

12th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials (ICEENN 2017)

3-6th September 2017

Old Ikon Gallery, Birmingham, United Kingdom



Conference programme - overview

Date	Event	Location
Sunday, 3 rd September	Training School on Nanomaterials Risk Assessment	UoB Campus – Biosciences
	Welcome Reception, 17.00 – 20.00	UoB Campus – Lapworth Museum
	Speakers dinner	La Tour Hotel
Monday, 4 th September	Conference Day 1	Old Ikon Gallery (Fazeley Studios)
Tuesday, 5 th September	Conference Day 2	Old Ikon Gallery (Fazeley Studios)
Wednesday, 6 th September	Conference Day 3 (AM)	Old Ikon Gallery (Fazeley Studios)
	FutureNanoNeeds Classification workshop (PM)	
Thursday, 7 th September	EU-US NanoEHS CoRs workshop	UoB Campus – Muirhead Tower
	Training School on SP-ICP-MS/single cell ICP-MS	UoB Campus – Biosciences
Friday, 8 th September	EU-US NanoEHS CoRs workshop	UoB Campus – Muirhead Tower
	Training School on SP-ICP-MS/single cell ICP-MS	UoB Campus – Biosciences

Conference programme – detailed

30 minute keynote talks (25 minutes plus 5 minutes questions)

20 minute talks selected from abstracts (15 minutes plus 5 minutes questions)

Monday September 4th

08.30 – 09.00	Registration
09.00 – 09.10	Opening and Welcome
Theme 1	Nanomaterials analysis and characterisation: new approaches and surface
09.10 – 09.40	Keynote 1: Single particle and single cell ICP-MS: applications in nanosafety Chady Stephan, Perkin Elmer
09.40 – 10.00	<u>Madjid Hadioui</u> (University of Montreal) Improvements in instrumental performance and data processing tools for a more reliable analysis of the smallest nanoparticles by Single Particle ICP-MS
10.00 – 10.20	<u>Olga Borovinskaya</u> (TOFWERK) Inductively Coupled Plasma Time-of-Flight Mass Spectrometry as a Monitoring Tool for Nanoparticles in the Environment
10.20 – 10.40	<u>Jamie Lead</u> (CENR, University of South Carolina) New data on transformations & dosimetry using single cell/single particle ICP-MS

10.40 – 11.00	<u>Åsa K. Jämting</u> (National Measurement Institute Australia) Particle characterisation: a nanometrologist's toolkit
11.00 – 11.20	<u>Wen-Che Hou</u> (National Cheng Kung University) Characterizing the Occurrence and Removal of Nano-sized Ag, Ti, Zn, Al, Pb, Ce, and Cu Pollutants in Wastewater Treatment Facilities by Single-Particle Inductively Coupled Plasma-Mass Spectrometry using Short Dwell Times
11.20 – 12.00	Tea / Coffee & networking
Theme 2	Nanomaterials Interactions with ligands, biomolecules or matrices
12.00 – 12.20	Keynote 2: Interactions of nanomaterials and biomolecules: theoretical and experimental approaches Serge Stoll, University of Geneva
12.20 – 12.40	<u>Yolanda Tancu</u> (Council for Scientific and Industrial Research) Preparation of coated cerium oxide nanoparticles and their behaviour in aquatic media
12.40 – 13.00	<u>Olena Oriekhova</u> (University of Geneva) Heteroaggregation of polystyrene latex nanoplastics in the presence of inorganic colloids and natural organic matter.
13.00 – 14.00	Lunch
14.00 – 14.20	<u>Laura Degenkolb</u> (German Environment Agency) Influence of aging and changes in physico-chemical conditions on the remobilization of Ag nanoparticles from sediments of an artificial riverbank filtration system
14.20 – 14.40	<u>Natalia Domenech-Garcia</u> (Leeds University) Evaluating Cerium (IV) Oxide nanoparticles meembrabe behaviour and related toxicity: synthesis and characterisation
14.40 – 15.00	<u>Yueyang Zhang</u> (University of Alberta) UV induced toxicity of cerium oxide nanoparticles (CeO ₂ NPs) and the protective properties of natural organic matter in Rio Negro Amazon River
15.00 – 15.20	<u>Damjana Drobne</u> (University of Ljubljana) Case study of invertebrate model for studying nanoparticles dissolution in vitro
15.20 – 15.40	<u>Ryo Sekine</u> (NERC Centre for Ecology and Hydrology) Raman spectroscopic investigation of model environmental ligand competition at the silver nanoparticle surface
15.40 – 16.00	<u>Korin E. Wheeler</u> (Santa Clara University) Machine learning provides predictive fingerprint of the nanomaterial protein corona
16.00 – 16.30	Tea / Coffee
Theme 3	Environmental and Health applications of nanomaterials / nanoscale processes
16.30 – 17.00	Keynote 3: Nanoscale Metal-Organic Matter Interactions: Implications for Bioavailability and Exposure of Contaminant Metals Heileen Hsu-Kim, Duke University
17.00 – 17.20	<u>Ajith D. Samarajeewa</u> (Environment and Climate Change Canada) Assessment of silver and copper nanoparticles on the microbial community in a biosolids-amended soil
17.20 – 17.40	<u>Andreas Gondikas</u> (Gothenburg University) Tungsten carbide particles as a test case for fate analysis and tracking of nanomaterials in the environment
17.40 – 18.00	<u>Sónia Rodrigues</u> (University of Aveiro) Measurement of CuO and Cu(OH) ₂ nanomaterials dissolution rates in agricultural soils: insight into the use of nano-enabled agrochemicals
18.30 – 21.30	Posters & Art @ Birmingham Museum & Art Gallery (short walk from IKON Gallery) Poster Session, Open Art Gallery, Beer & Canapés.

Tuesday September 5th**08.30 – 09.00 Registration****Theme 4 Nanomaterials release and environmental fate****09.00 – 09.30 Keynote 4: Exposure assessment: modelling and experimental approaches**

Antonia Praetorius, University of Vienna

09.30 – 09.50 Aleid Oosterwijk (The Netherlands Institute for Applied Scientific Research, TNO)
On the deposition velocity of nanosized aerosol particles measured by an eddy covariance measurement system.

09.50 – 10.10 Prado Domercq (University of York)
Modelling diffuse emissions and fate of engineered nanoparticles at high spatial resolution in urban environments

10.10 – 10.30 Howard Fairbrother (Johns Hopkins University)
Characterizing nanomaterial release from diverse matrices following natural and accelerated weathering

10.30 – 10.50 Adam Laycock (University of Vienna)
Analysis of Nanoparticles in Soils with Colloidal Extraction and Single-Particle ICPMS

10.50 – 11.30 Tea / Coffee & networking

11.30 – 11.50 Willie Peijnenburg (RIVM - Center for Safety of Substances and Products)
Exposure dynamics of metallic nano-Cu, -Pb and nano-ZnO affect metabolic potential of soil bacterial communities

11.50 – 12.10 Astrid Avellan (Carnegie Mellon University)
Long term behaviour and transformation of Cu- and Au- based nanomaterials after low dose, chronic addition in simulated freshwater wetlands.

12.10 – 12.30 Paul Westerhoff (Arizona State University)
A powder assay kit rapidly detects gold nanoparticles in water

12.30 – 12.50 Socorro Vázquez-Campos (LEITAT Technological Center)
Identification and quantification of ENM releases from nano-enabled products

12.50 – 14.00 Lunch**Theme 5 Biological effects of nanomaterials including mixtures (*in silico*, *in vitro* and *in vivo*)****14.00 – 14.30 Keynote 5: Recent progress in ecotoxicity assessment: towards mechanistic understanding**

Susana Loureiro, University of Aveiro

14.30 – 14.50 Richard Handy (University of Plymouth)
Is there a coating-effect on the toxicity of nanomaterials? Experiences from *in vivo* studies in the NANOSOLUTIONS project.

14.50 – 15.10 Seta Noventa (University of Exeter)
Influence of salinity and organic matter on the toxicity of metal oxide nanoparticles in the marine environment: effectiveness of the toxicity mechanisms based on dissolution and bandgap

15.10 – 15.30 Carolin Schultz (Centre for Ecology and Hydrology)
Aging effects on the toxicity of silver nanoparticles with varying properties to soil bacteria in artificial media and soil pore water

15.30 – 16.10 Tea / Coffee

16.10 – 16.30 Claire Passarelli (University of Essex)
Influence of TiO₂ and Ag nanoparticles on coastal biofilms in environmentally relevant conditions: consequences on carbon and nutrient fluxes

16.30 – 16.50 Mark Hartl (Heriot-Watt University)
Ecotoxicology of Sediment-Associated Single and Multi Walled Carbon Nanotube in Sediment Dwelling Cockles

16.50 – 17.10 Sophie Briffa (University of Birmingham)

	Uptake of Polyvinylpyrrolidone (PVP) Capped Metal Oxide Nanoparticles and their impact on D. Magna
17.10 – 17.30	<u>Nico van den Brink</u> (Wageningen University) Toxicokinetics of Ag-NPs, Ag ₂ S-NPs and Ag ⁺ in Eisenia fetida, a particle is not a particle.
17.30 – 17.50	<u>Anna von Mikecz</u> (IUF - Heinrich-Heine-University Duesseldorf) Anti-aging formula for the animal top model Caenorhabditis elegans: avoid certain nanomaterials.
17.50 – 18.10	<u>Amalie Thit</u> (Roskilde University) Trophic transfer of CuO NPs and Aqueous Cu: from sediment to worms to fish
19.00 – 22.00	Conference dinner @ Old IKON Gallery

Wednesday September 6th

Theme 6	Hot topics in environmental nanosciences
09.00 – 09.30	Keynote 6: Advanced characterizations of nanomaterials in consumer products and biological matrices Tae Hyun Yoon, Hanyang University
09.30 – 09.50	<u>Emily Guggenheim</u> (University of Birmingham) Methods for assessing the biological uptake and effects of ENP
09.50 – 10.10	<u>Laurence Andrew Nelson</u> (University of Leeds) Towards a third generation rapid high throughput screening platform for nanomaterials
10.10 – 10.30	<u>Tabea Junk</u> (Imperial College London) Multi-generational bioaccumulation of silver nanoparticles in zebrafish using stable isotope tracers
10.30 – 10.50	<u>Fabio Candotto Carniel</u> (University of Trieste) Effects of graphene based materials on pollen germination
10.50 – 11.30	Tea / Coffee & networking
Theme 7	Nanoregulation, standardisation and stakeholder dialogue and engagement
11.30 – 12.00	Keynote 7: Dissolution as a paradigm in regulation of nanomaterials toxicity Fred Klaessig, Pennsylvania Bio Nano Systems
12.00 – 12.20	<u>Miguel A. Gomez-Gonzalez</u> (Imperial College London) Towards understanding the environmental risk of nanoparticles: The fate of ZnO nanomaterials in waste water treatment plants
12.20 – 12.40	<u>Maurice Brennan</u> (University of Birmingham) Risk governance and the responsible innovation of nanomaterials: The progression to achieve EU Strategic Aims and Objectives
12.40 – 13.00	<u>Neil Hunt</u> (The REACH Centre) The Regulatory Position of Nanomaterials in the EU and Beyond: Current Situation and Possible Future Developments
13.00 – 14.00	Lunch
14.00 – 14.20	<u>Indrani Mahapatra</u> (University of Birmingham) Perspectives of experts on potential environmental risks from nanomedicines and adequacy of existing environment risk assessment framework
14.20 – 14.40	<u>Kai Paul</u> (Blue Frog Scientific Limited) Considering the use of Read-Across for Nanomaterials in a REACH Context
14.40 – 15.30	Closing remarks & awards (best poster and Rising Star of Environmental Nanosciences in memory of Prof. Steve Klaine)
15.30 – 18.30	FutureNanoNeeds Workshop on Nanomaterials categorisation ALL WELCOME