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Nota di contenuto	Part 1: Processes, material characterization, risks and regulation -- 1. An overview of the development and applications of nanoscale materials in the food industry -- 2. Potential health risks of nanoparticles in foods, beverages and nutraceuticals -- 3. Detecting and characterizing nanoparticles in food, beverages and nutraceuticals -- 4. Regulatory frameworks for food nanotechnologies -- 5. Atomic force microscopy and related tools for the imaging of foods and beverages on the nanoscale -- 6. Characterization of food materials at multiple length scales using small-angle X-ray scattering and nuclear magnetic resonance: Principle and applications. Part 2: Applications of nanotechnology in the food, beverage and nutraceutical industries -- 7.Improving food sensory and nutritional quality through nanostructure engineering -- 8. Nanocapsules as delivery systems in the food, beverage and nutraceutical industries -- 9. Association colloids as delivery systems -- 10. Fabrication, characterization and properties of food nanoemulsions -- 11. Nanotechnology-based approaches for the rapid detection of chemical and biological contaminants in foods -- 12. Nanocomposite food and beverage packaging materials -- 13. Electrospun fibers: fabrication, functionalities and potential food industry applications -- 14. Milk nanotubes: technology and potential applications -- 15. Nano- and micro-engineered membranes: principles and applications in the food and beverage industries.

Sommario/riassunto

Nanotechnology has the potential to impact on food processing significantly. This important book summarizes current research in this area and provides an overview of both current and possible future applications of nanotechnologies in the food industry. Issues such as safety and regulation are also addressed. After an introductory overview, the first part discusses general issues such as risk assessment, the regulatory framework, detection and characterization of nanoparticles in food. Part two summarizes the wide range of applications of nanotechnology in food processing, including nan
