

1. Record Nr.	UNINA9910154671003321
Titolo	Engineering Foods for Bioactives Stability and Delivery // edited by Yrjö H. Roos, Yoav D. Livney
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2017
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (VIII, 420 p. 104 illus., 41 illus. in color.)
Collana	Food Engineering Series, , 2628-8095
Disciplina	664
Soggetti	Food science Biochemistry Microtechnology Microelectromechanical systems Food Science Microsystems and MEMS
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Recovery Technologies for Lipophilic Bioactives -- Recovery Technologies for Water-Soluble Bioactives: Advances in Membrane-Based Processes -- Industrial Production of Active Probiotics for Food Enrichment -- Microencapsulation Technologies -- Nanoencapsulation Technologies -- Encapsulation Efficiency and Capacity of Bioactive Delivery Systems -- -Lactoglobulin-Based Nano and Microparticulate Systems for the Protection and Delivery of Bioactives -- Crystallization -- Freezing and Freeze-Drying -- Spray Drying of Bioactives -- Protective Performance of Delivery Systems in Production, Shelf Life and Digestion -- Food Extrusion -- Non-Thermal Stabilization Processes -- Chemical Stability: Browning and Oxidation -- Improvement of Bioaccessibility and Bioavailability: From Molecular Interactions to Delivery Systems.
Sommario/riassunto	This book introduces recovery and stabilization of common bioactive materials in foods as well as materials science aspects of engineering stable bioactive delivery systems. The book also describes most typical unit operations and processes used in recovery and manufacturing of

food ingredients and foods with stabilized bioactive components. The 15 chapters of the book discuss in detail substances that need to be protected and delivered via foods and beverages to achieve good stability, bioavailability and efficacy. Dedicated chapters present current and novel technologies used for stabilization and delivery of bioactive components. The material included covers formulation, stability, digestive release, bioaccessability and bioavailability. The text features a special emphasis on the materials science and technological aspects required for stabilization and successful production of foods with bioactive components. Consumer demand for healthier, yet satisfying food products is posing increasingly tough challenges for the food industry. Scientific research reveals new bioactive food components and new functionalities of known components. Food materials science has also developed to a stage where food materials can be designed and produced to protect sensitive components for their delivery in complex food products. Such delivery systems must meet high safety and efficacy requirements and regulations, as well as economic viability criteria and consumer acceptance.
