



Program

Version February 27, 2017

Sunday, March 12th

From 15:00

Registration

16:00 – 17:00

Welcome drink

The big picture

17:00 - 17:10

Bernd Nowack

Opening

17:10 – 17:35

Mark Wiesner

Quantifying physical-chemical interactions to predict behavior at the nano/bio interface

17:35 – 18:00

Ralf Kaegi

Engineered nanoparticles in natural and technical systems: A matter of concern?

18:00 – 18:30

Pedro Alvarez – Keynote Lecture

Nanotechnology-Enabled Water Treatment (NEWTE): a vision to enable decentralized water treatment and address growing challenges of the energy-water nexus

19:00

Dinner

Monday, March 13th

Sources, release and flows

Chair J. Rose

- 8:30 – 9:00 **Wendel Wohlleben – Keynote Lecture**
Release of nanomaterials from products
- 9:00 – 9:15 **Veronique Adam**
Flows of engineered nanomaterials through waste treatment to the environment
- 9:15 – 9:45 **Arturo Keller – Keynote Lecture**
Assessing the risk of engineered nanomaterials in the environment with nanoFate
- 9:45 – 10:00 **Alejandro Caballero**
Environmental concentrations of nanomaterials released from four applications during their life cycle: do they influence the entire system?
- 10:00 – 10:30 *Coffee break*

Sources, release and flows

Chair W. Wohlleben

- 10:30 - 10:45 **Camilla Delpivo**
Experimental life-cycle simulations of nano-enabled products and characterization of transformed and released materials
- 10:45 – 11:15 **Jerome Rose – Keynote Lecture**
Release of nanomaterials from products
- 11:15 – 11:30 **Jean-François Damlencourt**
NPS release study turned towards the safer by design approach
- 11:30 – 12:00 **Phil Demokritou – Keynote Lecture**
Nano-waste: Environmental Health and Safety (EHS) implications during thermal decomposition of nano-enabled thermoplastics
- 12:15 - 13:45 *Lunch*
- 14:00 – 16:00 Poster session
- 16:00 – 16:30 *Coffee break*
- 16:30 – 16:45 **Chiara Cometta and Lorenzo Sonognini**
Welcome address from CSF and Monte Verità

Analysis

Chair J. Ranville

16:45 – 17:15

Frank Von der Kammer – Keynote Lecture

Analysis of nanomaterials in the environment

17:15 – 17:30

Florian Meier

Asymmetrical flow field-flow fractionation hyphenated with ICP-MS – A promising tool for trace analysis of engineered silver nanomaterials in environmental samples

17:30 – 17:45

Florian Weigl

Preconcentration and quantitative characterization of rhodium nanoparticles

17:45 – 18:00

John Parsons

Analysis of fullerenes in urban and industrial soils using an UHPLC-QTOF MS method

18:00 – 18:30

James Ranville – Keynote Lecture

Nanometrology for examining nanomaterials released from products undergoing weathering

19:00

Dinner

Tuesday, March 14th

Fate modeling

Chair J. Lead

8:30 – 9:00

Claus Svendsen – Keynote Lecture

What is the meaning of pristine nanoparticles, their lifecycle and fate? An overview and forward look

9:00 – 9:20

Stephen Lofts

Approaches to modelling environmental fate of manufactured nanomaterials: a review and forward look

9:20 – 9:40

Peyman Babakhan

A tale of two assumptions: equilibrium and kinetic assumptions for modelling the deposition of nanoparticles in porous media

9:40 – 10:00

Serge Stoll

Investigation of nanoparticle heteroagglomeration by computer modeling

10:00 – 10:30

Coffee break

Fate in water

Chair C. Svendsen

10:30 – 10:45

Jeff Nason

“Patchy” particles: the role of surface heterogeneity in controlling nanoparticle aggregation

10:45 – 11:00

Jonathan Bridge

Early and later stages of aggregation of colloid and nanoparticles: measurement and modelling

11:00 – 11:30

Jamie Lead – Keynote Lecture

Fate and effects of nanoparticles in aquatic systems - role of transformations on transport, dose and uptake

11:30 – 11:45

Emel Topuz

Silver nanoparticle interactions with aquatic environmental relevant constituents determine their environmental fate?

11:45 – 12:00

Urs Dippon

Effect of natural organic matter and synthetic polymers on CeO₂-nanoparticle colloidal stability and their transport in saturated porous media

12:15 - 13:45

Lunch

Fate

Chair G. Lowry

- 14:00 – 14:15 **Olena Oriekhova**
Heteroaggregation of CeO₂ nanoparticle in aquatic system: in presence of inorganic colloids and polysaccharide chains
- 14:15 – 14:45 **Enzo Lombi – Keynote Lecture**
Fate of engineered nanoparticles inadvertently or intentionally released to the terrestrial environment
- 14:45 – 15:00 **Basilus Thalmann**
Transformation rates of AgNP in urban (waste)waters
- 15:00 – 15:15 **Peter Vikesland**
Controlled evaluation of nanomaterial transformations
- 15:15 – 15:30 **Alexander Gogos**
Sulfidation kinetics of copper oxide nanoparticles
- 15:30 – 15:45 **Denise Mitrano**
Mobility of metallic (nano)particles in leachates from landfills containing waste incineration residues
- 15:45 – 16:00 **Laura Degenkolb**
Remobilization of differently aged Ag NP from sediments of an artificial riverbank filtration system
- 16:00 – 16:30 *Coffee break*

Fate in soils and mesocosms

Chair E. Lombi

- 16:30 – 17:00 **Geert Cornelis – Keynote Lecture**
Fate of engineered particles vs. colloids in soils
- 17:00 – 17:15 **Sondra Klitzke**
The fate of synthetic Ag nanoparticles in soils
- 17:15 – 17:45 **Greg Lowry – Keynote Lecture**
What large mesocosm experiments indicate about nanomaterial fate and effects in complex environmental systems
- 17:45 – 18:00 **Melanie Auffan**
Aquatic indoor mesocosms: an integrated approach to assess the environmental risks of nanomaterials
- 18:00 – 18:15 **George Metreveli**
A floodplain mesocosm study for the characterization of fate and effects of engineered nanoparticles in the aquatic-terrestrial transition zone
- 18:15 – 18:30 **Michael Henning**
Release of radiolabelled multiwalled carbon nanotubes (14C - MWCNT) from nanocomposites in sediment-water systems and the uptake of released material by *Lumbriculus variegatus*
- 19:00 *Dinner*

Wednesday, March 15th

Nano-bio interactions

Chair E. Petersen

- 8:30 – 9:00 **Peter Gehr – Keynote Lecture**
What are the consequences when nanoparticles interact with biological systems?
- 9:00 – 9:15 **Angela Ivask**
Analysis of cellular binding and uptake of nanoparticles at the single cell level
- 9:15 – 9:30 **Nelson Marmiroli/Elena Maestri**
Nuclear-mitochondrial interactions in the toxicity mechanisms of metal-containing nanoparticles in different organisms
- 9:30 – 10:00 **Kristin Schirmer – Keynote Lecture**
Ecotoxicological effects of nanomaterials in freshwater ecosystems
- 10:00 – 10:30 *Coffee break*

Test systems and tools

Chair P. Gehr

- 10:30 – 11:00 **Elijah Petersen – Keynote Lecture**
Strategies to improve the reliability of nanoecotoxicity assays
- 11:00 – 11:25 **Janeck J. Scott-Fordsman**
Hazard assessment of NMs – multispecies test systems - high level testing of nanomaterial hazard
- 11:25 – 11:50 **Monica Amorim**
Hazard assessment of NMs – urgent need to integrate tools for long term assessment
- 12:00– 13:30 *Lunch*
- From 13:45 *Excursion to the Castles of Bellinzona, followed by Conference Dinner at the Grotto Brogginini in Losone*

Thursday, March 16th

Ecotoxicology

Chair K. Schirmer

8:30 – 9:00

Steffen Foss Hansen – Keynote Lecture

A critical and in-depth analysis of the environmental aspect of the OECD SP dossiers

9:00 – 9:20

Vera Slavejkova

Towards more ecological relevance of nanotesting: Synergistic effects of copper oxide nanoparticles and light on green microalga

9:20 – 9:40

Kerstin Hund-Rinke

Grouping of nanomaterials regarding ecotoxicological testing

9:40 – 10:00

Laura Canesi

Nanoparticle-protein coronas in invertebrate species: implications in the environmental impact of nanoparticles

10:00 – 10:30

Coffee break

Ecotoxicology

Chair S. Foss Hansen

10:30 – 10:45

Katre Juganson

Ag-ions play the main role in silver nanoparticles toxicity in the ciliate *Tetrahymena thermophila*

10:45 – 11:00

Anastasia Georgantzopoulos

Fate, transformation and ecotoxicological effects of Ag and TiO₂ nanoparticles using a lab-scale wastewater treatment plant

11:00 – 11:15

Daohui Lin

Joint toxicity and bioaccumulation of TiO₂ nanoparticles with organochlorine contaminants to algae

11:15 – 11:30

Ilaria Corsi

Ecosafety of nanomaterials entering the marine environment

11:30 – 12:00

Bernd Nowack– Keynote Lecture

Procedures for the production and use of released and aged nanomaterials for further testing

12:15 - 13:45

Lunch

Effects soils and plants

Chair G. Sarret

- 14:00 – 14:30 **Geraldine Sarret – Keynote Lecture**
Fate and impacts of silver nanoparticles in agricultural soils
- 14:30 – 14:50 **Yvonne Sakka**
Influences on chronic silver and copper nanoparticle toxicity in water and soils
- 14:50 – 15:10 **Naif Ashri**
Ecotoxicology of sediment-associated single and multi walled carbon nanotube in marine sediment dwelling cockles
- 15:10 – 15:30 **Nubia Zuverza-Mena**
Accumulation and toxicity of engineered nanoparticles in plants: Nano-specific physiological and molecular response
- 15:30 – 16:00 **Christine Hendren – Keynote Lecture**
Nanoinformatics and the nanomaterial research community: Where we are, where do we go from here, and how do we go there together?
- 16:00 – 16:30 *Coffee break*

Risk modeling

Chair C. Hendren

- 16:30 – 17:00 **Amy Dale – Keynote Lecture**
Golden hammers and golden rules: Addressing the hidden influences behind nanoparticle risk assessments and fate model design
- 17:00 – 17:15 **Yan Wang**
Environmental risk assessment of nano materials: nano silicon dioxide and nano iron oxides
- 17:15 – 17:30 **Henning Wigger**
Next steps in environmental risk assessment of engineered nanomaterials considering material-specific properties
- 17:30 – 17:50 **Beatrice Salieri**
Impact assessment of releases of engineered nanomaterial within the LCA methodology: state of the art and next research steps
- 17:50 – 18:10 **Joris Quik**
The next step in incorporating more in silico methods for environmental risk assessment of nanoparticles
- 18:10 – 18:30 **Fadri Gottschalk**
Major accidents and incidents with emerging materials: risk probabilities for the case of engineered nanoparticles embedded in a comparative and critical evaluation of analogies and prognosis on the power of nuclear energy approaches
- 19:00 *Dinner*

Friday, March 17th

Regulation

Chair B. Sokull-Kluettgen

- 8:30 – 9:00 **Birgit Sokull-Kluettgen – Keynote Lecture**
Towards regulation of nanomaterials
- 9:00 – 9:20 **Antonia Praetorius**
Do we have the analytical tools to enforce nanomaterial-specific regulations for food, cosmetics and biocides?
- 9:20 – 9:40 **Danail Hristozov**
Ecological risk along the life-cycle of nano-enabled products
- 9:40 – 10:00 **Thomas Bucheli**
What is special about nanopesticides and nanofertilisers compared to conventional agrochemicals?
- 10:00 – 10:30 *Coffee break*

Regulation and safe by design

Chair Amy Dale

- 10:30 – 10:50 **Jonathon Brame**
Broaden the scope: applying nano risk guidelines, tools and lessons learned to advanced materials
- 10:50 – 11:10 **Vicenç Pomar Portillo**
Implementation of Safe by design strategies in GUIDEnano textile case study
- 11:10 – 11:30 **Davide Gardini**
From design to properties evolution of nanomaterials in a Safer-by-Design framework
- 11:30 – 11:40 *CSF Award Ceremony*
- 11:40 – 12:00 **Bernd Nowack**
Closing remarks
- 12:00 *Lunch and departure*