

postage

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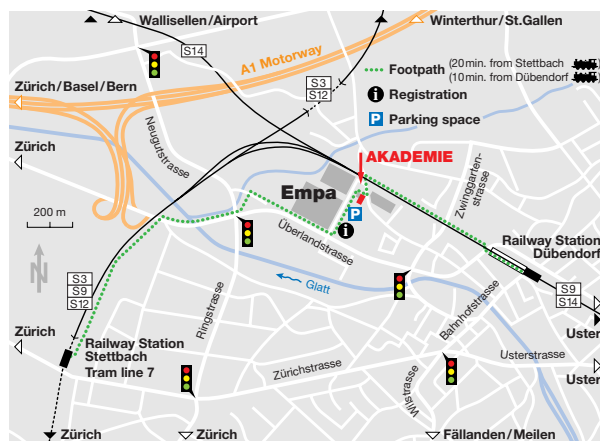
#### ■ Conference Office

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#### ■ Directions

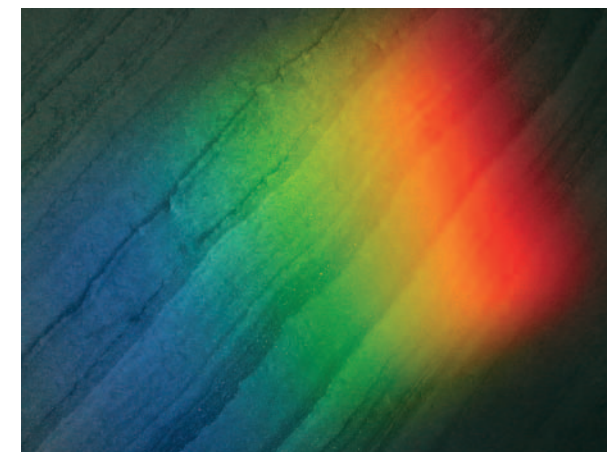


Zentrum für Wissenstransfer

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Conference

## Photovoltaics of the Future



Empa, CH-8600 Dübendorf  
**AKADEMIE**  
Überlandstrasse 129

**Tuesday, April 12, 2005**  
9 am to 6 pm

## ■ Background

Photovoltaics has a great potential as a powerful renewable energy source, which can contribute to a sustainable, secure and efficient energy supply. Crystalline silicon solar cells are a well established and reliable technology which has reached light conversion efficiencies close to the theoretical limit. For large area applications, this technology has the drawback of being too costly.

Thin film devices bear the potential of cheaper fabrication processes and are currently in the focus of numerous research and development efforts. Inorganic as well as organic semiconductors are promising materials to pursue this strategy. Several device concepts have already made the step from the research laboratories towards technological realization.

## ■ Purpose

Different thin film solar cell concepts shall be addressed, pointing out their working principle and merits.

While it is important to stimulate scientific discussion and interdisciplinary research, the purpose of this conference is also to consider industrial realization. Which factors determine whether a laboratory discovery will become a technological innovation? This question will be difficult to answer in general, but discussions during this conference will certainly provide specific answers.

## ■ Audience

Researchers and engineers in the fields of photovoltaic energy, materials science and device fabrication.

## ■ Poster Presentations

A limited number of posters can be presented during the coffee and lunch breaks. The maximum poster size is 90x120 cm (Width x Height). Poster titles, authors, affiliation and abstracts should be submitted to the conference office before **March 7, 2005**. They will be considered in chronological order.

## ■ Payment

Participant: CHF 200.–

Ph.D. student: CHF 80.–

After enrolment you will receive an invoice.

If you would like to pay by credit card, please use our website: [www.empa.ch/pvt](http://www.empa.ch/pvt)

## ■ Cancellation

Cancellations before March 14 will not be charged. Between March 14 and April 2, a fee of CHF 50.– will be charged. For later cancellations, the full fee will be charged. Another person as a replacement will be accepted.

## ■ Program

09:00 **Welcome coffee, registration and poster installation**

09:45 **Opening**  
**Empa, a materials and technology institution of the ETH domain**  
Prof. Dr L. Schlappbach, Empa, Dübendorf

10:00 **Solar cells – which future?**  
Dr S. Nowak,  
NET Nowak Energy & Technology Ltd., St. Ursen

10:30 **Solar module requirements for the photovoltaic industry**  
Dr F. Karg, Shell Solar GmbH, München

11:00 **Coffee**

### Thin film solar cells based on inorganic semiconductors

11:30 **New developments in thin film silicon photovoltaics**  
Prof. C. Ballif, Université de Neuchâtel

12:00 **Industrial realization of thin film photovoltaic modules based on amorphous silicon**  
Dr J. Meier, Unaxis SPTec, Neuchâtel

12:30 **High performance flexible and lightweight solar cells**  
Prof. A.N. Tiwari, ETH Zürich

13:00 **Lunch**

### Thin film solar cells based on organic semiconductors/hybrid systems

14:30 **Nanostructured organic materials enable ubiquitous solar power**  
Dr C. Brabec, Konarka Technologies, Erlangen/Linz

15:00 **Solar cells based on photographic dyes**  
Dr F. Nüesch, Empa, Dübendorf

15:30 **Coffee**

16:00 **Dye sensitized nanocrystalline solar cells**  
Prof. M. Grätzel, EPF Lausanne

16:30 **Light-harvesting host-guest antenna materials for quantum solar energy conversion devices**  
Prof. G. Calzaferri, Universität Bern

17:00 **Closure and Aperitif**

# Registration Form



Conference

## Photovoltaics of the Future

Tuesday, April 12, 2005, 9 am to 6 pm

AKADEMIE, Überlandstrasse 129, CH-8600 Dübendorf

**Registration deadline: March 14, 2005**

Your registration will be acknowledged by mail after reception.

Ms     Mr     Dr     Prof.

Name \_\_\_\_\_

First Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

**Please fax or mail to the conference office or register via our website [www.empa.ch/pvt](http://www.empa.ch/pvt)**