

24th EU PVSEC: The leading platform for the world's PV specialists

The most dynamic forum for the global PV Solar sector

Call for Papers

Institutional Support:



With the support of UNESCO's Natural Sciences Sector

Should you wish to be added to our photovoltaic mailing list please fill in the form and send it to the Conference Organiser:

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www.photovoltaic-conference.com



Abstracts to be submitted by 30 Jan. 2009

CHAIRMAN'S MESSAGE

with great pleasure I invite to the 24th European Photovoltaic Solar Energy Conference and Exhibition, which will be held at the CCH Congress Center and International Fair in Hamburg Germany, from 21 to 25 September 2009.

PV solar energy is taking off. After having experienced impressive growth rates for many years, gigawatt-scale manufacturing and installation are now becoming a reality. The choice for Hamburg as a conference location is an excellent one, since Germany has played a crucial role in reaching this stage of development. The PV sector owes our host country a lot. Fortunately the number of countries actively and ambitiously supporting the development of PV solar energy is increasing, providing a solid basis for further growth of the global PV market.

In the coming decade PV will have to position and establish itself as a key technology to fight climate change, to enhance security of supply and, last but not least, to bring electricity to people who do not have grid access. Reaching grid parity has become an important target and will provide the first major stepping stone on the road to full competitiveness. Technology development and economies of scale are two main drivers for cost reduction and this Conference will give exiting insights in both. The conference program will provide a comprehensive overview of developments aimed at short, medium and long term, while the Exhibition will again allow visitors to experience the vitality and width of the rapidly growing global PV industry sector. Moreover, the event gives unique opportunities to learn about virtually all other aspects of PV development. From education and training to financing, from government programs to entrepreneurship, and much more.

I would like to convey a special word of welcome to students and other young people: PV combines exiting science and technology with great societal relevance and many new business and job opportunities. Attending this Conference and Exhibition is very well spent time in many respects.

I hope all of you will come to Hamburg to get informed and inspired and to share your results and insights with members of the PV community as well as with people new to the sector. Looking forward to meeting you there!

Prof. Wim Sinke
 Energy research Centre of the Netherlands ECN
 Conference General Chairman



24th European Photovoltaic Solar Energy Conference and Exhibition

CCH - Congress Center and International Fair Hamburg, Germany

Conference 21 - 25 September 2009
Exhibition 21 - 24 September 2009

Institutional support:
 The European Commission
 UNESCO – United Nations Educational, Scientific and Cultural Organization, UNESCO's Natural Science Sector
 WCRE – World Council for Renewable Energy

Institutional PV Industry Cooperation:
 EPIA – European Photovoltaic Industry Association

Coordination of the Technical Programme:
 European Commission DG Joint Research Centre

Conference and Exhibition organised by:
 WIP – Renewable Energies



Conference Chairman:
Prof. Wim Sinke
Energy research Centre of the Netherlands ECN
Petten, The Netherlands



Coordination of the Technical Programme:
Dr. Heinz Ossenbrink
European Commission
DG Joint Research Centre



EU PVSEC organised by:
WIP-Renewable Energies
Munich, Germany
www.photovoltaic-conference.com

24th European Photovoltaic Solar Energy Conference and Exhibition, 21 - 25 September 2009, Hamburg, Germany

PROGRAMME

The five-day programme will comprise:

- **Plenary lectures** focusing on the state-of-the-art and targets of PV
- **Oral and poster presentations** of specific research, development and demonstration projects, PV applications, PV markets
- **Exhibition of PV products and services** (21-24 Sept.)
- **Fora and workshops** on present-day PV issues
- Scientific tours and a social programme
- **The 6th EPIA European PV Industry Forum**

CONFERENCE SUBJECTS

SUBJECT 1: ADVANCED PHOTOVOLTAICS

1.1 Fundamental Studies

Theoretical studies and visions, new measurement techniques and equipment including standards, modelling and simulation, PV and hydrogen.

1.2 New Materials, Cells and Modules

Nanotechnologies and quantum effects, new cell and module concepts, new substrates, interconnections and encapsulation, thermo-photovoltaics, LED-related issues.

1.3 Organic-based PV

Polymer PV and hybrid approaches, dye-sensitized cells and modules, carbon nanotubes and other use of organic materials, stability aspects.

1.4 Solar Cells, Modules and PV Systems for Space Applications

Materials and processing for very-high efficiency (III-V) space cells and modules, thin-film alternatives, issues related to heat evacuation, stability and lifetime, reliability and performance.

1.5 Terrestrial Concentrator Systems

Materials and processing for very-high efficiency cells and modules for terrestrial applications, alignment, measurements of cells, devices and system performance including standards, tracking and reliability.

SUBJECT 2: WAFER-BASED SILICON SOLAR CELLS AND MATERIALS TECHNOLOGY

2.1 Silicon Feedstock, Crystallisation and Wafering

Efficient production technologies for silicon and wafers, solar grade silicon properties and specs, testing, performance, costs.

2.2 Mono- and Multicrystalline Silicon Materials and Cells

Device concepts and processes for wafers, sheets and ribbons, measurements and modelling.

2.3 Manufacturing Issues

Handling and automation, in-line monitoring, safety, waste treatment, economies of scale, etc.

SUBJECT 3: THIN FILMS SOLAR CELLS

3.1 Thin Film Crystalline Silicon Solar Cells and Wafer Equivalents

Theoretical studies, process technologies for thin film crystalline silicon ma-



terials and solar cells, characterisation, manufacturing and up-scaling technologies, testing, performance.

3.2 Amorphous and Microcrystalline Silicon Solar Cells

Theoretical studies, process technologies for amorphous and microcrystalline silicon cells and modules, characterisation, aspects of high volume and large area production, testing, performance.

3.3 CIS and Other (II-VI) Ternary Thin Film Solar Cells

Theoretical studies, process technologies for thin film CIS and related solar cells and modules, characterisation of materials and devices, manufacturing and up-scaling technologies, testing, performance, recycling.

3.4 CdTe Solar Cells

Theoretical studies, process technologies for CdTe solar cells and modules, characterization of materials and devices, manufacturing and up-scaling technologies, testing, performance, recycling.

SUBJECT 4: COMPONENTS FOR PV SYSTEMS

4.1 PV Modules

Module design and manufacturing technology, measurements, testing, energy rating, quality and safety, standardisation, product life time, cross fertilisation.

4.2 Balance of System Components

Inverters and grid interfacing, storage systems, charge regulators, mounting structures, trackers, cabling, measurements and testing, standardisation, and regulations.

4.3 Engineering and System Integration

System design, engineering, integration, performance analysis and simulation, standardisation.

SUBJECT 5: PV SYSTEMS

5.1 PV Power Plants

Planning, installation and grid interfacing, auxiliary grid services, monitoring and performance, aesthetics and landscape integration, cost analyses, success stories of projects.

5.2 PV and Architecture

PV architecture and urban planning, cells and modules designed for applications in buildings and other objects (geometry, transparency, materials), visibility and aesthetics, dynamic behaviour, monitoring and performance, cost analyses, user aspects, standards and regulations.

5.3 Off-grid Applications and Rural Electrification

Stand-alone and hybrid systems, storage systems, minigrids, PV for communication, lighting, etc. PV for the rural and urban areas of developing nations.

SUBJECT 6: PV DEPLOYMENT

6.1 Markets for PV Systems

International, national and regional support strategies, policies and programs and their impact, market projections, R&D strategies and programmes, international cooperation.

6.2 Enablers for PV Development and Benefits of PV

Economics and cost development, financing and investment, education and training, licensing, solar entrepreneurship, job-creation, recycling and externalities, Life Cycle Analyses, socio-economic issues.

REVIEW PROCEDURE

Papers will be presented in plenary, oral and poster sessions and all presented papers will be published in the Proceedings. Authors wishing to submit a contribution should read the following instructions carefully and send an abstract preferably by using the **Online Submission Form** on www.photovoltaic-conference.com by **30 January 2009**. The abstract, single spaced and in English, should include:

- Applicable subject number (1 to 6) and subsection (e.g. 1.2)
- Full title
- Full name and address of one author for all correspondence
- For each author and co-authors, full name, affiliation, address, phone/fax/e-mail
- Purpose of the work
- Approach
- Scientific innovation and relevance
- Results
- Conclusions

The abstract should not exceed one page (size A4, 210 x 300mm).

In addition, authors may add up to 3 explanatory pages, which will facilitate the reviewers assessment.

DEADLINE FOR RECEIPT OF ABSTRACTS: 30 January 2009

Only contributions complying with the above specifications will be considered. Please send one copy of this complete information (abstract plus optionally up to 3 explanatory pages) as a *.doc or *.pdf file preferably by using the **Online Submission Form** on our Conference website www.photovoltaic-conference.com.

For questions concerning abstract submission please contact:

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The abstracts will not be accessible by public until the Conference. All authors will be notified of the decision of the Programme Committee. Authors of accepted abstracts will receive special guidelines for the preparation of the final papers for the Proceedings.

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