

17<sup>th</sup> - 21<sup>st</sup> May, 2010

Bozen/Bolzano  
Italy

## Final Circular

### Preface

The “nano” prefix not only refers to the extremely small but also stands for the integration of traditional physics, chemistry, biology and engineering disciplines to form an interdisciplinary science which has far-reaching consequences for science, the environment and society.

One of the main challenges of nanoscience and technology over the next decades is to achieve precise positional control of material at the nanoscale allowing, for example, the fabrication and manipulation of single molecules. Top-down approaches, such as lithography or bottom-up, as in biological systems, combined with imaging and manipulation techniques such as STM and optical tweezers are providing scientists with insights into the behaviour and control of matter at the nanoscale.

The ability to create, move and image nanoscale objects provide us with fascinating insights in this exciting area of interdisciplinary research which form the focus of this symposium: *Functional Nanoscience*.

Topics such as self-organization and self-assembly, molecular motors and transport, self-replicating biomimetic systems, molecular magnets, imaging and manipulation of molecules at the atomic scale will be presented and discussed.

### The Symposium

The Symposium will be held from 17<sup>th</sup> to 21<sup>st</sup> May 2010. The scientific program will take place over three days and will start at 09.00 on Tuesday, the 18<sup>th</sup> and end at ca. 18.30 on Thursday, the 20<sup>th</sup>.

You should plan to arrive on Monday, the 17<sup>th</sup> and to depart in the morning (after the breakfast) of the 21<sup>st</sup>. The language of the symposium is English. The dress is casual/informal.

### The Venue

The Symposium, lunches and dinners will take place at Hotel Schloss Korb, Missian/Eppan, Italy.

Accommodation will be reserved for registered speakers and participants for four nights at

Hotel Schloss Korb \*\*\*\*

Hocheppanerweg 5

I-39050 Missian - Eppan (BZ), Italy

Tel.: +39 0471 636000, Fax: +39 0471 636033

e-mail: [info@schloss-hotel-korb.com](mailto:info@schloss-hotel-korb.com)

A special rate of about € 660,-- per person for lodging (4 nights) and full board has been negotiated with the hotel. If you wish to extend your stay, please contact the hotel directly.

The full board at the hotel covers from dinner on the 17<sup>th</sup> to breakfast on the 21<sup>st</sup> and includes all coffee breaks. Extras, such as drinks, telephone calls etc. are not included in the price.

Participants are responsible for settling their hotel bills directly with the hotel on departure.

The hotel accepts MasterCard and Visa but not Amex or Diners Club.

### Conference Office

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**Register Today!**

## Scientific Program

### Tuesday, 18<sup>th</sup>

**Fraser Stoddart** (Northwestern University, Evanston, IL, USA)

*Fashioning Functional Materials with Integrated Mechanostereochemical Systems*

**Paul S. Weiss** (University of California, Los Angeles, CA, USA)

*Designing, Measuring and Controlling Molecular- and Supramolecular-scale Properties of Molecular Devices*

**Jonathan D. Posner** (Arizona State University, Tempe, AZ, USA)

*Locomotion Physics and Collective Dynamics of Synthetic Nanomotors*

**Petr Král** (University of Illinois, Chicago, IL, USA)

*Rotary Molecular Motion at the Nano-scale: Propellers, Motors, Wheels, Self-assembly*

**Keith Firman** (University of Portsmouth, UK)

*A Single Molecule Nanoactuator: Towards a Device of Drug Discovery at the Limits of Sensitivity*

**Nadrian C. Seeman** (New York University, NY, USA)

*DNA: Not Merely the Secret of Life*

**Jørgen Kjems** (University of Århus, Denmark)

*Self-assembly and Functionalization of Nanoscale DNA Boxes*

**William Shih** (Harvard Medical School, Boston, MA, USA)

*Self-assembly of DNA into Nano-scale Three-dimensional Shapes*

### Wednesday, 19<sup>th</sup>

**Tim Clark** (University of Erlangen-Nürnberg, Germany)  
*Structurally Persistent Micelles - Theory Leads Experiment*

**Christoph Gerber** (University of Basel, Switzerland)  
*Nanoanalytics Based on Nanomechanics: Applications in Life Sciences*

**Petra Schwille** (Technical University Dresden, Germany)

*Minimal Systems of Cellular Self-organization*

**Sylvia Speller** (Radboud University Nijmegen, The Netherlands)

*Magnetite Nanoparticles in Fish and their Role in Bionavigation*

### Thursday, 20<sup>th</sup>

**Peter Dimroth** (ETH Zürich, Switzerland)  
*Energy Transductions in ATP Synthase*

**Athel Cornish-Bowden** (CNRS-BIP, Marseille, France)  
*Problems of Energy Conversion in Biological Systems*

**Peter Seeberger** (MPI for Colloids and Interfaces, Berlin, Germany)  
*Carbohydrate-based Nanoscience*

**Kerstin Koch** (Rhein-Waal University of Applied Sciences, Kleve, Germany)

*Hierarchically Sculptured, Artificial Lotus Leaf Structures with Superhydrophobic and Self-cleaning Properties*

**Johannes Mulders** (FEI Electron Optics, Eindhoven, The Netherlands)

*The EBID Roadmap Towards Functional Nano-structures*

**Michael Huth** (University of Frankfurt, Germany)  
*Focused Particle Beam Induced Deposition - Principles and Applications*

**Thomas Schimmel** (University of Karlsruhe, Germany)  
*Atomic-scale Transistors - Perspectives for Quantum Electronics at Room Temperature*

**Dave Winkler** (CSIRO, Clayton, Australia)  
*Summary*

## Registration & Fees

Registration should be made by using the registration form available from the conference web site:

[www.beilstein-institut.de/en/symposia/bozen-2010/](http://www.beilstein-institut.de/en/symposia/bozen-2010/)

Please complete, print and fax the form to the address given on the form.

The conference fee € 550.-- (€ 275.-- academic) should be paid by **12.04.2010** to the account given on the conference web site.

Participants are responsible for paying any bank charges. Refunds for cancellations cannot be made after 16.04.2010. Any refunds will be paid after the workshop and subject to a € 50.-- administration fee. If you have to cancel, please note, that registrations may be transferred to another member of your organization at any time.

## Travelling

The hotel is located in Missian which is about 10 km from Bozen/Bolzano. Bozen can be flown from several European airports. Other airports close to Bozen are: Innsbruck (120 km), Milan (300 km), München (280 km), Verona (150 km) and Zurich (400 km). From these cities, it is then possible to travel by train or car to Bozen. The city is located on the main railway and highway route between Italy and Germany.

By train: Travel to Bozen station and take a taxi to the hotel (for trains see [www.bahn.de](http://www.bahn.de), [www.trenitalia.it](http://www.trenitalia.it) or [www.oebb.at](http://www.oebb.at)).

By car: Take the exit "Bozen Süd" from the autobahn A22 (Innsbruck - Verona), drive direction "Eppan", and then follow the signs to "Missian/Unterrain" or drive further to St. Pauls. The hotel is sign-posted.

