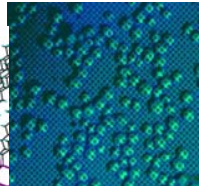
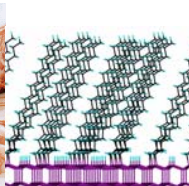
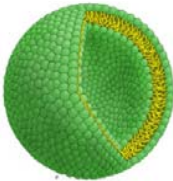


Wageningen Bionanotechnology Centre for food and health innovations



Mission

The Wageningen Bionanotechnology Centre is active in the fundamental science and technology of micro- and nanosystems and their applications in food and health.

Themes

Interdisciplinary research teams from Wageningen University & Research Centre closely co-operate on:

- Sensing and diagnostics of food quality and safety
- Encapsulation and delivery of nutrients
- Micro- and nanodevices for physical and (bio)chemical processing
- Chemical biology
- Nanotoxicology
- Consumer science and technology assessment

Rationale

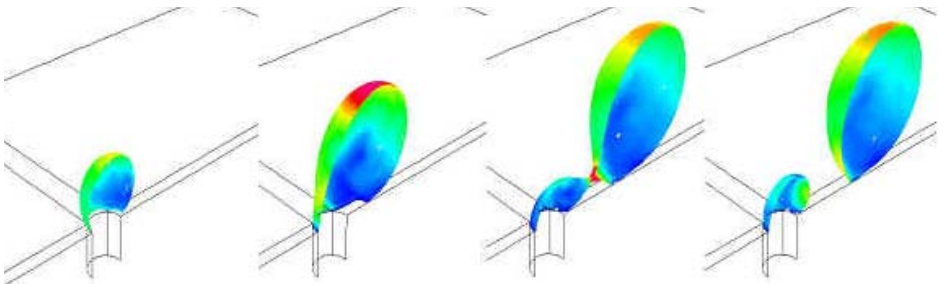
In relation to food humanity faces large challenges. Food related diseases like **obesity** and **diabetes** will create serious problems for society; the **aging population** will require special nutrition to maintain quality of life; food quality and safety is an increasingly important issue; life-style requirements will have to be addressed; and sustainability of food production and processing has continuous attention. Micro- and nanotechnology can make important contributions to the fulfilment of these challenges. It will allow **sensors** and diagnostic systems with improved sensitivity and specificity with which **food quality** can be assured and processes can be controlled more accurately. Application of micro- and nanotechnology will make separation and other **food processes** more efficient and will open up possibilities for new products. Derived from drug delivery systems envelopes for the **delivery of nutrients** can be designed that will improve the uptake by the consumer. Nanoscale control of structures will allow tailoring the texture of food



products to the requirements of consumer groups. Results of micro- and nanotechnology will have a large impact on **packaging and logistics** of food. Although these results are attainable within the foreseeable future, the combined effort of academia, research institutions and industry is required to develop them into economically viable concepts. A Centre for Applications of Nanotechnology in Food, offering state-of-the-art **facilities** and critical mass of **expertise** on the cross-section of micro- and nanotechnology and food, is a prerequisite for such efforts.

Participating Research Groups

- Microbiology
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- Biochemistry
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Prof.dr. Ton Visser
Prof.dr. Ernst Sudhölter
Prof.dr. Martien Cohen Stuart
Prof.dr. Willem Norde
Prof.dr. Herbert van Amerongen
Prof.dr. Erik van der Linden
Prof.dr. Remko Boom
Prof.dr. Harry Gruppen
Prof.dr. Tini van Boekel
Prof.dr. Michael Muller
Prof.dr. Ivonne Rietjens
Prof.dr. Lynn Frewer
- Organic chemistry
- Physical Chemistry and Colloid Science
- Biophysics
- Food Physics
- Process Engineering
- Food Chemistry
- Product Development and Quality
- Human Food
- Toxicology
- Marketing and consumer behavior
- Agrotechnology and Food Innovations
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For quality of life