CHITIN AND CHITOSAN

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CHITIN AND CHITOSAN

Sources, Chemistry, Biochemistry, Physical Properties and Applications

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The importance of chitin and chitosan has grown partly because they represent a renewable and biodegradable source of materials, and partly because of the recent increased understanding of their functionality in biology and in technological, biotechnological and medical applications. As the second most abundant natural polymer, chitin, and its derivative chitosan, represent a great challenge both to the scientific community and to industry.

The previous three International Conferences on Chitin and Chitosan were held at MIT, Cambridge, USA (1977), Sapporo, Japan (1982) and Ancona, Italy (1985). The 4th International Conference on Chitin and Chitosan was held on 22–24 August 1988 at the University of Trondheim, Norway. The response to the 4th International Conference on Chitin and Chitosan was overwhelming. The total number of scientific contributions exceeded the maximum possible number of oral presentations for a three-day meeting with two parallel sessions.

Since the 3rd conference, new chitin/chitosan production capacity has appeared both in the USA and Japan and many new forms of chitosan are now commercially available. This increased interest in commercial applications has stimulated research both at academic and industrial laboratories. Commercialization of chitosan-containing products is stimulating the finding of new sources of chitinous materials and has led to the finding of better ways of recovering chitin from existing sources.

New medical and biotechnology applications have required high purity forms of chitin and chitosan to be made commercially. Currently, commercial suppliers and users are formulating specifications and standards to ensure that their products will meet the criteria of *in vivo* use. New derivatives of chitin and chitosan continue to appear, providing new solubilities and useful properties. With the increasing availability of commercial products, coupled with chitin/chitosan's variety of forms (powder, solution, gel, films, fibre, bead, derivatized), the need for continued research on the basic and applied aspects of chitin/chitosan will inevitably increase. This volume will provide the researcher with the most up-to-date information on this important and rapidly expanding area of research.

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Proceedings from the 4th International Conference on Chitin and Chitosan
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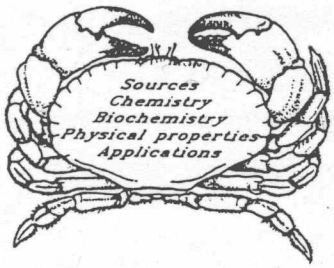

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PREFACE

The importance of chitin and chitosan has grown partly because they represent a renewable and biodegradable source of materials, and partly because of the recent increased understanding of their functionality in biology and in technological, biotechnological and medical applications. As the second most abundant natural polymer, chitin, and its derivative chitosan, represent a great challenge both to the scientific community and to industry. The International Conferences on Chitin and Chitosan are organized for the rapid reporting of progress in this field, and to be a place for scientific discussions integrated with social and business interaction to promote further development.

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