Special Issue

Mathematical/Kinetic Modeling of Safety and Quality Attribute Changes During Food Processing or Storage

Message from the Guest Editors

Understanding the intricate dynamics of safety and quality attribute changes during food processing or storage is pivotal for ensuring food safety and maintaining product quality throughout shelf-life. Mathematical and kinetic modeling techniques play a pivotal role in this pursuit, offering predictive insights into the complex transformations within food systems. This Special Issue aims to curate original research and reviews focused on mathematical and kinetic modeling methodologies, encompassing a broad spectrum of approaches. Contributions are invited to explore various mathematical models, including reaction kinetics, transport phenomena, predictive algorithms, statistical modeling, computational simulations and machine learning applications. The focus is on decoding and forecasting alterations in chemical, microbiological, physical and sensory attributes. Submissions should demonstrate the application of diverse modeling frameworks across different food categories and processing scenarios, aiming to unravel the kinetics underlying safety and quality changes. We are looking forward to your submissions.

Guest Editors

Dr. Jiakai Lu

Department of Food Science, University of Massachusetts, Amherst, MA 01003, USA

Dr. Carlos M. Corvalan

Department of Food Science, Purdue University, 745 Agriculture Mall Drive, West Lafayette, IN 47906, USA

Deadline for manuscript submissions

closed (15 March 2025)



Foods

an Open Access Journal by MDPI

Impact Factor 5.1
CiteScore 8.7
Indexed in PubMed



mdpi.com/si/194010

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



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 Lafavette. 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).

