RESEARCH CONFERENCES

ESF-FWF Conference in Partnership with LFUI

Nanotechnology for Sustainable Energy

Universitätszentrum Obergurgl (Ötz Valley, near Innsbruck) • Austria
14-19 June 2008

Chair: **Bengt Kasemo**, Chalmers University of Technology, SE
Co-Chair: **Michael Grätzel**, Ecole Polytechnique Fédérale de Lausanne, CH

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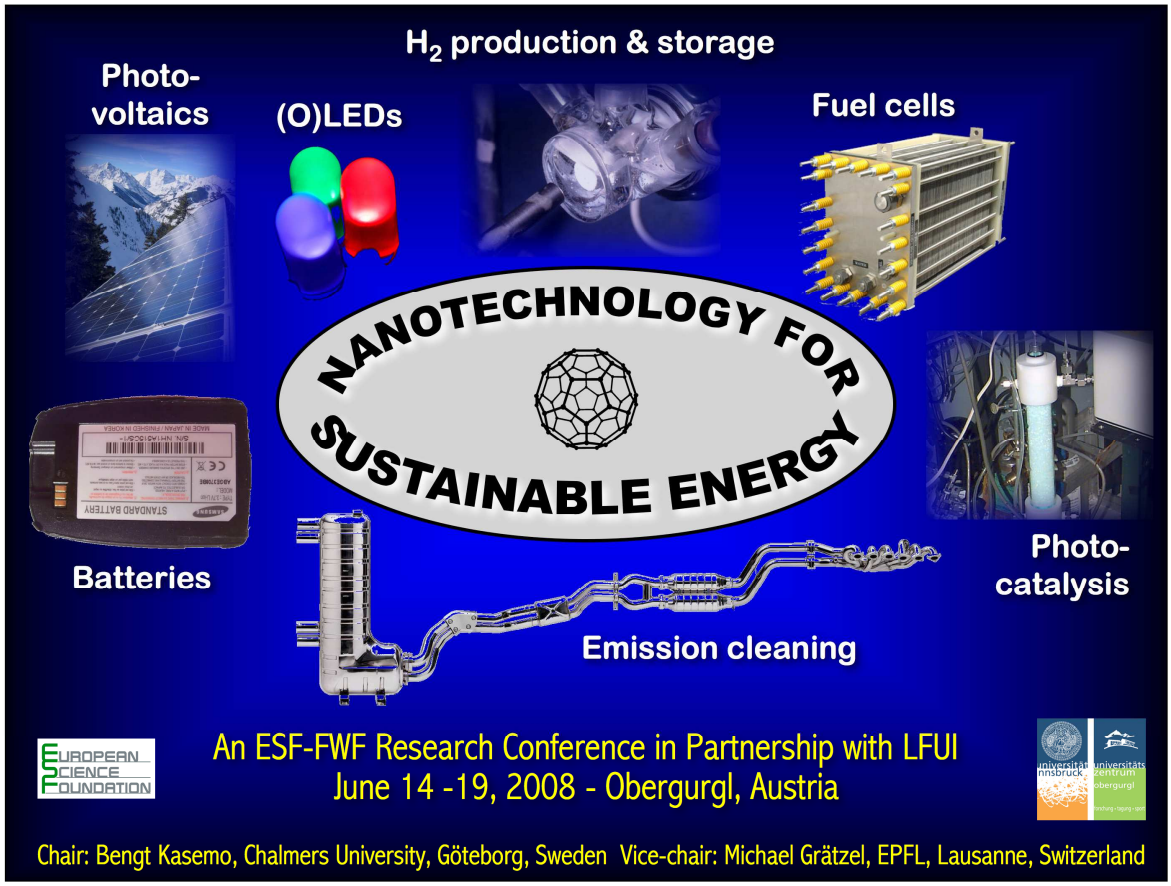

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Final Programme

Saturday, 14 June

Late afternoon / early evening	Registration at the ESF desk
19.00	Welcome Drink
20.00	Dinner

Sunday, 15 June

08.30-09.00 Welcome address and conference opening

Session 1: Nanoscience and Nanotechnology (N2) for Photovoltaics

Chair: Name, Affiliation

09.00-09.55 **Michael Grätzel**
Ecole Polytechnique Fédérale de Lausanne, CH
The magic world of nanocrystals, from batteries to solar cells

09.55-10.50 **Peng Wang**
Changchun Institute of Applied Chemistry, CN
High-performance dye-sensitized solar cells based on advanced organic optoelectronic materials

10.50-11.20 Coffee break

11.20-12.15 **Arthur Nozik**
National Renewable Energy Laboratory, US
Multiple exciton generation: silicon QDs, QD arrays, QD solar cells, and controversy

12.15-13.10 **Richard Schaller**
Los Alamos National Laboratory, US
Multiexcitions from a single photon absorption in semiconductor nanocrystals

13.15 Lunch

Session 1: continued

Chair: Name, Affiliation

16.00-16.55 **Shuzi Hayase**
Kyushu Institute of Technology, JP
Research on dye sensitized solar cells from view point of charge collection using nano-interface modification

16.55-17.20 Coffee break

Session 2: N2 for Hydrogen Production

Chair: Name, Affiliation

17.20-18.15 **Kazunari Domen**
University of Tokyo, JP
Overall water splitting on heterogeneous photocatalysts

18.15-19.10

Ib Chorkendorff
Technical University of Denmark, DK
Identifying the site and new materials for hydrogen production

19.15-20:45 Dinner

Contributed Talks

Chair: Name, Affiliation

20.45-21.20

Philip Earis, Energy and Environmental Science
Vincent Dusastre, Nature Materials

Poster Session I

21.20 Poster Session I

Monday, 16 June

Session 3: N2 for Hydrogen Storage

Chair: Name, Affiliation

09.00-09.55

Louis Schlapbach
Swiss Federal Lab for Materials Science and Technology, CH
Lecture title

Contributed Talks

Chair: Name, Affiliation

09.55-10.50

Christoph Langhammer, Chalmers University
Carl Hägglund, Chalmers University
Almantas Pivrikas, Johannes Kepler University Linz

10.50-11.20 Coffee break

Session 4: N2 for Fuel Cells

Chair: Name, Affiliation

11.20-12.15

R. Jürgen Behm
Universität Ulm, DE
Nanosciences and nanotechnology in fuel cell research

12.15-13.10

Jens Norskov
Technical University of Denmark, DK
Understanding electrocatalysis for fuel cells and water splitting

13.15 Lunch

Session 5: N2 for (O)LEDs and PV

Chair: Name, Affiliation

16.00-16.55

Tom Kempa
Harvard University, US
Nanowire Structures as Novel Photovoltaic Elements

16.55-17.20 Coffee break

17.20-18.15

Horst Weller
Universität Hamburg, DE
Fabrication of quantum dots and their use for solar applications

Contributed Talks

Chair: Name, Affiliation

18.15-19.10	Michael Bertoz, Dyesol Ltd. Spike Wadman, Utrecht University Jun-Ho Yum, EPFL
19.15-20:45	Dinner
20.45-21.20	Dimas De Oteyza, Donostia Internat. Physics Center Mukundan Thelakhat, University of Bayreuth

Poster Session II

21.20	Poster Session II

Tuesday, 17 June

Session 6: N2 for Batteries

Chair: Name, Affiliation

09.00-09.55	Angela Belcher Massachusetts Institute of Technology, US *From Nature and back again...Giving new life to materials for energy, electronics and the environment*
09.55-10.50	Jean-Marie Tarascon University of Picardie Jules Verne, FR *Materials in nanometric forms for sustainable Li-based batteries*
10.50-11.20	Coffee break
11.20-12.15	Linda Nazar University of Waterloo, CA *High-capacity nanostructured cathodes for energy storage*
12.15-13.10	Robert Schlögl Fritz-Haber Institut der MPG, DE *The critical role of heterogeneous catalysis for energy storage and conversion*
13.15	Lunch
Afternoon	Half-day free time
19.15	Get-together & Conference Dinner

Wednesday, 18 June

Session 7: N2 for Catalysis

Chair: Name, Affiliation

09.00-09.55	Charles Peden Pacific Northwest National Laboratory, US *The nanoscience of next generation automobile emission control catalysts*

Contributed Talks

Chair: Name, Affiliation

09.55-10.50 Fabio Di Fonzo, Politecnico di Milano
Cristina Giordano, MPI of Colloids and Interfaces
Raheleh Mohammadpour, Sharif University of Techn.

10.50-11.20 Coffee break

11.20-13.10 Rasmus M. Nielsen, Technical University of Denmark
Nima Taghavinia, Sharif University of Technology
Scott Warren, EPFL
Holger Wolfschmidt, TU München
Nam-Hee Kwon, High Power Lithium

13.15 Lunch

Session 8: N2 for Thermoelectrics

Chair: Name, Affiliation

16.00-16.55 G. Jeffrey Snyder
California Institute of Technology, US
Nanostructured thermoelectric materials for sustainable power generation and cooling

16.55-17.20 Coffee break

Session 9: Nanosafety and Nanoethics

Chair: Name, Affiliation

17.20-18.15 Bengt Kasemo
Chalmers University of Technology, SE
Nanosafety and nanoethics – facts and fiction

Contributed Talks

Chair: Name, Affiliation

18.15-19.10 Gerrit Boschloo, Uppsala University
Dominik Eder, University of Cambridge
Anna Tröger, University of Erlangen-Nuremberg

19.15-20:45 Dinner

Next Conference and Closing Remarks

Chair: Bengt Kasemo, Chalmers University of Technology, SE

20.45-21.30 Forward Look Plenary Discussion

Thursday, 19 June

Breakfast & Departure

Posters & Short Oral Presentations

There will be no short talks other than those listed on the programme. All other abstracts are accepted as posters. The list of accepted posters is available from www.esf.org/conferences/08257.

Each short oral presentation has been allocated 18 minutes in total, which will be divided into 15 minutes actual presentation time and 3 minutes discussion. Projector and laptop will be available.

Posters can be fixed with magnets and pins onto poster panels. Recommended poster size is 140 cm high x 100 cm wide. Use letters and drawings that can be read from approximately 100 cm distance.

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