Special Issue

Applications of Ultrasound-Assisted Food Processing Technologies

Message from the Guest Editors

High-intensity focused ultrasound (HIU) is a sustainable physical technology with a wide variety of applications in the food industry. The advantages of HIU are mainly due to the cavitation phenomenon produced by sound waves (20–100 kHz), which modifies the physical, biochemical, and mechanical properties of food. The most important ultrasound-assisted unit operations that improve process efficiency and product quality, compared to traditional technologies. Furthermore, HIU can be applied in combination with temperature, pressure, or both to produce a synergistic effect. Another important field of HIU is the structural modification of proteins and carbohydrates for their incorporation as food ingredients with superior techno-functional properties. While HIU offers numerous advantages, there are some limitations that must be addressed. Effective large-scale implementation, process optimization, and safety due to the release of trace amounts of toxic elements from the devices, as well as the degradation of nutrients and bioactive substances, are some of the main challenges currently facing HIU in food processing.

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Message from the Editor-in-Chief

Foods (ISSN 2304-8158) is an open access and peer reviewed scientific journal that publishes original articles, critical reviews, case reports, and short communications on food science. Articles are released monthly online, with unlimited free access. Currently, Foods has been indexed by the Science Citation Index Expanded (SCIE - Web of Science), PubMed, and Scopus. Our aim is to encourage scientists, researchers, and other food professionals to publish their experimental and theoretical results as much detail as possible. We therefore invite you to be one of our authors, and in doing so share your important research findings with the global food science community.

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