

Fibres are being produced which are actually biomimetic. That is, they mimic the structure of a naturally occurring system. Uses for this range from synthetic furs and leathers, which are undetectable from the real thing, to deodorant fibres which are enzyme-like in their action. The biomimetic field has massive potential.

Biopolymers are polymers which mimic or derive from natural organisms, these are discussed in great detail with examples such as enzyme mimicking and the production of cellulose by bacterial means, producing incredibly fine and pure fibres. The book discusses these new developments and proposes many new uses of fibres in varied fields.

The book is a very good source of information on the state of the fibre field today, and of its possibilities for the future. It is well written and extremely readable, and would be a useful addition to the library of a person working in the fibre field, although because it covers such a wide number of topics it will only be useful to a fibre scientist who feels he requires an overview of the whole topic. General scientists who wish to find out about the fibre field will find the book invaluable, as will students of fibre science.

David W. Taylor  
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**Bitterness in Food and Beverages.** Edited by Russel L. Rouseff, Elsevier Science Publishers, Amsterdam, 1990. xviii + 356 pp. ISBN 0-444-88175-1. Price: US\$133.25.

Bitterness is a subject which has not received the attention it deserves by scientists involved with food and beverages although it is present in many of our most important foods; fruits (apples, grapes, citrus), vegetables (soya beans, carrots, hops), protein products (milk, cheese, fish), etc.

Bitterness is considered to be one of the so-called four basic tastes, together with sweetness, salty and sour. A large variety of compounds can taste bitter; amino acids, amines, esters, carbohydrate derivatives, and so on, which makes research in this area a fascinating challenge.

This last volume of the series *Development in Food Science* represents a successful attempt at producing a readable and comprehensive text. It contains some fundamental concepts of bitterness and

discusses its presence in the above cited foods, beverages, processed and fermented products. It illustrates analytical methods for isolation and characterization of bitter substances, and finally, presents methods for bitterness removal by adsorption, precipitation, chromatography or ultrafiltration. Procedures and technological processes are also shown, for example, the use of the glucose oligomer cyclodextrin for elimination of bitter flavour in citrus juices. These subjects are divided into four chapters, with plenty of references and more than eleven hundred citations.

This book is a source of valuable information for general scientists, technologists, biochemists and chemists working in the field of food science.

**Haroldo C. B. Paula**  
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