

About the organizers

The UNESCO-IHE Institute for Water Education carries out research, education and capacity building activities in the fields of water, environment and infrastructure. The Institute is the largest water education facility in the world, and the only institution in the UN system authorised to confer accredited MSc degrees. UNESCO-IHE is instrumental in strengthening the efforts of other universities and research centres to increase the knowledge and skills of professionals working in the water sector. For further details, see: www.unesco-ihe.org.

Organizing committee

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Information

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Contact for registration:

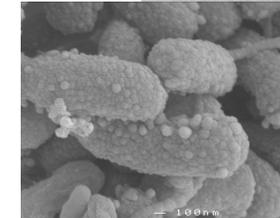
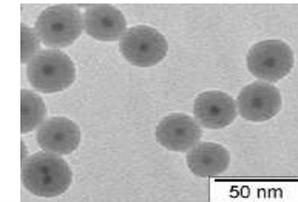
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Marie Curie Excellence Grant
Biogeological Engineering

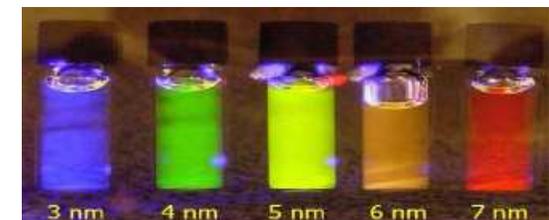


MARIE CURIE ACTIONS

Short course



Nanotechnology for water and wastewater treatment



April 6-9th, 2010

Delft
The Netherlands

Introduction

The emergence of nanobiotechnology and the incorporation of living microorganisms in biomicroelectronic devices are revolutionizing interdisciplinary opportunities for microbiologists and biotechnologists to participate in understanding microbial processes in and from the environment. Moreover, it offers revolutionary perspectives to develop and exploit these processes in completely new ways.

This short course overviews innovative applications of nanotechnology for water and wastewater treatment, with an emphasis on environmental nanobiotechnology. Presentations will be given by leading scientists on nanotechnology and water/wastewater treatment; Effective, High-Performance Water and Wastewater Purification Systems; Nanomanufacturing: Materials Design and Production and Nanoparticles that sense and treat disease.

This short course will represent an opportunity for learn and discuss about various innovative research aspects of nanoscience and nanotechnology interfacing with environmental chemistry, environmental engineering and bioprocess technology amongst professionals as well as young researchers and PhD students.

Tentative Program

This short course will be lectured by UNESCO-IHE staff and an international panel of invited experts from academia, industry and the water sector.

The full program is available at the website:
www.unesco-ihe.org/nanotechnologycourse

Day 1 – Introduction

- Nanoparticles and water.
- Responsible use of nanomaterials: an industry point of view.
- NanoNed and the Netherlands Nano Initiatives.
- Policy aspects of innovation.

Day 2 - Characterisation of Nanomaterials

- Analytical techniques for characterisation of nanomaterials.

Day 3 – Effective, High-Performance Water and Wastewater Purification Systems

- Nano and micro engineered membrane technology.
- Applications of nanotechnology for drinking water.
- Biocatalysts for reductive treatment of water contaminated with priority pollutants.
- Video conferencing with Asian Institute of Technology nanotechnology laboratory.

Day 4 – Bionanotechnology and Nanomanufacturing

- Virus-based single-enzyme nanoreactors.
- Measurement of bacterial-particle interactions with atomic force microscopy.
- Bioremediation: from environmental processes to production of functional bionanominerals.
- Microbial manufacture of silver nanoparticles for water disinfection.
- Microbial manufacture of chalcogen nanoparticles and quantum dots.

Pre-registration Form

(Please fill in capitals)

Short Course "Nanotechnology for water and wastewater treatment"

Delft, April 6-9th, 2010

A more detailed registration form will be required for full registration. It is available from the website: www.unesco-ihe.org/Education/Prospective-students/Application-forms.

Name:

Title:

Company/Organization:

Department:

Address:

E-mail:

Poster presentation
I wish to present a poster: YES / NO

Poster title:

The registration fee is 500 €, excluding travel and accommodation.

There are special arrangements available for participants in the SWITCH project and Ph.D. students of the research school SENSE.

Return application form by fax or e-mail to:

Claudia Brakel
UNESCO-IHE
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