



Journal of Chemistry

Special Issue on  
**Food Nanotechnology: Opportunities and Challenges**

CALL FOR PAPERS

Nanotechnology has been employed in various sectors of food science and technology. Recently, a number of food products employing nanotechnology have been launched in the market by food sector industries. Nanomaterials exhibit unique physicochemical properties that open windows of opportunity for the creation of new and high performance products. As a result, nanomaterials can have a significant influence on the manufacturing, packaging, and storage of food. Recent applications of nanotechnology in food production have included the development of nanosized food ingredients and additives, delivery systems for bioactive compounds, and innovative food packaging.

Food nanotechnology not only has improved the quality of foods by making them tastier, healthier, and more nutritious but has also helped to generate totally new food products. Application of nanotechnology to foods has enhanced food texture and quality, reduced fat content, compressed nutrients such as vitamins and minerals, and helped to safeguard products during storage, processing, and transportation. In addition, nanomaterials can help to increase the shelf life of food products. However, with so many benefits, nanomaterials also may pose safety concerns to the consumers. Scientific research indicates that engineered nanomaterials may pose significant health risks. A 2012 National Research Council study notes that “there is little progress” in research about the human health effects of oral consumption of nanomaterials. On the other hand, there has been some international companies such as Kraft Foods and Nestle that are filling patents for food products developed from nanotechnology. Thus, food nanotechnology is an increasingly relevant research topic.

Individuals from both academics and industry are expected to participate in this special issue. For example, personnel from the nanotechnology based industries that are giving value added products such as nanofoods and nanotechnology based water purifiers are expected to participate. Additionally, research scientists, government and nongovernment 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 nanofood technology, we invite investigators to share original research articles and to review current papers in order to help new scientists to understand and contribute to this interesting field.

Potential topics include, but are not limited to:

- ▶ Nano in food, agricultural practices, nutrition, and diet
- ▶ Nanotechnology for delivery of natural and functional compounds
- ▶ Nanofoods: safety and toxicology
- ▶ Nanofoods with medicinal properties
- ▶ Nano in food processing and packaging
- ▶ Nanosensors for detection of food-borne pathogens
- ▶ Recent trends, patents, and IPR in nanofood

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jchem/food.chemistry/fnoc/>.

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**Manuscript Due**

Friday, 29 January 2016

**First Round of Reviews**

Friday, 22 April 2016

**Publication Date**

Friday, 17 June 2016