

High-Pressure Treatments for Enhancing the Techno-Functional Properties of Food Ingredients

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Message from the Guest Editors

Proteins, polysaccharides, and fibers from natural sources are gaining increasing interest as sustainable food ingredients. Nonthermal technologies, particularly those based on high pressure (e.g., high-pressure processing and high-pressure homogenization), have recently emerged as capable of modifying the accessibility and techno-functionality of scarcely exploited macromolecules from underutilized crops, agri-food by-products and residues, or novel sources such as insects.

By inducing targeted structural changes at the cellular level, for example by increasing the bioaccessibility of value-added components by size reduction or simply opening the cell structure, and at the molecular level (e.g., defibrillation and size reduction of structural polysaccharides, or the aggregation, unfolding, or partial denaturation of proteins), high-pressure processing and high-pressure homogenization may become versatile tools to improve and modulate the functional and technological properties of natural ingredients.





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Message from the Editor-in-Chief

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