Fraunhofer
NANOTECH

FRAUNHOFER NANOTECHNOLOGY ALLIANCE

3RD JOINT SYMPOSIUM ON NANOTECHNOLOGY

APRIL 9 – 10, 2019

The Fraunhofer Alliance on Nanotechnology, the Fraunhofer Alliance Food Chain Management, and the German Federal Institute for Risk Assessment BfR invite you to their third Joint Symposium on Nanotechnology in spring 2019. This time, the event is hosted by the Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB in Stuttgart.

The focal points of the symposium range from nanotechnology in medicine to applications in the food industry or water treatment to applications in the field of energy and construction.

MORE INFORMATION AND REGISTRATION
www.igb.fraunhofer.de/json

Please consider the participation fee of 120 Euro.

CONTACT

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Fraunhofer
FOOD CHAIN

BfR
Bundesinstitut für Risikobewertung

3RD JOINT SYMPOSIUM ON NANOTECHNOLOGY

APRIL 9 – 10, 2019

Tuesday, April 9, 2019

10:30 – 10:40 Uhr
Welcome note.
Dr. Markus Wolperdinger, Fraunhofer Institute for Interfacial Process Engineering and Biotechnology IGB (Stuttgart, Germany)

Session I:
Biokinetics and mechanistic toxicology of nanomaterials (Chairperson Prof. Dr. Dr. Andreas Luch)

10:40 – 10:45 Uhr
Introduction to Session I.
Prof. Dr. Dr. Andreas Luch, German Federal Institute for Risk Assessment BfR (Berlin, Germany)

10:45 – 11:10 Uhr
***In vitro* / *in vivo* correlations of lung toxicity parameters.**
Dr. Otmar Schmid, Helmholtz-Zentrum Munich – German Research Center for Environmental Health (München, Germany)

11:10 – 11:35 Uhr
Fate of aerosolized nanoparticles: The influence of surface active substances on lung deposition and respiratory effects.
Frank Bierkandt, BfR (Berlin, Germany)

11:35 – 12:00 Uhr
Stable isotope tracing of engineered nanoparticles – concepts, methods and (kinetic) applications.
Prof. Dr. Mark Rehkämper, Imperial College London (London, United Kingdom)

12:00 – 13:10 Uhr
Lunch break / Guided Lab Tour I

13:10 – 13:35 Uhr
Graphenes / MWCNT toxicity – Two-tiered *in vitro* / *in vivo* approach.
Dr. Otto Creutzenberg, Fraunhofer Institute for Toxicology and Experimental Medicine ITEM (Hannover, Germany)

13:35 – 14:00 Uhr
Genotoxicity of metallic nanoparticles.
Dr. Valerie Fessard, Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail ANSES (Fougère, France)

14:00 – 14:25 Uhr
Al toxicology and organ burden.
Prof. Dr. Andrea Hartwig, Karlsruhe Institute of Technology KIT (Karlsruhe, Germany)

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Session II: Food / Water
(Chairperson Dr. Roland Franz)

14:25 – 14:30 Uhr
Introduction to Session II.
Dr. Roland Franz, Fraunhofer Institute for Process Engineering and Packaging IVV (Freising, Germany)

14:30 – 14:55 Uhr
Is Nano released from food packaging?
Dr. Roland Franz, Fraunhofer IVV (Freising, Germany)

14:55 – 15:20 Uhr
Risk assessment of the application of nanoscience and nanotechnologies in the food and feed chain.
Dr. Reinhilde Schoonjans, European Food and Safety Authority EFSA (Parma, Italy)

15:20 – 15:35 Uhr
Coffee break

15:35 – 16:00 Uhr
Nano-sized delivery systems for food applications.
Dr. Ralf Greiner, Max-Rubner-Institute (Karlsruhe, Germany)

16:00 – 16:25 Uhr
Nanostructured ceramic membranes for water treatment.
Dr.-Ing. Hannes Richter, Fraunhofer Institute for Ceramic Technologies and Systems IKTS (Dresden, Germany)

Session III Nanomedicine
(Chairperson Prof. Dr. Günter Tovar)

16:25 – 16:30 Uhr
Introduction to Session III.
Prof. Dr. Günter Tovar, Fraunhofer IGB (Stuttgart, Germany)

16:30 – 16:55 Uhr
Biofabrication, 3D-printing and additive manufacturing.
Prof. Dr. Jürgen Groll, Julius-Maximilians-Universität JMU (Würzburg, Germany)

16:55 – 17:20 Uhr
Selection of drug carriers.
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17:20 – 17:45 Uhr
Nanomedicine – Scientific breakthroughs or more of the same?
Prof. Dr. Pauline Iden, Nanid Scientific Consulting (Dudenhofen, Germany)

17:45 – 17:50 Uhr
Conclusions Day One.

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Wednesday: April 10, 2019

08:30 – 08:35 Uhr
Re-Opening Session III.
Prof. Dr. Günter Tovar, Fraunhofer IGB

08:35 – 09:00 Uhr
Local and systemic exposure to metallic nanoparticles from orthopedic implants.
Dr. Janosch Schoon, Charité (Berlin, Germany)

09:00 – 09:25 Uhr
Nose-to-brain-patch – circumventing the blood-brain barrier.
Dr. Carmen Gruber-Traub, Fraunhofer IGB (Stuttgart, Germany)

Session IV: Fate of Nanomaterials/Ökotox/Grouping (Chairperson Dr. Peter Laux)

09:25 – 09:30 Uhr
Introduction to Session IV.
Chairperson Dr. Peter Laux, BfR (Berlin, Germany)

09:30 – 09:55 Uhr
Establishing nanomaterial grouping: current status and lessons learnt from different projects.
Dr. Andrea Haase, BfR (Berlin, Germany)

09:55 – 10:20 Uhr
Coffee break

10:20 – 10:45 Uhr
Frameworks and case studies to support grouping for industrial and regulatory purposes: GRACIOUS & nanoGRAVUR projects.
Dr. Wendel Wohlleben, BASF SE (Ludwigshafen, Germany)

10:45 – 11:10 Uhr
Grouping concept for nanomaterials regarding fate and effect of nanomaterials.
Dr. Kerstin Hund-Rinke, Fraunhofer Institute for Molecular Biology and Applied Ecology IME (Schmallenberg, Germany)

11:10 – 11:35 Uhr
Critical applications and exposure scenarios of engineered CeO_2-, SiO_2- and Ag-nanomaterials in Germany.
Dr. Bernd Giese, University of Natural Resources and Life Sciences BOKU (Wien, Austria)

11:35 – 12:00 Uhr
Safe use of nanomaterials for drinking and industrial water purification.
Prof. Dr. Paul Westerhoff, Arizona State University (Tempe, Arizona, USA)

12:00 – 13:20 Uhr
Lunch break / Guided Lab Tour II

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Session V: Energy / Construction
(Chairperson Dr. Karl-Heinz Haas)

13:20 – 13:25 Uhr
Introduction to Session V.
Dr. Karl-Heinz Haas, Fraunhofer Institute for Silicate Research ISC (Würzburg, Germany)

13:25 – 13:50 Uhr
Perovskite solar cells, a novel development in photovoltaics.
Dr. Andreas Hinsch, Fraunhofer Institute for Solar Energy Systems ISE (Freiburg, Germany)

13:50 – 14:15 Uhr
Nanomaterials for energy storage.
Dr. Henning Lorrmann, Fraunhofer ISC (Würzburg, Germany)

14:15 – 14:40 Uhr
Nanostructured semiconductors for solar energy conversion.
Prof. Dr. Roland Marschall, University of Bayreuth (Bayreuth, Germany)

14:40 – 15:05 Uhr
Overview on nanomaterials for construction.
Dr. Karl-Heinz Haas, Fraunhofer ISC (Würzburg, Germany)

15:05 – 15:30 Uhr
Coffee break

15:30 – 15:55 Uhr
Life cycle approach for nanoparticle-based products used in house coatings to balance benefits and risks.
Claudia Som, EMPA Materials Science and Technology (St. Gallen, Switzerland)

Session VI: Registration / Regulation
(Chairperson Dr. Kerstin Hund-Rinke)

15:55 – 16:00 Uhr
Introduction to Session VI.
Dr. Kerstin Hund-Rinke, Fraunhofer IME (Schmallenberg, Germany)

16:00 – 16:25 Uhr
Analysis of nanomaterials in food.
Dr. Karin Löschner, Technical University of Denmark (Lyngby, Denmark)

16:25 – 16:50 Uhr
The European Commission's definition of nanomaterials: regulatory implementation and challenges.
Dr. Hubert Rauscher, European Commission, DG Joint Research Centre (Ispra, Italy)

16:50 – 17:15 Uhr
Standardization in nanotechnology – status and requirements review from the occupational safety and health perspective.
Dr. Wolfgang, Luther, VDI Technologiezentrum (Düsseldorf, Germany)

17:15 – 17:25 Uhr
Conclusions (Fraunhofer / BfR)

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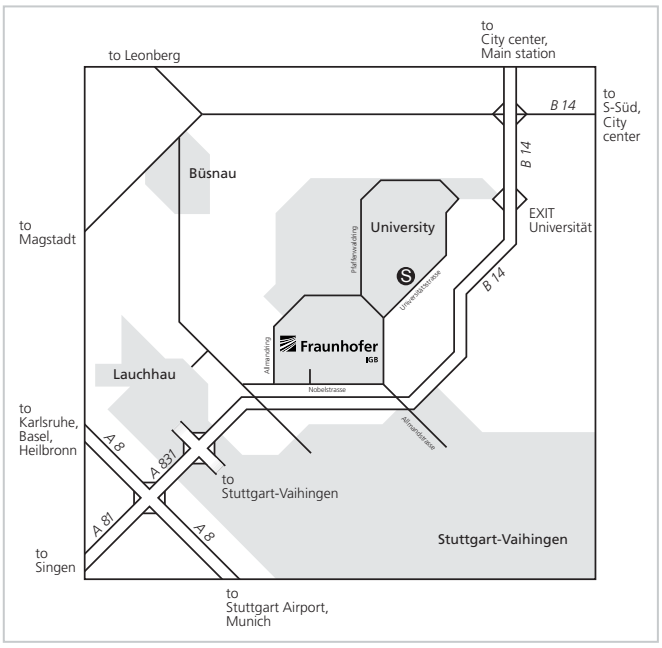
DIRECTIONS

The symposium is hosted by the Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB:

Adress
Fraunhofer-Institute for Interfacial Engineering and Biotechnology IGB
Nobelstr. 12
70569 Stuttgart
www.igb.fraunhofer.de



By train
From Stuttgart's main station (Hauptbahnhof), take either the S-Bahn (city rail) S1 (towards Herrenberg), S2 or S3 (both towards Airport), all departing from platform 101 on the lower level underneath the train station. Get off at the "Universität" station and follow the signs there to the "Wohngebiet Schranne/Endelbang/Nobelstrasse" exit. You are now on Universitätsstrasse where you will find signs directing you to "Fraunhofer-Gesellschaft" (approx. 650 m). Alternatively, take bus no. 84 or 92 from the "Universität" station to the "Nobelstrasse" bus-stop. Plan approx. 30 minutes from the main station to the IGB building (this includes walking time).

By car
Leave motorway A 81 or A 8 at the "Stuttgarter Kreuz" junction. Take the A 831 in the direction of "Stuttgart Zentrum" (City center) and exit at "Universität". Turn left at the traffic lights onto Universitätsstrasse and keep straight on until Universitätsstrasse becomes Nobelstrasse after a sharp bend to the right. After a further 400 m, the Fraunhofer-Institutszentrum will appear on the right.

By air
From Stuttgart airport, take the S-Bahn (city rail) S2 or S3 in the direction of Stuttgart-Vaihingen/Hauptbahnhof. Get off at the "Universität" station and continue as described directly above. A taxi from the airport will cover the distance of 14 km in approx. 20 minutes.