

About G16

Chalcogens are elements belonging to periodic table group 16 and include the elements oxygen, sulfur, selenium and tellurium. These elements, their biogeological cycles and interactions with metals still have many unrevealed scientific curiosities and technological potentials. These were studied within the Marie Curie Excellence Grant "Novel Biogeological Methods for Heavy Metal Removal", headed by Prof. Piet Lens. On the occasion of the conclusion of this grant, the 1st G16 conference was held in June 2008 in Wageningen (The Netherlands). It overviewed the wide range of the topics related to chalcogen research. It was also the start of a biannual International Conference, that has the cycles of the chalcogens (G16 elements) as the central topic.

The **Marie Curie Actions** of the European Union (ec.europa.eu/research/mariecurieactions) aim to contribute towards improving the quality and increasing the scientific potential of the European Community.

Organizing committee

Ajit Annachatre (Asian Institute for Technology, Thailand)
Jan Bartacek (UNESCO-IHE, NL; ICT Prague, CZ)
Thomas G. Chasteen (Sam Houston State University, USA)
Bernhard Dold (Universidad de Concepción, Chili)
Giovanni Esposito (University Cassino, It)
Eugenio Foresti (Universidade de São Paulo, Brasil)
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Karel Keesman (Wageningen University, NL)
Piet Lens (UNESCO-IHE, NL)
John Lloyd (University Manchester, UK)
Peter Munk (PANalytical, NL)
Mihai Popescu (NIMP, Ro)
David Rickerby (JRC, It)
Philippe van Cappellen (Georgia Institute of Technology, USA)
Eric van Hullebusch (Universiy Paris-Est, Fr)
Herman van Leeuwen (Wageningen University, NL)

Accompanying event and program

6-9th April 2010: Short course
"Nanotechnology for water and wastewater treatment"



2nd International Conference

Information

Important deadlines:

Submission of oral or poster abstracts:

March 30th 2010

Pre-registration: May 15th 2010

Full papers: June 1st 2010

Location: UNESCO-IHE

Westvest 7

2611 AX Delft

The Netherlands

www.unesco-ihe.org/G16conference2010

Banking info:

ABN AMRO bank 51.68.20.923

Accountholder: Stichting IHE

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8209 23

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Department Environmental Resources

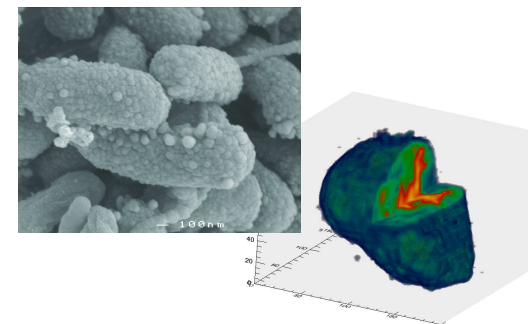
Pollution Prevention and Control Core

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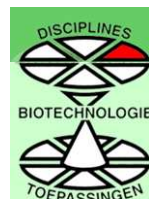
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Research Frontiers in Chalcogen Cycle Science and Technology



May 25th – 26th 2010

Delft, The Netherlands



Nederlandse Organisatie voor Wetenschappelijk Onderzoek

Information

Submission of Scientific Contributions

Authors interested in giving a presentation are invited to submit an abstract in English, preferably as a word-file. It should not exceed 1000 words. If it contains figures or tables, it should not exceed 2 pages. The abstract must include a comprehensive title, the name of all authors, their complete affiliation (address, fax, e-mail), and clear results and conclusions to allow the scientific committee to judge on the quality of the work.

Abstracts should be submitted by e-mail, as an attached file, to G16@unesco-ihe.org, before March 30th 2010. Registration is a prerequisite for an abstract to be included in the final programme.

Registration

The full registration fee is 100 € before May 15th and 150 € after May 15th, one day registration: 75 €. Note that these prices are without dinners and accommodation. Information on accommodation can be found at www.delfthotels.nl/eng, hotels.hollandbookings.com and www.bedandbreakfast.nl.

Publications

Original research papers will be published in a special issue of a peer reviewed journal. Authors willing to contribute to this special issue should submit their full paper by June 1st 2010.

G16 participants are entitled to 25% discount on the book "Environmental Technologies to Treat Sulfur Pollution", edited by Lens & Hulshof Pol, published by IWA Publishing (www.iwapublishing.com). The book can be ordered directly (sales@portland-services.com; use keycode ZWQIWA365a).

About the organizers

The 2nd International Congress on Research Frontiers in Chalcogen Cycle Science and Technology is organized by the Pollution Prevention and Control core of the UNESCO-IHE Institute for Water Education (Delft, The Netherlands, see www.unesco-ihe.org).

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.

Topics of the Congress

Analytics

- Characterisation of metal speciation and bioavailability in aquatic systems
- Novel analytical techniques for liquid phase speciation, as DMT, DGT, ...
- New developments in solid phase speciation using, e.g. XANES, STXM and SIMS
- Engineering of FRET-based fluorescent sensor proteins
- NMR imaging of transport in biofilms
- Sensing, monitoring and control

Novel bioconversions of chalcogen (S, Se, Te, ...) and metals

- Microbiological aspects of chalcogen or metal bioconversions: physiology and metabolism, new species, microbial populations in bioreactors, application of novel microbiology approaches
- Anaerobic methane oxidation coupled to sulfate or metal reduction
- Dissimilatory reduction of metals and chalcogen oxyanions
- Biological production of volatile, alkylated chalcogens and mixed Se/S/Te compounds

Chalcogen - metal interactions for metal removal

- Impact and treatment of chalcogen or metal pollution
- Selective metal sulfide precipitation
- Performance and optimization of conventional and innovative bioreactor concepts, including two-liquid phase systems, (inversed) fluidized bed reactors and microbial fuel cells
- New approaches to selenium and tellurium removal from wastewaters
- *On site, in situ* and industrial, pilot and full-scale applications

Biomanufacturing of chalcogen nanoparticles

- Biological production of nanoparticles, quantum dots, ...
- Chemistry of chalcogen nanoparticles
- Fate and toxicity of chalcogen nanoparticles

Role of metals in biodegradation

- Role of metal speciation in biodegradation of organic compounds
- Use of transporters for heavy metal removal
- Trace metal retention in anaerobic granules and biofilms
- Trace metal requirements of aquatic biota

Emerging areas

- Odour and corrosion measurement and control.
- Role of chalcogens in early planet life
- Chalcogens and sustainable environmental technology

Registration Form

(Please fill in capitals)

2nd International Conference Research Frontiers in Chalcogen Cycle Science and Technology Delft, May 25th – 26th 2010

Name:

Title:

Company/Organization:

Department:

Address:

E-mail:

I wish to give an oral presentation YES / NO

I wish to present a poster YES / NO

Title of presentation:

The registration fee is:

Full registration:

Before May 15th 2010: 100 €

After May 15th 2010: 150 €

One day registration: 75 €

Developing countries, Students** and NBV-Members:*

Before May 15th 2010: 50 €

After May 15th 2010: 100 €

(*) Participants must be resident in a developing country

(**) Students must include a letter of their institution or supervisor.

Return application form by fax or e-mail to:

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