

Special Issue on
**Nanotechnology for Food Engineering: Biomembrane
and Nanocarriers**

CALL FOR PAPERS

Nanotechnology has been employed in various areas of food engineering and technology. Recent research has begun addressing the potential applications of nanotechnology for functional foods and nutraceuticals by applying the new concepts and engineering approaches involved in nanomaterials to target delivery of bioactive compounds and nutrients. “Nano” must exist naturally in food since, even in natural foods, structural components are built from molecules and, during digestion, break down into molecules. These molecules form ordered structures like cells, fibers, gels, emulsions, foams, and liquids, which give foods their various properties.

There is strong interest in significantly improving the quality of foods, especially nanocarriers, in order to improve the encapsulation efficiency of carriers and to control the release rate under various stimuli for target delivery using biocompatibility materials and size optimization. The biomembrane is one of the important molecular assemblies that contribute in an essential way to the functioning of organelles and of biological cells at large. A systematic study of the “Membranome,” in addition to the genome and proteome, is expected to be achieved in the 21st century with considerable potential for biomedicine, bioengineering, biomaterials, and functional food engineering development. In addition, enzymes are produced by all living organisms, from microorganisms to plants and animals; enzymes are necessary for nearly all of life’s processes of chemical breakdown of complex molecules into simpler ones, which often results in the release of energy and the biochemical synthesis of complex substances with storage energy.

Individuals from both academia and industry are expected to participate in this special issue. For example, personnel from nanotechnology-based industries that provide value-added products such as functional foods, including biomembranes, nanocarriers, and nanotechnology-based biomaterial products, are expected to participate. Additionally, research scientists, governmental and nongovernmental organizations, and research students who are actively involved in this field are expected to participate.

Therefore, to promote communication among the scientific community working in the field of functional food technology, we invite investigators to share original research articles and to review current papers in order to help new scientists understand and contribute to this interesting field.

Potential topics include but are not limited to the following:

- ▶ Carriers for food, agricultural practices, nutrition, and diet
- ▶ Target delivery of natural and functional compounds
- ▶ Application of biomembranes as biocatalyst, biomaterial, and bioprocess
- ▶ Nanotechnology in functional foods improvement
- ▶ “Nano” in food processing and packaging
- ▶ Sensors for detection or prevention of foodborne pathogens

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jchem/food.chemistry/nfebn/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Pahn-Shick Chang, Seoul National University, Seoul, Republic of Korea
pschang@snu.ac.kr

Guest Editors

Hiroshi Umakoshi, Osaka University, Osaka, Japan
umakoshi@cheng.es.osaka-u.ac.jp

Hakjin Kim, Seoul National University, Seoul, Republic of Korea
kimhj69@snu.ac.kr

Submission Deadline

Friday, 19 October 2018

Publication Date

March 2019