Record Nr. UNINA9910863134503321 Starch Structure, Functionality and Application in Foods // edited by **Titolo** Shujun Wang Pubbl/distr/stampa Springer Singapore, 2020 Singapore:,: Springer Singapore:,: Imprint: Springer,, 2020 **ISBN** 981-15-0622-1 Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (177 pages) 664.2 Disciplina Soggetti **Biochemistry** Food—Biotechnology Biochemistry, general Food Science Midó Bioquímica Biotecnologia alimentària Llibres electrònics Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Nota di contenuto Chapter 1. History of Starch Research -- Chapter 2. Botanical Sources of Starch -- Chapter 3. Fine Structure of Amylose and Amylopectin --Chapter 4. Multi-scale Structures of Starch Granules -- Chapter 5. Amylose-Lipid Complex -- Chapter 6. Phase Transitions of Starch and Molecular Mechanisms -- Chapter 7. Rheological, Pasting and Textural Properties of Starch -- Chapter 8. Starch Modification and Application -- Chapter 9. In vitro Starch Digestion: Mechanisms and Kinetic Models. Sommario/riassunto The book summarizes the latest research on starch structures and how these structures occur during food processing and storage. Discussing

the origins, multi-scale granule structures and functional properties of starch as well as starch digestion, it focuses on the relationship between starch structure and functionality, the phase transition mechanism, the molecular disassembly and self-assembly of starch

during food processing and storage and their effects on starch digestion. As such, the book provides a comprehensive overview of starch structure and functionality for researchers and postgraduate students in the field of food chemistry, carbohydrate polymers, polymer chemistry, food ingredients and food processing as well as human nutrition and health.