



an Open Access Journal by MDPI

Physical Chemistry, Formulation and Processing, Intersection of Food Sciences, Engineering and Global Health

Guest Editors:

Dr. Teresa Carvajal

Department of Agricultural & Biological Engineering, Purdue University, West Lafayette, IN, USA

Prof. Dr. Gustavo F. Gutiérrez-López

Escuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional, Mexico City, Mexico

Message from the Guest Editors

This Special Issue explores a broad range of topics in surface chemistry and materials' physical and chemical properties, motivated by the need to understand the interactions of food ingredients during processing and with biological membranes. The goal is to share findings that are unfamiliar to those primarily in food systems. Key achievements extend into studies on microstructure transformations and the ability to manipulate behaviors such as powder wetting, reconstitution, caking, flow, dissolution, digestibility, and bioavailability.

Keywords:

- surface chemistry
- water isotherms
- hysteresis
- powder caking
- powder flow
- particle interactions
- particle morphology
- formulation
- regulatory considerations
- awareness diversity equity inclusion (DEI)

Deadline for manuscript submissions:

20 September 2026



mdpi.com/si/213869

Special Issue



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica,
Politecnico di Milano, Piazza L.
da Vinci 32, 20133 Milano, Italy

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, Embase, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

Contact Us

Applied Sciences Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/applsci
applsci@mdpi.com
[X@Applsci](https://twitter.com/Applsci)