About the organizers

The workgroup "Environmental Biotechnology" of the ***Nederlandse Biotechnologische Vereniging*** aims to inform its members about the latest developments of biological processes for the treatment of pollution, reuse of resources from waste and the implementation of clean production. See also: www.nbvsite.nl

DECHEMA (Society for Chemical Engineering and Biotechnology) is a non-profit making scientific and technical society, with at present 5000 private and institutional members. DECHEMA promotes research and technical advances in the areas of chemical engineering, biotechnology and environmental protection. The "subject division nanotechnology" addresses activities concerning nano and environment and co-organises the ACHEMA conference in 2009 (see www.dechema.de and www.achema.de).

Organizing committee

Janneke Krooneman
(Bioclear)

Piet Lens
Gary Amy
Henk Lubberding
(UNESCO-IHE)

Andries Meijerinck
(University Utrecht)

Christoph Steinbach
(DECHEMA e.V.)

Peter van der Maas
(Water Laboratorium Noord)

Marie Curie Excellence Grant
Biogeological Engineering

MARIE CURIE ACTIONS

Information

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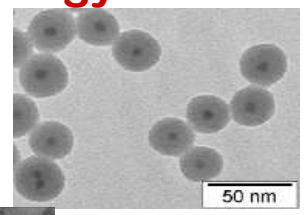
DISCIPLINES BIOTECHNOLOGIE TOEPASSINGEN

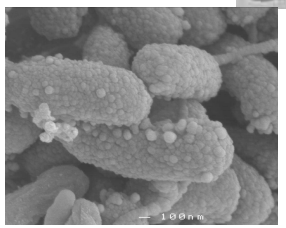
DECHEMA
Gesellschaft für Chemische Technik und Biotechnologie e.V.

UNESCO-IHE
Institute for Water Education

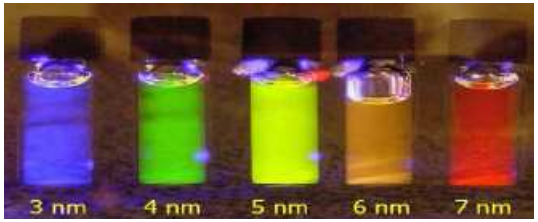
Seminar

Trends in Environmental Biotechnology





Applications of Nanotechnology in Environmental Biotechnology



November 28th, 2008
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 process in completely new ways.

The seminar will overview innovative applications of nanotechnology in environmental biotechnology. 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 seminar will represent an opportunity for discussion 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

9:30 **Opening of the day**
Piet Lens (UNESCO-IHE, NL)

Keynote lectures

9:30 Nanoparticles and water
Dik van de Meent (RIVM, NL)

9:50 Responsible use of nanomaterials: an industry point of view
Germ Visser (DSM,NL)

10.10 NanoNed and the Netherlands Nano Initiative
Leon Gielgens (STW and NanoNed, NL)

10:30 Coffee break

Tentative Program

Session 1
Effective, High-Performance Water and Wastewater Purification Systems
Chairman: Peter van der Maas (WLN, NL)

11:00 Nano and micro engineered membrane technology
Cees van Rijn (Aquamarijn Research BV, NL)

11:20 Applications of nanotechnology for drinking water
Jan Hofman (KWR, NL)

11:40 Nanocatalysts for reductive treatment of water contaminated with chlorinated priority pollutants
Pieter Verhagen (University College Ghent and Ghent University, B)

12:00 Lunch + poster session

Session 2 - Nanomanufacturing: Materials Design and Production
Chairman: Janneke Krooneman (Bioclear, NL)

13:30 A virus-based single-enzyme nanoreactor
Hans Engelkamp (Radboud University Nijmegen,NL)

13:50 Microbial manufacture of chalcogen nanoparticles and quantum dots
Carolyn I. Pearce (University of Manchester, UK)

14.10 Bioremediation: from environmental processes to production of functional bionanominerals
Piet Lens (UNESCO-IHE, NL)

14:30 Coffee break

Session 3 – Nanoparticles that sense and treat disease
Chairman: Henk Lubberding (UNESCO-IHE, NL)

15.00 Microbial manufacture of silver nanoparticles for water desinfection
Liesje Sintubin (University Gent, B)

15.20 Measurement of bacterial-particle interactions with atomic force microscopy
Henk Brusscher (University Groningen, NL)

15.40 Trapping and Raman-identification of bacteria in water using photonic crystals
Jaap Caro (TUDelft, NL)

16.00 Drinks

Registration Form

(Please fill in capitals)

Seminar 'Applications of Nanotechnology in Environmental Biotechnology'
Delft, November 28, 2008

Name:

Title:

Company/Organization:

Department:

Address:

E-mail:

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

Poster title:

The registration fee is:
NBV /Dechema-Menbers: 15 €
Non-NBV- Members: 40 €

Return application form by fax or e-mail to:

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