



## Program

Version January 25, 2017

### Sunday, March 12<sup>th</sup>

*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**

TBA

18:00 – 18:30

**Pedro Alvarez – Keynote Lecture**

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

*19:00*

*Dinner*

## Monday, March 13<sup>th</sup>

### Sources, release and flows

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

### Sources, release and flows

10:30 - 10:45	<b>Camilla Delpivo</b> Experimental life-cycle simulations of nano-enabled products and characterization of transformed and released materials
10:45 – 11:15	<b>Jerome Rose – Keynote Lecture</b> Release of nanomaterials from products
11:15 – 11:30	<b>Delphine Boutry</b> NPS release study turned towards the safer by design approach
11:30 – 12:00	<b>Phil Demokritou – Keynote Lecture</b> TBA
<i>12:15 - 13:45</i>	<i>Lunch</i>
14:00 – 16:00	Poster session
<i>16:00 – 16:30</i>	<i>Coffee break</i>
16:30 – 16:45	<b>Chiara Cometta and Lorenzo Sonognini</b> Welcome address from CSF and Monte Verità

### Analysis

16:45 – 17:15	<b>Frank Von der Kammer – Keynote Lecture</b> Analysis of nanomaterials in the environment
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17:15 – 17:30	<b>Florian Meier</b> 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	<b>Florian Weigl</b> Preconcentration and quantitative characterization of rhodium nanoparticles
17:45 – 18:00	<b>John Parsons</b> Analysis of fullerenes in urban and industrial soils using an UHPLC-QTOF MS method
18:00 – 18:30	<b>James Ranville – Keynote Lecture</b> Nanometrology for examining nanomaterials released from products undergoing weathering
19:00	<i>Dinner</i>

## Tuesday, March 14<sup>th</sup>

### Fate modeling

8:30 – 9:00	<b>Claus Svendsen – Keynote Lecture</b> TBA
9:00 – 9:15	<b>Stephen Lofts</b> Approaches to modelling environmental fate of manufactured nanomaterials: a review and forward look
9:15 – 9:30	<b>Rute Ferreira Domingos</b> A kinetic environmental fate model for the risk assessment of engineered nanomaterials
9:30 – 9:45	<b>Peyman Babakhan</b> A tale of two assumptions: equilibrium and kinetic assumptions for modelling the deposition of nanoparticles in porous media
9:45 – 10:00	<b>Serge Stoll</b> Investigation of nanoparticle heteroagglomeration by computer modeling
<i>10:00 – 10:30</i>	<i>Coffee break</i>

### Fate in water

10:30 – 10:45	<b>Jeff Nason</b> “Patchy” particles: the role of surface heterogeneity in controlling nanoparticle aggregation
10:45 – 11:00	<b>Jonathan Bridge</b> Early and later stages of aggregation of colloid and nanoparticles: measurement and modelling
11:00 – 11:30	<b>Jamie Lead – Keynote Lecture</b> TBA
11:30 – 11:45	<b>Emel Topuz</b> Silver nanoparticle interactions with aquatic environmental relevant constituents determine their environmental fate?
11:45 – 12:00	<b>Urs Dippon</b> Effect of natural organic matter and synthetic polymers on CeO <sub>2</sub> -nanoparticle colloidal stability and their transport in saturated porous media
<i>12:15 - 13:45</i>	<i>Lunch</i>

### Fate

14:00 – 14:15	<b>Olena Oriekhova</b> Heteroaggregation of CeO <sub>2</sub> nanoparticle in aquatic system: in presence of inorganic colloids and polysaccharide chains
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14:15 – 14:45	<b>Enzo Lombi – Keynote Lecture</b> Fate of engineered nanoparticles inadvertently or intentionally released to the terrestrial environment
14:45 – 15:00	<b>Basilus Thalmann</b> Transformation rates of AgNP in urban (waste)waters
15:00 – 15:15	<b>Peter Vikesland</b> Controlled evaluation of nanomaterial transformations
15:15 – 15:30	<b>Alexander Gogos</b> Sulfidation kinetics of copper oxide nanoparticles
15:30 – 15:45	<b>Denise Mitrano</b> Mobility of metallic (nano)particles in leachates from landfills containing waste incineration residues
15:45 – 16:00	<b>Laura Degenkolb</b> Remobilization of differently aged Ag NP from sediments of an artificial riverbank filtration system
16:00 – 16:30	<i>Coffee break</i>

## **Fate in soils and mesocosms**

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

## Wednesday, March 15<sup>th</sup>

### Nano-bio interactions

- 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 **Bing Yan**  
Modulation of nano-bio interactions using a systematic approach
- 9:30 – 10:00 **Kristin Schirmer – Keynote Lecture**  
TBA
- 10:00 – 10:30 *Coffee break*

### Test systems and tools

- 10:30 – 11:00 **Elijah Petersen – Keynote Lecture**  
Strategies to improve the reliability of nanoecotoxicity assays
- 11:00 – 11:20 **Janeck J. Scott-Fordsman**  
Hazard assessment of NMs – multispecies test systems - high level testing of nanomaterial hazard
- 11:20 – 11:40 **Monica Amorim**  
Hazard assessment of NMs – urgent need to integrate tools for long term assessment
- 11:40 – 12:00 **Nelson Marmiroli**  
Nuclear-mitochondrial interactions in the toxicity mechanisms of metal-containing nanoparticles in different organisms
- 12:00– 13:30 *Lunch*
- From 13:45 *Excursion to the Castles of Bellinzona, followed by Conference Dinner at the Grotto Broggin in Losone*

## Thursday, March 16<sup>th</sup>

### Ecotoxicology

- 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 – 9:15 **Willie Peijnenburg**  
Are there significant acute ecotoxicological effects of nanoparticles?
- 9:15 – 9:30 **Vera Slavejkova**  
Towards more ecological relevance of nanotesting: Synergistic effects of copper oxide nanoparticles and light on green microalga
- 9:30 – 9:45 **Kerstin Hund-Rinke**  
Grouping of nanomaterials regarding ecotoxicological testing
- 9:45 – 10:00 **Laura Canesi**  
Nanoparticle-protein coronas in invertebrate species: implications in the environmental impact of nanoparticles
- 10:00 – 10:30 *Coffee break*

### Ecotoxicology

- 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 TiO<sub>2</sub> nanoparticles using a lab-scale wastewater treatment plant
- 11:00 – 11:15 **Daohui Lin**  
Joint toxicity and bioaccumulation of TiO<sub>2</sub> 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

- 14:00 – 14:30 **Geraldine Sarret – Keynote Lecture**  
Fate and impacts of silver nanoparticles in agricultural soils

14:30 – 14:45	<b>Xingmao Ma</b> Root exudates-facilitated dissolution is an important mechanism for plant uptake of engineered metallic nanoparticles
14:45 – 15:00	<b>Yvonne Sakka</b> Influences on chronic silver and copper nanoparticle toxicity in water and soils
15:00 – 15:15	<b>Naif Ashri</b> Ecotoxicology of sediment-associated single and multi walled carbon nanotube in marine sediment dwelling cockles
15:15 – 15:30	<b>Nubia Zuverza-Mena</b> Accumulation and toxicity of engineered nanoparticles in plants: Nano-specific physiological and molecular response
15:30 – 16:00	<b>Christine Hendren – Keynote Lecture</b> 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	<i>Coffee break</i>
<b>Risk modeling</b>	
16:30 – 17:00	<b>Amy Dale – Keynote Lecture</b> Golden hammers and golden rules: Addressing the hidden influences behind nanoparticle risk assessments and fate model design
17:00 – 17:15	<b>Yan Wang</b> Environmental risk assessment of nano materials: nano silicon dioxide and nano iron oxides
17:15 – 17:30	<b>Hennin Wigger</b> Next steps in environmental risk assessment of engineered nanomaterials considering material-specific properties
17:30 – 17:50	<b>Beatrice Salieri</b> Impact assessment of releases of engineered nanomaterial within the LCA methodology: state of the art and next research steps
17:50 – 18:10	<b>Joris Quik</b> The next step in incorporating more in silico methods for environmental risk assessment of nanoparticles
18:10 – 18:30	<b>Fadri Gottschalk</b> 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	<i>Dinner</i>



## Friday, March 17<sup>th</sup>

### Regulation

8:30 – 9:00

**Phil Sayre – Keynote Lecture**

Progress on regulation of nanomaterials: Is there anything novel, from a regulatory science perspective?

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

**Elena Semenzin**

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

10:30 – 11:00

**Birgit Sokull-Kluettgen – Keynote Lecture**

Towards regulation of nanomaterials

11:00 – 11:20

**Vicenç Pomar Portillo**

Implementation of Safe by design strategies in GUIDEnano textile case study

11:20 – 11:40

**Davide Gardini**

From design to properties evolution of nanomaterials in a Safer-by-Design framework

11:40 – 11:50

*CSF Award Ceremony*

11:50 – 12:00

**Bernd Nowack**

Closing remarks

12:00

*Lunch and departure*