



Global Challenges

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Opportunities for Nanotechnology

VIU April 15-18, 2013

A workshop for PhD students and
post docs organized by
CeNS Munich, ETH & SNI Basel



Goals of the workshop

1.) Identify global challenges

From gofer's perspective of the lab
to eagle's view of the world!

2.) Identify, where nano-science can contribute to solutions

Convergence with other technologies with the goal to develop
sustainable low-key technologies

3.) Formation of a world-wide junior nano-scientist network

Direct personal contact will make joint projects possible,
which otherwise might be stuck in the mud-holes of bureaucracy.

Organizational details

When: April 15-18, 2013

Where: San Servolo, Laguna of Venice, Italy

Organization: Hermann Gaub (CeNS)
Daniel Müller (ETH)
Christoph Gerber (SNI)

Advisory board: Viola Vogel (ETH)
Gerd Binnig (Definiens)
Ted Hänsch (LMU)
Jean-Marie Lehn (ISIS)

Accommodation: VIU-dorms on San Servolo

Arrival: April 14; **departure:** April 18

Format: 70 senior PhD-students or postdocs

Language: English





Program

Day 1: Who am I

- Presentations on own research, 5 minutes each, summarized on a poster.

Day 1 + 2: Identify global challenges

- Round table discussions in 6-8 groups with 5-6 people; composition remixes after 30 minutes; table leader summarizes and continues next round
- Identify the most urgent problems that threaten our future.
- Wrap-up of the conclusions in the big group.

Day 3 + 4: Identify how nanoscience might provide help

- Discussions about how to approach the problems identified.
- Identify how nano-aspects may be relevant for solutions.
- Wrap-up of the conclusions in the big group.

Day 4: Draft a whitepaper for the public/politics

- Summarize the results of the discussions and sketch the outline of a report



Details & information

Format

- The organizers will cover all costs on San Servolo, including accommodations and meals for the participants
- Participants have to raise their own travel funds.
- The organizers will be happy to assist with contacts to funding sources.

Information

www.cens.de (Starting Jan. 13)

Contact

hennig@cens.de (Starting Jan. 13)



Goals of the workshop (Details)

1.) Identify global challenges

Our junior researchers will shape the future! However their keen search for discoveries drives them ever deeper into the details of their research. The goal of this workshop is to develop means to open the eyes of our best young minds for the urgent global challenges that we are facing since we will need the best brains to solve them! Help them from gofer's perspective up to eagle's view of the world!

The perception of global challenges is strongly context dependent: researchers from the western world will identify quite different challenges as urgent ones than researchers from developing or threshold countries. A global strategy will thus require the development of a global view. A broad cultural and ethnical spectrum of the participants is essential for success.

To derive this view for the global challenges from the viewpoint of junior researchers, which will in their lifespan experience the results of these developments, is a prime goal of this conference



Goals of the workshop (Details)

2.) Identify where nanoscience may provide key contribution to solutions

All delegates are selected leaders in their respective fields of nano-science and will constitute a competent forum with a wide spectrum of expertise at the forefront of nano-science.

With the raised awareness, with the list of identified challenges derived in the first round, discussions will be initiated on how to approach and contribute to the solutions of these problems. Particular emphasis will be put on how nano-aspects may be relevant and crucially important for success.

As nano-technology is an enabling technology, its implementation should also be analyzed in combination with other powerful technologies, e.g. biotechnology or information technology. Particular emphasis will be put on the feasibility and sustained applicability given the challenging boundary conditions in the developing world.



Goals of the workshop (Details)

3.) Formation of a world-wide junior nano-scientist network

Promoted by the intense personal contacts among the leading young scientists during their joint stay on San Servolo, an intercultural and multidisciplinary network of experts will be formed which will allow for a fast and direct exchange of information in the future.

Particularly the contacts between the members of the well-developed and the less well developed countries may initiate a very stimulating and at the same time fruitful and sustainable basis for future projects. The direct personal contacts within such a network will make joint projects possible, which otherwise might be stuck in the mud-holes of bureaucracy.



Instructions for participants

The format of this conference is somewhat experimental in the same way as our current global situation is novel and unique since it requires non-conventional measures. The format is not entirely fixed yet and will to a good degree evolve during the conference following the needs that you identify. But for a start we ask for the following:

- Prepare a 5 min power point presentation (max. 5 slides) and 1 poster (max 1m wide 1.5m high) highlighting your research.
- Identify the global problem that you think is the most urgent and collect as many data as possible to support your point of view.
- Think of a nano-based research project that might add to the solution of this problem and identify the critical steps needed for success. Hopefully someone at the workshop can contribute to a solution?!