

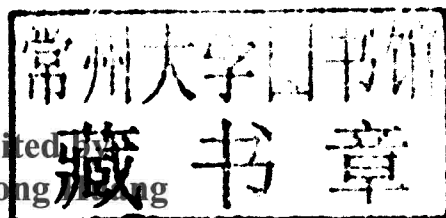
Nanotechnology in the food, beverage and nutraceutical industries

Edited by Qingrong Huang

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Edited by
Qingrong Jiang



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Nanotechnology in the food, beverage and nutraceutical industries

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Multifunctional and nanoreinforced polymers for food packaging provides a comprehensive review of polymers for use in packaging with more than one functional purpose. Recent developments in multifunctional polymers and nanoreinforced polymers provide the opportunity to produce active packaging, in addition to increasing the shelf life of products. The book focuses on the materials science and engineering of multifunctional polymers intended for use in food packaging.

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Active ingredients in foods must remain fully functional for as long as necessary and be transported and discharged appropriately to have the desired nutritional effect. Controlled release and delivery systems are a method to achieve these aims. Edited by a leading expert in the field, this collection discusses materials and techniques for the controlled release and delivery of nutraceuticals. Opening chapters review factors affecting nutrient bioavailability and methods to test delivery system efficacy. Part II addresses materials used and specific techniques, such as nanoemulsions. The final chapters focus on the delivery of particular nutraceuticals, such as vitamins and probiotics.

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(ISBN 978-1-84569-151-6)

Awareness of the interrelationship between the nanoscopic, microscopic and macroscopic features of foods and their bulk physiochemical properties, sensory attributes and healthfulness is increasing. It is now widely recognised that creation of novel foods or improvement of existing products largely depends on a better understanding of this complex interrelationship. This important collection presents an understanding of significant aspects of food structure and methods for its control. The main structural elements in foods, their interactions and newer analytical techniques for structure assessment are reviewed. Following chapters then discuss the use of structural design principles in product development and structural issues in particular foods, such as ice cream and chocolate.

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