resources polysaccharides, including cellulose, starch, chitin, storage polysaccharides, are expected to play an increasingly important role in industrial use.

However, our understanding of polysaccharide chains is still in its premature state with respect to their structure in solid and in solution. Structural analysis may offer the most fundamental knowledge to understand the functions of polysaccharides, but the diversity and irregularity of polysaccharides chains make a formidable task.

Completely revised and expanded to reflect the latest advancements in the field, *Polysaccharides* presents state-of-the-art polysaccharides research from different aspects regarding the macromolecular variety, function, chemistry, structure and stability in just one volume. This second edition outlines are the most complete summary now available of the present knowledge of polysaccharide chemistry. This work reveals new analytical techniques and applications currently impacting the cosmetic, medicinal, chemical, and biochemical industries.

This authoritative book discusses some fundamental aspects of polysaccharides as: progress in structural characterization, conformation and dynamic aspects of polysaccharides gels, rheological behaviour of polysaccharides in aqueous systems, biosynthesis, structure and physical properties of bacterial polysaccharides, renewable resources, new applications of polysaccharides and the incorporation of the polysaccharides in the synthetic matrix. Just one point—what is your view as a reader—should *polysaccharides* still be being used as a term or should it now be solely carbohydrate polymers?

In summary, this book is a very useful tool for scientist of both academia and industry interested in the fundamental principles of polysaccharides functions and modifications on one hand, and novel applications on the other. This manual opens an interesting way to challenge and encourage scientists to deal with polysaccharides as fascinating polymers with a bright future.

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**Shalaby W. Shalaby and Karen J.L. Burg, editors. Advances in Polymeric Biomaterials Series: Absorbable and Biodegradable Polymers (2004, CRC Press, Florida, USA) (289 pp., $289, ISBN 0-8493-1484-4)**

Egyptians sutured wounds as early as 3500 BC using a variety of natural polymers including treated intestines, which are the early versions of collagen-based surgical gut-sutures. In