

THE SYMPOSIUM

The symposia of this series present and discuss subjects of current importance in the field of health effects associated with inhalation exposure to gaseous and particulate substances. They bring together scientists from government, academia, and industry, offering an opportunity for opinions to be heard, questions raised, and solutions sought on the basis of invited and proffered papers and posters. An international advisory committee composed of a broad range of renowned scientists ensures that a high scientific standard is maintained.

The 11th INIS will cover the main areas of current concern and active research on the benefits and risks of inhaled engineered nanoparticles, including:

- Relevant physico-chemical characteristics
- Measuring methods for airborne particles
- Emerging biological test systems
- Bioavailability
- Pulmonary and systemic toxicity
- Mechanisms of toxicity
- Use in therapy and diagnosis
- Potential sources of human exposure
- Potential risks

OFFICIAL LANGUAGE

The official language of the symposium will be English.

ABSTRACTS (deadline May 20, 2008)

The symposium will provide opportunities for oral communications and poster presentations of submitted abstracts relevant to the topics under discussion. Abstracts can be submitted via the INIS homepage (www.inis-symposium.com) and will be reviewed by the Scientific Planning Committee prior to acceptance. Acceptance of an abstract requires author(s) to present the oral communication or the poster themselves or to elect a substitute; registration of at least one author per accepted abstract is required. In case of non-registration, the poster or lecture will be excluded from the program.

PROCEEDINGS

Papers and selected posters resulting from this symposium will be published in a peer-reviewed international journal. Since the beginning of the International Inhalation Symposia, nine monographs of conferences have been published, and the proceedings of the 10th INIS have been published as a supplement of Inhalation Toxicology. These publications represent important scientific work that has been presented by internationally recognized experts during the course of the symposia. Some copies are still available, which will be offered for sale during the symposium.

LOCATION

The symposium will be held at the hotel Courtyard by Marriott Hannover Maschsee in Hannover, Germany. The hotel stands out for its charming location: it is in close vicinity to Hannover's city center, but also located in a beautiful green environment on the banks of the lake Maschsee. All rooms, including the conference facilities, are air-conditioned and offer state-of-the-art technical equipment. For further information, please refer to <http://www.marriott.com/hotels/travel/hajcy-courtyardhannover-maschsee/>.

Courtyard by Marriott Hannover Maschsee
Arthur-Menge-Ufer 3 • 30619 Hannover, Germany
Phone +49 511 36600-0 • Fax +49 511 36600-555

ACCOMMODATION

Accommodation is not included in the registration fee. Participants are kindly asked to make their own hotel arrangements. A limited number of rooms have been allocated for symposium participants at the hotel Courtyard by Marriott Hannover Maschsee. If you require contact details of other hotels or private places to stay near the symposium venue, please refer to <http://www.inis-symposium.com/accomodation.php>.

PAYMENT

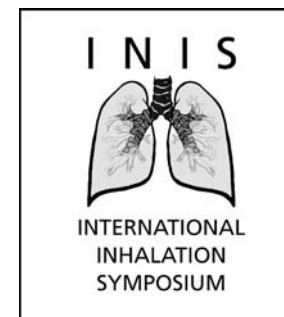
The registration fee is to be paid in advance of the symposium. All checks or bank drafts (in EUR only and indicating the participant's name) should be made payable to the "Fraunhofer-Gesellschaft" and sent to the INIS Secretariat (see address below under SECRETARIAT). Alternatively, payment can be made by bank transfer to:

Account name: Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., München
Bank: Deutsche Bank München • BIC (SWIFT code): DEUTDEMM
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SECRETARIAT

Should you require additional information about the symposium, the following individuals can assist you: Ines Emmermann and Karin Schlemminger • Fraunhofer Institute of Toxicology and Experimental Medicine • Nikolai-Fuchs-Str. 1 • 30625 Hannover Germany • Phone +49 511 5350-120 or -151 • Fax +49 511 5350-132 • ines.emmermann@item.fraunhofer.de • karin.schlemminger@item.fraunhofer.de



Second Announcement

Benefits and Risks of Inhaled Engineered Nanoparticles

11th International Inhalation Symposium
June 11-14, 2008
Hannover, Germany

Sponsored by:
Fraunhofer Institute of Toxicology and
Experimental Medicine ITEM

German Society of Toxicology, GST

National Health & Environmental Effects
Research Laboratory, U.S. EPA

The Helmholtz Zentrum München -
German Research Center for Environmental Health

PROGRAM OUTLINE

(speakers confirmed as at the date of printing)

Wednesday, June 11

9:00 Educational Course: Nanoparticles in medicine: particle design, inhalation administration, therapeutic approaches

13:30 Opening Address to the 11th International Inhalation Symposium by symposium president Uwe Heinrich

13:40 SESSION 1: Standardization, physico-chemical characteristics, and cell-particle interactions

Gérard Rivière, European Committee for Standardization and Research (CEN-STAR), Belgium: European and international standardization progress in the field of engineered nanoparticles • **Volkmar Richter**, Fraunhofer Institute for Ceramic Technologies and Systems, Germany: Physico-chemical characterization of nanoparticles in the light of toxicological effects • **Lutz Mädler**, University of Bremen, Germany, and **Andre Nel**, UCLA Medical Center, USA: Nanoparticle-bio-interactions: controlled design and cellular response • **Ken Donaldson**, University of Edinburgh Centre for Inflammation Research, ELEGI Colt Laboratory, UK: Towards a structure/activity relationship for nanoparticle toxicity • **Arwyn T. Jones**, Cardiff University, UK: Endocytic pathways: gateways for the cellular internalization of nanoparticles • **Free papers and posters**

Thursday, June 12

8:30 SESSION 2: Potential sources of human exposure, pulmonary delivery, and lung deposition evaluation

Kaarle Hämeri, Finnish Institute of Occupational Health and University of Helsinki, Finland: Facing the key workplace challenge: assessing and preventing exposure to nanoparticles • **Dave Mark**, Health and Safety Laboratory, UK: Problems and experience of measuring worker exposure to manufactured nanoparticles • **Heinz Fissan**, University of Duisburg-Essen, Germany: Extended applications of an on-line lung deposited nanoparticle surface area monitor • **Free papers and posters**

14:00 SESSION 3: Pulmonary and systemic toxicity

Kevin Dreher, United States Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, USA: Local and vascular health effects associated with the pulmonary deposition of engineered-manufactured nanomaterials: research challenges and preliminary findings • **Jürgen Pauluhn**, Bayer HealthCare AG, Germany: Comparative pulmonary response to inhaled nanostructures: considerations on test design and endpoints • **Ian M. Kennedy**, University of California Davis, USA: The in vitro interaction of lung epithelial cells and microvasculature

endothelial cells with metal oxide nanoparticles • **Julie Muller**, Solvay S. A. and Catholic University of Louvain, Belgium: Clastogenic and aneugenic effects of multi-wall carbon nanotubes in epithelial cells • **Robert B. Devlin**, United States Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, USA: Acid-functionalized single-walled carbon nanotubes enhance cardiac ischemic/reperfusion injury in mice • **Free papers and posters**

Friday, June 13

9:00 SESSION 4: Use in therapy and diagnosis

Régis Cartier, Boehringer Ingelheim Pharma GmbH & Co. KG, Germany: Controlled release formulations for pulmonary drug delivery: utilization of nanosuspensions and nanostructured dry powders • **Stuart Jones**, King's College London, UK: The design of novel poly(vinyl alcohol) fluorescently labeled nanoparticles suitable for drug delivery and inhalation toxicokinetics • **Poster session**

After lunch, boat ride around the lake Maschsee

15:00 SESSION 4 (continued): Use in therapy and diagnosis

Claus-Michael Lehr, University of Saarbrücken, Germany: Respiratory nanomedicines – opportunities for improving drug delivery across the air-blood barrier • **Justin S. Hanes**, The Johns Hopkins University Baltimore, The Institute for NanoBioTechnology (INBT), USA: Advances in pulmonary nanotherapeutics • **Free papers**

16:50 Awarding of prizes for the best poster(s) presented

17:00 SESSION 5: Mechanisms of toxicity and hazard evaluation

Günter Oberdörster, University of Rochester, USA: Screening assays for predicting nanoparticle toxicity

19:30 Dinner reception for all participants of the symposium

Saturday, June 14

9:00 SESSION 5 (continued): Mechanisms of toxicity and hazard evaluation

Peter Wick, EMPA, Swiss Federal Laboratories for Materials Testing and Research, Switzerland: Nanomaterials - cell interactions: how carbon nanotubes affect cell physiology • **David Warheit**, DuPont Haskell Global Centers for Health and Environmental Sciences, USA: Role of nanoparticle surface reactivity on pulmonary hazard effects and development of a base set of toxicity assays as a component of nanoparticle risk management • **Bengt Fadeel**, Karolinska Institute, Sweden:

Recognition determines toxicity: studies on immune recognition of engineered nanomaterials and implications for therapeutic use of nanomaterials • **Petia Simeonova**, National Institute for Occupational Safety and Health Centers for Disease Control and Prevention, USA: Engineered nanoparticle respiratory exposure and potential risk for cardiovascular toxicity • **Free papers**

REGISTRATION

Early registration is recommended, as participation is limited. To register, please use the online registration form at <http://www.inis-symposium.com>. The registration fee for the symposium must be paid in advance and includes symposium attendance, morning and afternoon coffee, lunch (Thursday and Friday only), the program booklet, abstracts, symposium reception on Friday night, as well as one copy of the published proceedings. Participation in the Educational Course on Wednesday morning is not included in the registration fee for the symposium. The fee for the course is also to be paid in advance.

Registration fees for the Symposium:

Regular participant, complete symposium	490 (550)* euros
Regular participant, Wednesday only	100 (120)* euros
Regular participant, Thursday only	200 (220)* euros
Regular participant, Friday only	200 (220)* euros
Regular participant, Saturday only	100 (120)* euros

Student*, complete symposium	300 (360)* euros
Student*, Wednesday only	60 euros /day
Student*, Thursday only	120 euros /day
Student*, Friday only	120 euros /day
Student*, Saturday only	60 euros /day

Registration fees for the Educational Course:

Participant registered also for the symposium	50 euros
Participant not registered for the symposium	75 euros

*Students registering must send a proof of student's status. Fees indicated in parentheses are for late registration, to be paid if your registration is received after May 14, 2008.

A **cancellation fee** of 50 percent of your registration fee will be charged, if written notice is received (by mail, fax, or e-mail) before May 28, 2008. No refunds will be made in case of cancellation after this date.

For any inquiries regarding your registration, please contact:

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