Special Issue

Optimization of Microwave Technology in Food Processing: Trends and Prospects

Message from the Guest Editors

Microwave technology presents a high potential for food processing, essentially because energy is supplied volumetrically and not only at overheated surfaces, allowing a faster treatment with a better energy efficiency and reduced loss of quality attributes. Many challenges, however, exist for the expansion of microwave technology in the food industry. Amongst them, (i) complex temperature distribution, especially in solid foods, generate non-trivial cold spots and innovative solutions are needed to homogenize the treatment and guarantee food safety; (ii) treatment of powders remains understudied even if experimental results are promising, and the multiphysics modelling of the phenomena is a scientific challenge; (iii) an important controversy subsists about the potential non thermal effect of microwaves on enzymatic or microorganism inactivation; (iv) the use of microwaves to assist food freezing permits to obtain smaller crystals, for reasons that have yet to be elucidated. These challenges lead us to propose the edition of this Special Issue to better evaluate and disseminate the advances in this promising area.

Guest Editors

Prof. Dr. Lionel Boillereaux

GEPEA – UMR 6144 CNRS, ONIRIS, ITM Atlantique, University of Nantes, Nantes, France

Prof. Dr. Jorge Andrey Wilhelms Gut

Department of Chemical Engineering, Escola Politécnica, FoRC - Food Research Center, Universidade de São Paulo, São Paulo, Brazil

Deadline for manuscript submissions

closed (10 October 2021)

Foods

an Open Access Journal by MDPI

Impact Factor 5.1
CiteScore 8.7
Indexed in PubMed

mdpi.com/si/75908

Foods
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
foods@mdpi.com

mdpi.com/journal/foods

Foods

an Open Access Journal by MDPI

Impact Factor 5.1
CiteScore 8.7
Indexed in PubMed

mdpi.com/journal/foods

About the Journal

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.

Editor-in-Chief

Prof. Dr. Arun K. Bhunia
1. Department of Food Science, Purdue University, West Lafayette, IN 47907, USA
2. Department of Comparative Pathobiology, Purdue University, West Lafayette, IN 47907, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, FSTA, AGRIS, PubAg, and other databases.

Journal Rank:

JCR - Q1 (Food Science and Technology) / CiteScore - Q1 (Health Professions (miscellaneous))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.9 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).