

Nanotechnology in the Food Sector

Research activities on applications of nanotechnology in the food sector already include the development of improved taste, colour, flavour, texture of food products and increased bioavailability of nutrients and bioactive compounds. Improved quality, extended shelf-life and safety of food products due to new food packaging materials with improved mechanical, barrier, and antimicrobial properties are further important research topics. Nanosensors for traceability could be the future for monitoring the quality of food during transport and storage.

Because nanotechnology applications are expected to result in improved quality and safety of food products, many of the world's largest food companies are reported to support specific research programmes to explore the potential of nanotechnology for use in the food sector. It has been suggested that the number of companies currently applying nanotechnologies to food could be as high as 400 and that this number is expected to increase dramatically in the near future. In addition, the market for nanotechnology-derived products for the food sector is predicted to grow rapidly in the coming years. Currently, many nanotechnology applications in the food sector are at R&D or near-market stages, whereas currently only nanotechnology-derived materials for food packaging to improve mechanical and barrier properties and some delivery systems for biologically active compounds are available in selected countries. However, data on the benefits, improvements and risks of nanotechnology applications in the food sector as well as their economical competitiveness are still almost lacking. The conference seeks to cover the whole range of nanotechnology applications in the food sector and to bring people interested in that rapidly developing area together.

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Accommodation

A link to hotels in Karlsruhe: www.karlsruhe.de/stadt/tourismus/uebernachtung

Conference language

All contributions will be in English.

Conference venue

The conference will be held at the Max Rubner-Institut, Federal Research Institute of Nutrition and Food, Haid-und-Neu-Straße 9, Karlsruhe, Germany.

Evening event – dinner

There will be a complimentary dinner on October 11, 2010, for 60 guests. Separate registration is required (see registration form). Seats will be assigned to the first 60 participants (date of receipt of registration applies).

Payment

All payments should be made in EUR by bank transfer. Sorry, no credit card payments. Please indicate your name!

International bank transfer

IBAN: DE08 7500 0000 0075 0010 07
BIC: MARKDEF 1750

Reason for transfer:
1063 1001 7427 BEW 03037309

German bank transfer

Dt. Bundesbank Regensburg
BLZ: 750 000 00
Konto-Nr.: 750 010 07
Verwendungszweck:
1063 1001 7427 BEW 03037309

Registration fee

The fee covers participation in the sessions of the conference, abstract volume, meals and drinks at the get-together, at lunch and during coffee breaks.

	Before Sept 10	After Sept 10
Participants	230 EUR	250 EUR
Students*	100 EUR	120 EUR

(* Please fax or mail a copy of student ID.)

Cancellation policy

Registration fees will be refunded, if written cancellation is received before September 10, 2010. No Refunds will be made after this date.



Federal Ministry
of Food, Agriculture and
Consumer Protection

MRI
Max Rubner-Institut



Programme

Max Rubner Conference 2010 Nanotechnology in the Food Sector

October 10-12, 2010
Karlsruhe, Germany

Max Rubner-Institut
Federal Research Institute
of Nutrition and Food

Programme

Sunday, October 10, 2010

- 15:00-16:00 Registration - Coffee
- 16:00-16:30 Welcome and opening lectures
Welcome address
- 16:30-17:15 **Application of nanotechnologies in the food sector**
R. Greiner, MRI, Karlsruhe, Germany
- 17:15-18:00 **Nanostructures in food**
Pingfang Rao, Fuzhou University, Fuzhou, China
- 18:00 Get-together

Monday, October 11, 2010

- 09:00-09:40 **Novel nano-structured carrier and release systems for functional components**
E. Windhab, ETH Zurich, Zurich, Switzerland
- 09:40-10:20 **Product design and engineering (emulsions)**
H.P. Schuchmann, KIT, Karlsruhe, Germany
- 10:20-10:50 Coffee break
- 10:50-11:30 **Improved plastics packaging via nanocomposites and nanoparticles**
H.C. Langowski, Fraunhofer-Institute for Process Engineering and Packaging IVV, Freising, Germany
- 11:30-12:10 **Intelligent packaging as potential field for nanotechnology**
M. Smolander, VTT, Helsinki, Finland
- 12:10-13:30 Lunch break
- 13:30-14:10 **Nanosafety and risk assessment: Nanomaterials and their biological impact**
H. Krug, EMPA, Switzerland

- 14:10-14:50 **Protein-nanoparticle interactions**
Dr. M. Monopoli, University College Dublin, Dublin, Ireland
- 14:50-15:30 **Nanoparticles of the gastrointestinal tract: form and function**
L. Pele, Cambridge University, Cambridge, United Kingdom
- 15:30-16:10 **Interaction of nanoparticles with the intestinal mucosa in 3-D-test systems**
H. Walles, Fraunhofer-Institute for Interfacial Engineering and Biotechnology IGB, Stuttgart, Germany
- 16:10-17:00 Coffee break
- 17:00 Departure for dinner
Burg Windeck, Black Forest (www.burg-windeck.de)

Tuesday, October 12, 2010

- 08:00-08:40 **Detection and characterization of nanoparticles in food**
S. Weigel, RIKILT, Wageningen, The Netherlands
- 08:40-09:20 **Nanomaterials in food - risk perception of experts versus laymen**
M. Lohmann, BfR, Berlin, Germany
- 09:20-10:00 **Nanomaterials in food - an industry perspective**
B. Kettlitz, CIAA, Brussels, Belgium
- 10:00-10:15 Coffee break
- 10:15-10:55 **EFSA's approach for the safety evaluation of nanotechnology products in the food and feed area**
A. Theobald, EFSA, Parma, Italy
- 10:55-11:45 **Nanomaterials in food - ILSI view**
A. Cockburn, ILSI Europe, Brussels, Belgium
- 11:45-12:15 Break
- 12:15-15:00 Panel discussion (in German)
Moderation: G. Rechkemmer, MRI, Karlsruhe, Germany

Registration Form

Max Rubner Conference 2010

Title _____

Last Name _____

First Name _____

Organization _____

Address _____

Phone _____

E-Mail _____

Fax _____

Vegetarian meal for lunch yes no

Registration for complimentary dinner yes no

Vegetarian meal for dinner yes no

Signature _____

Registration is complete upon receipt of payment.

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