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## Biopolymer-based coacervates: Structures, functionality and applications in food products



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### ABSTRACT

Complex coacervates are self-assembly structures with many potential functional properties. Coacervates are mainly fabricated from proteins and polysaccharides and therefore they can be designed to function over a wide range of conditions in food products by withstanding adverse environmental stresses during manufacturing and storage and even upon passage through the human digestive track. They can be utilized to encapsulate bioactive compounds in order to protect these sensitive ingredients from chemical and physical degradation in a food product during storage and manufacturing as well as during the gastrointestinal tract transition, and thereby improve their biological (physiological) efficacy. Recent advances and achievements are discussed, including the basic principles of structural transitions of interacting biopolymers and formation of coacervates along with their potential use in food products as well as ways to improve their functional performance in conjunction with other physicochemical processes for structuring macromolecular assemblies.

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