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Nota di contenuto	Chapter 1: Application of Nanotechnology in the Food Industry -- Chapter 2: Nanomaterials in Food System Application: Biochemical, Preservation, and Food Safety Perspectives -- Chapter 3: Use of Nanotechnology for the Improvement of Sensory Attributes of Foods -- Chapter 4: Nano- and Microencapsulation of Foods, Vitamins and Minerals -- Chapter 5: Nanoemulsions in Food Industry -- Chapter 6: Food System Application of Nanomaterials in the Food Industry -- Chapter 7: Shelf-life Improvement of Foodstuffs through nanotechnology engineered application -- Chapter 8: Roles of Nanotechnology for Efficient Nutrient Delivery of Foods -- Chapter 9: Anticaking Agents in Food Nanotechnology -- Chapter 10: Gelling

Agents, Micro and Nanogels in Food System Applications -- Chapter 11: Smart Use of Nanomaterials as Sensors for Detection and Monitoring of Food Spoilage -- Chapter 12: Active, Smart, Intelligent, and Improved Packaging -- Chapter 13: Application of Nanoformulations in Improving the Propertiesof Curcuma (Curcuma longa L.) -- Chapter 14: Bioavailability of Nano Nutrients, Potential Safety Issues, and Regulations -- Chapter 15: Prospects and Toxicological Concerns of Nanotechnology Application in the Food Industry.

Sommario/riassunto

This book entitled ‘Application of Nanotechnology in Food Science, Processing and Packaging’ presents up-to-date information on the emerging roles of nanotechnology in food industry, its fundamental concepts, techniques and applications. The application of nanotechnology in the food industry is an emerging area which has found tremendous use in improving food quality through the enhancement of food taste, texture, colour, and flavour. Also, its application has improved the bioavailability and target delivery of certain bioactive food ingredients through controlled release of nutrients, a feature that is impossible with the conventional methods of food processing. The application of nanotechnology in food packaging for the detection of contaminants, pathogens, biotoxins and pesticides through nanosensor safety evaluations has led to the increase in shelf-life of products and quality assurance through the detection and monitoring of toxins. This book taps from the experience of subject experts from key institutions around the world. The users of this book will benefit greatly as the chapters were simplified and arranged carefully to aid proper understanding, consistency and continuity.