

REGISTER NOW (FREE - SEE BACK FOR DETAILS)

QualityNano NanoFATE & NanoMILE Joint Meeting

4th to 7th March 2014 • Birmingham, UK

*“Putting environmental realism into
nanosafety assessment”*

4th & 5th State of the art Workshops
6th & 7th – 3 module Training School

All focusing on best practice in relation to **exposure, fate & hazard assessment in soils, sediments and water**

For more information see next pages or contact: NanoFATE@ceh.ac.uk.

QualityNano NanoFATE & NanoMILE Joint Meeting Programme

Tuesday 4th March 2014, afternoon: 14:00 – 17:30

Welcome & Introduction

Claus Svendsen – *NERC Centre for Ecology and Hydrology*

Nanoparticle properties and their interactions with the environment

Víctor Puentes – *Catalan Institute of Nanotechnology*

How much will there be and where might it all be going – modelling environmental distributions?

Egon Dumont & Virginie Keller – *NERC Centre for Ecology and Hydrology*

How does the environment modify nanoparticle properties and consequently their behaviour and fate?

Geert Cornelis – *University of Gothenburg*

Bionanointerfaces and the ecological corona – interactions, displacement and evolution

Iseult Lynch – *University of Birmingham*

Issues for marine nanoecotox: From standard ecotox exposure issues to model systems for gut uptake.

Richard Handy – *University of Plymouth*

Species sensitivity distributions for Ag and ZnO nanoparticles: using taxonomic and trait based approaches

Susana Loureiro – *University of Aveiro*

Wednesday 5th March 2014, morning: 9:00 – 12:30

Bioavailability of Nanoparticles (ENP): Effect of long-term equilibration (ageing)

Kees van Gestel – *VU University Amsterdam*

Silver nanoparticles: Effects on and interactions with freshwater algae and bacteria

Marianne Matzke – *NERC CEH & Iseult Lynch – University of Birmingham*

Tracking internal distribution and effects of nanoparticles within organisms

Damjana Drobne – *University of Ljubljana*

The problem of scale and tracking uptake and effects – detecting small things in big animals

Peter Kille, *Cardiff University*

Significant trends in the physiochemical control of nanoparticle toxicity

Eva Valsami-Jones – *University of Birmingham*

Bringing it all together: Comparing a “classical” ERA with a nano-specific ERA for ZnO and Ag nanoparticles

Claus Svendsen – *NERC Centre for Ecology and Hydrology*

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Wednesday 5th March, afternoon parallel Workshops: 14:00 – 17:30

Workshop 1: Nanoparticle speciation: Theory, detection, interpretation and modelling

General nanoparticle behaviour theory and models

Andrew Nelson - *University of Leeds*

Nanoparticle speciation: determination and Interpretation

Geert Cornelis - *University of Gothenburg*

Modelling approaches to nanoparticle speciation and behaviour

Eva Valsami-Jones – *University of Birmingham*

Workshop 2: Mechanistic toxicology of Engineered Nanoparticles (ENPs): state of the art, future perspectives and practical workshop on high-throughput molecular data.

The problem of scale and localised effects in nanoecotox – where can mechanistic toxicology help?

Francesco Dondero - *DISIT, Alessandria, Italy* & Peter Kille – *Cardiff University*

Using molecular toxicology approaches to identify differential mechanisms of effect in marine organisms

Maria Bebianno - *Universidade do Algarve, Faro, Portugal*

Proteomic and transcriptomic effects in *C. elegans* exposed to size and surface property variant Ag NPs

Dirk Valkenburg - *VITO, Belgium* & Carolin Schultz – *NERC Centre for Ecology and Hydrology*

Smaller is better: reducing complexity in the output of RNAseq analysis reveals key biological responses

Martha Novo & Peter Kille – *Cardiff University* & Elma Lahive – *NERC, CEH*

Thursday 6th March, Practical training courses (in parallel): 9:00 – 16:30

Course 1: Mechanistic toxicology and systems biology approaches and data analysis:

How to approach, design, undertake and analyse high throughput molecular analysis experiments

Maria Bebianno - *Universidade do Algarve, Faro, Portugal*

Overview of a typical proteomics work flow.

Dirk Valkenburg - *VITO, Belgium*

HANDS ON TRAINING SESSION: reducing complexity in the output of RNAseq analysis

You will be led through analysing the NanoFATE RNAseq data using the Bioconductor open source package

Peter Kille & Martha Novo – *Cardiff University*

Course 2: Making your own Gold NPs and characterising them and other NPs:

AM:

HANDS-ON bench synthesis of citrate coated Au particles and characterisation of your product

You will be given the basic theory and then proceed to make and characterise your Au NPs

Andrew Nelson – *Leeds University*, Richard Handy – *Plymouth University*, NanoSight Instruments

PM:

Behaviour of particles in various standard aquatic ecotox media – dosing and characterisation

You will again be given the basic theory and then characterise what happens to your Au NPs (and other NPs) when dosed into various media of different properties, at a range of NP concentrations

Andrew Nelson – *Leeds University*, Richard Handy – *Plymouth University*, NanoSight Instruments

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Friday 7th March, Practical training course: 9:00 – 15:30

Course 3: Environmental realism in NP dosing and experiments (practical considerations and modelling).

Introduction to what dosing with nanomaterials in ecotox experiments have to achieve and how to do that

Claus Svendsen – NERC CEH & Teresa Fernandes – Heriot-Watt University

Standard test issues and modifications – using pristine vs. modified pigment nanoparticles as a case study

Teresa Fernandes – Heriot-Watt University

HANDS ON Modelling exercise on nanoparticle speciation and behaviour

Eva Valsami-Jones – University of Birmingham

Practical lab based exercise on how to achieve best ecotox dosing for various test systems

Claus Svendsen – NERC CEH & Teresa Fernandes – Heriot-Watt University

Verifying and Monitoring NP state, speciation and behaviour within ecotox tests

Iseult Lynch – University of Birmingham & Geert Cornelis – University of Gothenburg

Practical issues and registration details

Registration

Registration for the event is FREE – please book on <http://goo.gl/SsvQ5R>

See below for separate accommodation and conference dinner costs and booking information.

The lab based training courses on the 6th and 7th are limited to 30pers on a first come first served basis.

Accommodation

Accommodation is available at the venue (7min train ride from City Centre):

Conference Park B&B – University of Birmingham

Single room B&B* £40.00 per night

Double room B&B (1 person)* £50.00 per night

Double/twin room B&B (2 sharing)* £60.00 per night

* all En suite

Delegates are expected to book their own accommodation by calling **0121 415 8400** and quoting the following reference "QualityNano".

Alternative accommodation is available in the City Centre.

Conference Dinner

The Organising Committee will be arranging an optional conference dinner on the evening of Tuesday 4th March 2014. Dinner will cost £26 per person.

Delegates wishing to attend the dinner should indicate this on the registration form.