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# CONFERENCE PROGRAM


## June 11–14, 2012

**Intersolar Europe Conference**
**Innovations, Trends, Networking**
**ICM – Internationales Congress Center München, Germany**

**www.intersolar.de**

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## CONFERENCE QUICK FACTS

| | | | |
|---|---|---|---|
| Dates | June 11–14, 2012 | | |
| Hours | Monday | June 11, 2012 | 12:00pm–7:00pm |
| | Tuesday | June 12, 2012 | 10:00am–6:00pm |
| | Wednesday | June 13, 2012 | 10:00am–6:00pm |
| | Thursday | June 14, 2012 | 10:00am–6:00pm |
| Venue | ICM – Internationales Congress Center München<br>81823 Munich | | |
| Speakers | 400 (including Side Events) | | |
| Attendees | 2,500 (including Side Events) | | |
| Registration | Available on-site | | |

Conference partners

Fraunhofer ISE

itw

PVGroup

DLR

VDMA Photovoltaic Equipment

Conference organizer

SOLAR PROMOTION

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**1** presented in German

Subject to change
Edited: May 24, 2012

# INTERSOLAR EUROPE CONFERENCE COMMITTEE

### Chairman Photovoltaics

Prof. Dr. Gerhard P. Willeke, Fraunhofer Institute for Solar Energy Systems ISE

### Photovoltaics

Prof. Bruno Burger, Fraunhofer Institute for Solar Energy Systems ISE | Markus A. W. Hoehner, EuPD Research | Uwe Ilgemann, Invecco | Prof. Dr. Claudia Lüling, University of Applied Sciences Frankfurt am Main | Paula Mints, Navigant Consulting Inc. | Prof. Dr. Michael Powalla, Centre for Solar Energy and Hydrogen Research (ZSW)| Simon Rolland, Alliance for Rural Electrification | Prof. Dr. Dirk-Uwe Sauer, RWTH Aachen University | Dr. Rutger Schlatmann, PVcomB-Competence Centre Thin-Film and Nano-technology for Photovoltaics | Dr. Matthias Vetter, Fraunhofer Institute for Solar Energy Systems ISE

### Chairman PV Production Technology

Dr. Peter Fath, VDMA German Engineering Federation, centrotherm photovoltaics AG

### PV Production Technology

Karl-Heinz Bahnmüller, Schiller Automation GmbH & Co. KG | Steffen Günther, Reis GmbH & Co. KG Maschinenfabrik | Heinz Kundert, SEMI PV Group Europe | Stephan Raithel, SEMI PV Group Europe | Volker Reith, Heraeus Noblelight GmbH | Andre Richter, Meyer Burger AG | Dr. Roland Schreieck, Siemens AG | Christof Siebert, TRUMPF Laser GmbH & Co. KG | Egbert Wenninger, Grenzebach Maschinenbau GmbH | Dr. Florian Wessendorf, VDMA German Engineering Federation

**Chairman Solar Thermal**

Dr. Harald Drück, Institute of Thermodynamics and Thermal Engineering (ITW), University of Stuttgart

**Solar Thermal**

Prof. Jan-Olof Dalenbäck, Chalmers University of Technology | Prof. Dr. Ursula Eicker, Hochschule für Technik - HFT Stuttgart | Dr. Andreas Häberle, PSE AG | Dr. Uli Jakob, Green Chiller Association for Sorption Cooling e.V.| Dr. Petri Konttinen, Aurubis Finland Oy | Prof. Dr. Robert Pitz-Paal, Institute of Solar Research German Aerospace Center | Dr. Christoph Richter, German Aerospace Center (DLR) | Robin Welling, European Solar Thermal Industry Federation (ESTIF)

## CONFERENCE SESSIONS

### Monday, June 11

| | | |
|---|---|---|
| 12:00pm–1:30pm | Official PV Conference Opening | |
| Lunch Break | | |
| 2:15pm–4:00pm | Electricity Storage | Global PV Markets: Europe |
| Coffee Break | | |
| 4:30pm–6:00pm | Electricity Storage | Global PV Markets: Europe |
| Coffee Break | | |
| 6:15pm–7:00pm | Electricity Storage Panel Discussion | |
| from 6:00pm | Networking Reception | |

### Tuesday, June 12

| | | |
|---|---|---|
| 10:00am–12:00pm | PV Power Plants | Global PV Markets: Asia |
| Lunch Break | | |
| 1:30pm–3:30pm | PV Power Plants | Global PV Markets: The Americas |
| Coffee Break | | |
| 4:00pm–6:00pm | CEO PV Panel Discussion | |
| from 6:00pm | Intersolar Europe Conference Barbecue | |

### Wednesday, June 13

| | | |
|---|---|---|
| 10:00am–12:00pm | Testing & Certification & Quality Assurance | Global PV Markets: MENA Region |
| Lunch Break | | |
| 1:30pm–3:30pm | Recycling Management | Global PV Markets: MENA Region |
| Coffee Break | | |
| 4:00pm–6:00pm | Global Rural PV Markets | Global PV Markets: India |

### Thursday, June 14

| | | |
|---|---|---|
| 10:00am–12:00pm | Concentrating PV | |
| Lunch Break | | |
| 1:30pm–3:30pm | Building Integrated Solutions | |
| Coffee Break | | |
| 4:00pm–6:00pm | | |

Full Conference Package | Photovoltaics Package | Solar Thermal Package

| | | |
|---|---|---|
| Crystalline Silicon | 8th Advanced PV Manufacturing Forum | Offcial Solar Thermal Conference Opening |
| Thin Film Technology | 8th Advanced PV Manufacturing Forum | Solar Thermal Technology Update |
| | | Solar Thermal Round Table: PV Heating-Threat or Option? |

| | | |
|---|---|---|
| Grid Integration | | Solar Heat for Industrial Processes |
| Balance of Systems | | Solar Cooling |
| Balance of Systems | | Large-Scale Solar Thermal Systems |

| | | |
|---|---|---|
| | CSP-Market Prospects | Solare Heizkonzepte (Teil 1): Solarthermie versus Dämmung[1] |
| | CSP-Technology Update | Solare Heizkonzepte (Teil 2): Solarthermie versus Heizen mit Solarstrom[1] |
| | CSP-Operational Experience | Solare Heizkonzepte (Teil 3): Abschlussdiskussion[1] |

Utility-Scale Solar Energy Package

**1** presented in German

## WORKSHOPS

### Tuesday, June 12

| | | |
|---|---|---|
| 1:30pm–3:30pm | Solar Energy for the World's Largest Radio Telescope | |

### Wednesday, June 13

| | | |
|---|---|---|
| 1:30pm–5:30pm | PV-Training Crystalline Silicon Solar Cells – Basics and Working Principle | Thermische Solaranlagen (Teil 1)[1] |

### Thursday, June 14

| | | |
|---|---|---|
| 9:00am–1:00pm | PV-Training Production Technology – Innovative Processes and Technologies | Thermische Solaranlagen (Teil 2)[1] 10:00am–1:00pm |
| Coffee Break | | |
| 2:00pm–6:00pm | PV-Training High Efficiency Solar Cells – Concepts and Potentials | |

**1** presented in German

## PRICING

| Ticket Packages | At the door |
|---|---|
| Full Conference Package (all conference sessions and networking events) | €1,380 |
| Photovoltaics Package | €1,120 |
| Solar Thermal Package | €660 |
| Utility-Scale Solar Energy Package | €920 |

### Day Tickets Photovoltaics

| | | |
|---|---|---|
| Monday, | June 11 | €430 |
| Tuesday, | June 12 | €540 |
| Wednesday, | June 13 | €540 |
| Thursday, | June 14 | €430 |

### Day Tickets Solar Thermal

| | | |
|---|---|---|
| Tuesday, | June 12 | €370 |
| Wednesday, | June 13 | €370 |
| Thursday, | June 14 | €370 |

### Individual Tickets

| | |
|---|---|
| CEO PV Panel Discussion | €140 |
| Building Integrated Solutions | €260 |
| Concentrating PV | €260 |
| Recycling Management | €260 |
| Solar Thermal Round Table: PV Heating-Threat or Option? | €140 |
| Intersolar Europe Conference Barbecue | €60 |

### Workshops

| | |
|---|---|
| PV-Training: Three workshops, each to | €450 |
| Thermische Solaranlagen (ein Tag)[1] | €180 |
| Thermische Solaranlagen (zwei Tage)[1] | €260 |

**1** presented in German

## OFFICIAL PHOTOVOLTAIC CONFERENCE OPENING

| FACTS | |
|---|---|
| **Date** | Monday, June 11, 2012 |
| **Room** | 14 B |
| **Time** | 12:00pm |
| **Language** | English |

### Topic

The future of renewable energy and in particular PV power supply, from centralized to decentralized.

### Summary

How can a long-term sustainable energy supply be practically and realistically implemented? What is the future of energy supply for locally available renewable energy sources? Against this background, how will the transition from a centralized to a decentralized energy supply develop in the future based on Germany's Energiewende? What technological applications will play a key role in the long-term.

| MONDAY, JUNE 11, 2012 | |
|---|---|
| **12:00pm** | Moderator: Prof. Dr. Gerhard P. Willeke<br>Manager Photovoltaics<br>Fraunhofer Institute for Solar Energy Systems ISE, Germany<br>Keynote Speeches<br>■ Dr. Harry Lehmann, Director Environmental Planning and Sustainability Strategies, The Federal Environment Agency, Germany<br>■ Dr. Harald Will, Managing Director, Solarinitiative München GmbH & Co. KG, Germany<br>■ Professor Dr. Eicke Weber, Director, Fraunhofer Institute for Solar Energy Systems ISE, Germany |

# ELECTRICITY STORAGE

| FACTS | |
|---|---|
| **Date** | Monday, June 11, 2012 |
| **Room** | 14 C |
| **Time** | 2:15pm–7:00pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Energy Consultants, Government Agencies, Investment Companies, Installers & Integrators, Project Developers & Planners, R&D Companies, Utility Companies |

## Summary

The presentations provide explanations of various electrical short-term and medium-term storage systems such as lead acid, lithium, NaCiCl batteries and redox flow, their respective deployment scenarios as well as cost models for the operation of such storage systems. Furthermore speakers will present the technical applications designed to provide long-term electricity storage, including hydrogen and power-to-gas based concepts.

| MONDAY, JUNE 11, 2012 | |
|---|---|
| **2:15pm** | Welcome and introduction<br>Dr. Matthias Vetter, Head of Department PV Off-Grid Solutions and Battery System Technology, Fraunhofer Institute for Solar Energy Systems ISE, Germany |
| **2:20pm** | Applying UltraBattery® technology to deliver MW scale energy storage solutions for smoothing and shifting of solar power<br>John Wood, Chief Executive Officer, ecoult, Australia |
| **2:45pm** | Lithium batteries allow optimization of self energy consumption in residential solar power systems<br>Dr. Gerold Neumann, Chief Technology Officer, Dispatch Energy Innovations GmbH, Germany |
| **3:10pm** | Autonomous energy systems – secured access to electricity anywhere, anytime<br>Stephan Brand, Local Product Group Manager Renewables, ABB AG, Germany |

**MONDAY, JUNE 11, 2012**

| | |
|---|---|
| **3:35pm** | The NaNiCl2 sodium-nickel battery and its applications<br>Giuseppe Lodi, Chief Research and Technology Advisor, FIAMM, Italy |
| **4:00pm** | **Coffee break** |
| **4:30pm** | Welcome and introduction<br>Dr. Matthias Vetter, Head of Department PV Off-Grid Solutions and Battery System Technology, Fraunhofer Institute for Solar Energy Systems ISE, Germany |
| **4:35pm** | Large scale Energy storage – applications of the VRB-ESS® in providing electrical grid power solutions<br>Tim Hennessy, President, Prudent Energy Inc., China |
| **5:05pm** | Electrolysis, storage, market potential<br>Dr. Christopher Hebling, Hydrogen Technology, Micro Energy Technology, Fraunhofer Institute for Solar Energy Systems ISE, Germany |
| **5:35pm** | Technical challenges of power to gas and market potential<br>Stefan Rieke, Chief Country Officer, SolarFuel GmbH, Germany |
| **6:05pm** | **Q&A round**<br>Moderator: Dr. Matthias Vetter, Head of Department PV Off-Grid Solutions and Battery System Technology, Fraunhofer Institute for Solar Energy Systems ISE, Germany<br>Panelists<br>■ Stephan Brand, Local Product Group Manager Renewables, ABB AG, Germany<br>■ Dr. Christopher Hebling, Hydrogen Technology, Micro Energy Technology, Fraunhofer Institute for Solar Energy Systems ISE, Germany<br>■ Tim Hennessy, President, Prudent Energy Inc., China<br>■ Giuseppe Lodi, Chief Research and Technology Advisor, FIAMM, Italy<br>■ Dr. Gerold Neumann, Chief Technology Officer, Dispatch Energy Innovations GmbH, Germany<br>■ Stefan Rieke, Chief Operating Officer, SolarFuel GmbH, Germany<br>■ John Wood, Chief Executive Officer, ecoult, Australia |

## GLOBAL PV MARKETS: EUROPE

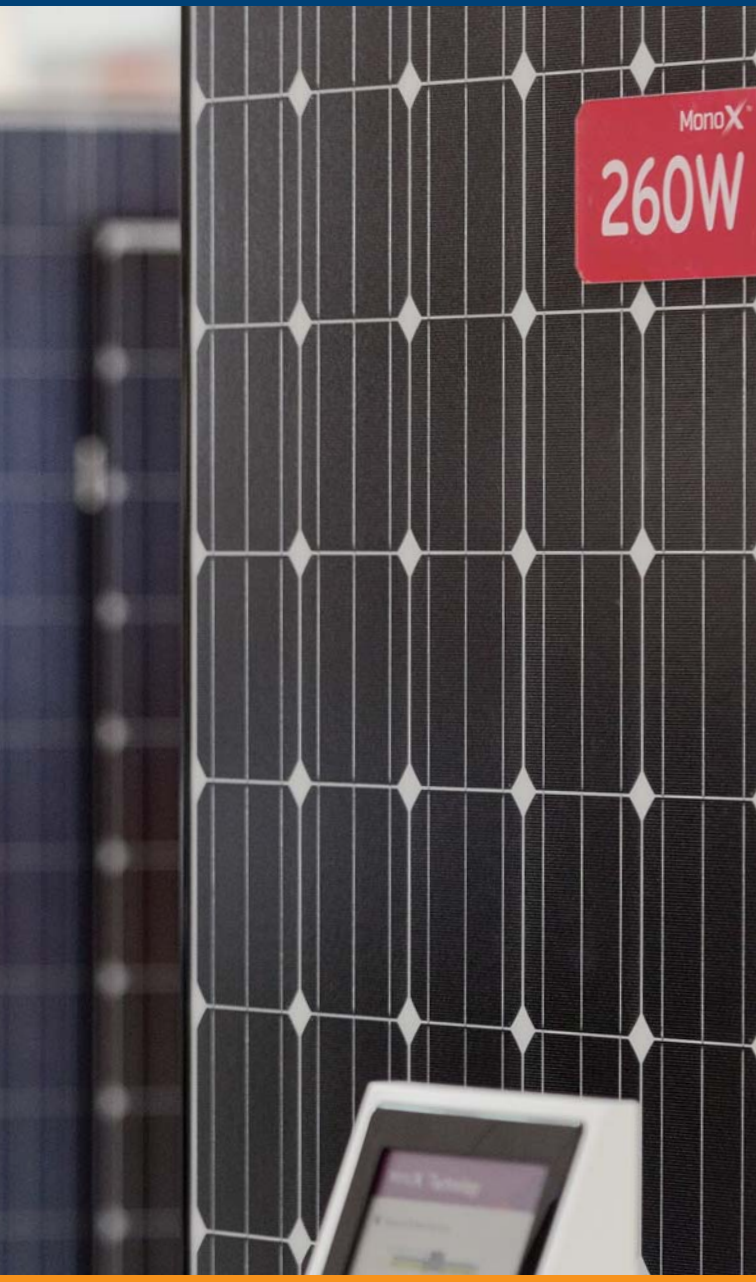
| FACTS | |
|---|---|
| **Date** | Monday, June 11, 2012 |
| **Room** | 14 A |
| **Time** | 2:15pm–6:00pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Energy Consultants, Equipment & Material Manufacturers, Government Agencies, Investment Companies, Project Developers & Planners, R&D Companies, Roofing Companies, System Technology Manufacturers, Trade Associations, Utility Companies |

### Summary

As a result of intense price competition for PV systems the PV market changed dramatically compared to previous years. In some European countries grid parity has been reached and opened new business models for the solar industry. Consequently, several governments have adjusted the legislative framework conditions designed to support photovoltaic applications. Here we will find out about new market trends and business opportunities in certain European countries.

| MONDAY, JUNE 11, 2012 | |
|---|---|
| **2:15pm** | Welcome and introduction |
| **2:20pm** | PV market at the crossroads of sustainable development and globalisation<br>Gaëtan Masson, Head of Business Intelligence, European Photovoltaic Industry Association (EPIA), Belgium |
| **2:50pm** | European PV industry<br>Ash Sharma, Research Director, IMS Research, U.K. |
| **3:20pm** | Solar power generation: beyond feed in tariffs; the solar based on utility business model<br>Thierry Lepercq, President, Solairedirect, France |
| **4:00pm** | **Coffee break** |

| MONDAY, JUNE 11, 2012 | |
|---|---|
| **4:30pm** | Welcome and introduction |
| **4:35pm** | Photovoltaic market and policy development in Germany<br>Thomas Chrometzka, Head of International Affairs, German Solar Industry Association (BSW-Solar), Germany |
| **4:55pm** | Selling PV on the spot market<br>Paul Kreutzkamp, Senior Project Manager for Renewables, 3E, Belgium |
| **5:15pm** | PV in Spain<br>Markus Hoehner, Chief Executive Officer, EuPD Research, Germany |
| **5:35pm** | East European countries market overview<br>Christian Grundner, Project Manager Market Intelligence Unit, eclareon GmbH, Germany |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# PV POWER PLANTS

## FACTS

| | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 14 B |
| **Time** | 10:00am-3:35pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Installers & Integrators, Investment Companies, Cell & Module Manufacturers, Component Manufacturers, Distributers, Energy Consultants, Project Developers & Planners, System Technology Manufacturers, Utility Companies |

## TUESDAY, JUNE 12, 2012

| | |
|---|---|
| **10:00am** | Welcome and introduction<br>Uwe Ilgemann, Managing Director, Invecco, Germany |
| **10:05am** | Midterm pricing trends of PV systems<br>Dirk Morbitzer, General Manager, Renewable Analytics LLC, U.S. |
| **10:35am** | Future trends of PV power plants<br>Manfred Bächler, Managing Director, Phoenix Solar AG, Germany |
| **11:05am** | Experiences of an independent PV power producer<br>Dr. Zoltan Bognar, Member of Board, Capital Stage AG, Germany |
| **11:35am** | Quality of PV systems<br>Robert Pfatischer, Managing Director, meteocontrol GmbH, Germany |
| **12:05pm** | **Lunch break** |
| **1:30pm** | Welcome and introduction<br>Uwe Ilgemann, Managing Director, Invecco, Germany |
| **1:35pm** | Securing your investment through quality<br>Thibaut Lemoine, Co-Founder & General Manager, Senergy Testing Solutions Ltd. (STS), China |
| **2:05pm** | PV power plants on disposal sites<br>Jörn Menke, General Manager, relatio ES GmbH, Germany |
| **2:35pm** | Development of a model for integrated PV power plant design, impact studies, commissioning and operations<br>Juris Kalejs Ph.D, Chief Technology Officer, American Capital Energy, U.S. |
| **3:05pm** | PV plant performance evaluation and optimization<br>Peter Erning, Power generation, product management renewables, ABB AG, Germany |

# GLOBAL PV MARKETS: ASIA

| FACTS | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 14 A |
| **Time** | 10:00am–12:10pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Energy Consultants, Equipment & Material Manufacturers, Government Agencies, Investment Companies, Project Developers & Planners, R&D Companies, Roofing Companies, System Technology Manufacturers, Trade Associations, Utility Companies |

## Summary

Experts believe that the most promising future markets will be in Asia. Industry insiders working locally for governments, companies and industry associations, explain how they see the long-term legislative landscape, business environment and potential of Asian markets.

| TUESDAY, JUNE 12, 2012 | |
|---|---|
| **10:00am** | Welcome and introduction<br>Frank Haugwitz, Head of Intersolar Conference Development, Solar Promotion International GmbH, China |
| **10:05am** | Japan's PV market<br>Izumi Kaizuka, Manager, RTS Corporation, Japan |
| **10:30am** | China's PV market<br>Frank Haugwitz, Head of Intersolar Conference Development, Solar Promotion International GmbH, China |
| **10:55am** | The Thai PV market – lessons learnt and new developments<br>Samerjai Suksumek, Deputy Director-General, Energy Policy and Planning Office, Thailand |
| **11:20am** | PV market development and FiT in Malaysia<br>Datuk Loo Took Gee, Secretary General, Ministry of Energy, Green Technology and Water of Malaysia, Malaysia |
| **11:45am** | Solar energy in Indonesia: Framework conditions and business potential<br>Yani Witjaksono, Vice Secretary General, Indonesian Renewable Energy Society, Indonesia |

## CRYSTALLINE SILICON

| FACTS | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 13 B |
| **Time** | 10:00am–12:10pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Equipment & Material Manufacturers, Installers & Integrators, Project Developers & Planners, R&D Companies, System Technology Manufacturers |

### Summary

The latest technological advancements achieved by cell and module manufacturers are the focus of this session. Different new approaches and concepts designed to further increase cell efficiencies while lowering production costs, will be highlighted in the presentations. This session will conclude with supply and demand outlook for PV modules.

| TUESDAY, JUNE 12, 2012 | |
|---|---|
| **10:00am** | Welcome and introduction |
| **10:05am** | Silicones – the vehicle to differentiate in the PV module production and installation<br>Doris Peters, Business Development & Senior Marketing Manager, Wacker Chemie AG, Germany |
| **10:30am** | Innovation in multicrystalline efficiency: Creating the next generation of modules<br>Erik Sauar, Advisor to Chief Executive Officer, REC Solar, Germany |
| **10:55am** | Simplification strategies in PV module production and installation – the next step in PV cost reductions following the successful PV cell optimisations<br>Dr. Ronald Lange, Chief Executive Officer, 9-om ag, Switzerland |
| **11:20am** | Current status & future development of PV module supply and demand<br>Sam Wilkinson, Senior Analyst, IMS Research, U.K. |
| **11:45am** | Next generation solar technologies, and optimizing best attributes to enable grid parity<br>Christopher Beitel, Vice President Business Development and Marketing, Silevo Inc., U.S. |

## 8TH ADVANCED PV MANUFACTURING FORUM

| FACTS | |
|---|---|
| Date | Tuesday, June 12, 2012 |
| Room | 14 C |
| Time | 10:00am-3:30pm |
| Language | English |
| Partner | SEMI PV Group, VDMA Photovoltaic Equipment |
| Target groups | Cell & Module Manufacturers, Equipment & Material Manufacturers |

### Summary

The 8th Advanced PV Manufacturing Forum is an excellent opportunity for PV technology leaders, managers, engineers and professionals from the manufacturer and supplier community, as well as for R&D, and to share most recent developments in their joint drive towards "excellence in PV manufacturing".

This conference will show strategies and concepts to cope with the most urgent challenges for PV manufacturing. Thereby the focus is on the continuous advancement of the production equipment and the optimization of the production processes. Apart from the intensive discussions with the leading technology drivers of the industry, the forum offers an outstanding opportunity for networking. We combine efforts between PV device manufacturers, equipment and materials suppliers and academia.

| TUESDAY, JUNE 12, 2012 | |
|---|---|
| 10:00am | Leading equipment technology for higher competitiveness in the PV industry<br>Dr. Peter Fath, Chief Technology Officer, centrotherm photovoltaics AG, Germany |
| 10:10am | Global collaboration to enhance success in the PV industry<br>Heinz Kundert, President, SEMI Europe, Germany |
| 10:20am | PV materials & chemicals market development overview<br>Mark Thirsk, Managing Partner, Linx Consulting Inc., U.S. |

| TUESDAY, JUNE 12, 2012 | |
|---|---|
| **10:40am** | New opportunities with new materials in PV<br>Dr. Michael Grimm, Project Manager R&D, Roth & Rau AG, Germany |
| **11:00am** | Importance and benefits of flow and pull in highly volatile markets<br>Lance Cullen, Continuous Improvement Manager, Madico Inc., U.S. |
| **11:20am** | Liquid encapsulation – Silicone-based modules and new production technology<br>Marcel Schulz, Head of Product Management Solar, Reis GmbH & Co. KG Maschinenfabrik, Germany |
| **11:40am** | One-step selective emitter in industrial mass production<br>Gerda Gläser, Division Manager Process c-Si, Manz AG, Germany |
| **12:00pm** | Buffer deposition technology for large-scale CIGS production<br>Jens Eckstein, Managing Director & Chief Technology Officer, Singulus Stangl Solar GmbH, Germany |
| **12:30pm** | **Lunch break** |
| **1:30pm** | Influence of handling operations on strength of silicon<br>Stephan Schönfelder, Team Leader Mechanics Wafer/Cell, Fraunhofer Center for Silicon Photovoltaics CSP, Germany |
| **1:50pm** | Non-contact PV substrate handling using ultrasound bearing technology<br>Josef Zimmermann, Managing Director, Zimmermann & Schilp Handhabungstechnik GmbH, Germany |
| **2:10pm** | Laser processes for high-efficient solar cells<br>Roland Mayerhofer, Innovation Manager, Rofin Baasel Lasertech, Germany |
| **2:30pm** | Advanced beam shaping and laser solutions for photovoltaic production<br>Maja Gacnik, Solutions Manager for Advanced Optical Solutions, Limo Lissotschenko Mikrooptik GmbH, Germany |
| **2:50pm** | Integrated software solutions for optimized design of PV production lines and factories<br>Manuel Müller, Business Development Manager Glass & Solar, Siemens AG, Germany |
| **3:10pm** | Future challenges for cost effective PV fab design<br>Dr. Klaus Eberhardt, Global Technology Manager PV, M+W Group, Germany |

## GLOBAL PV MARKETS: THE AMERICAS

**FACTS**

| | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 14 A |
| **Time** | 1:30pm–3:40pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Energy Consultants, Equipment & Material Manufacturers, Government Agencies, Investment Companies, Project Developers & Planners, R&D Companies, Roofing Companies, System Technology Manufactures, Trade Associations |

### Summary

Presentations given in this session will cover markets across the Americas, including California – the single largest market in the United States, Canada, as well as Mexico, Brazil and Chile. Insights into the future of these evolving growth markets, in light of the given political framework conditions will be offered.

**TUESDAY, JUNE 12, 2012**

| | |
|---|---|
| **1:30pm** | Welcome and introduction |
| **1:35pm** | The Canadian PV market development – Prospects until 2013<br>Antonio Antonopoulos, Vice President Technology, CarbonFree Technology, Canada |
| **2:00pm** | Photovoltaic pricing history and forecast and the effect on competitiveness and margins<br>Paula Mints, Director, Energy, Navigant Consulting Inc., U.S. |
| **2:25pm** | California's Solar Initiative and solar outlook<br>Timothy Kelley, President, Team California, U.S. |
| **2:50pm** | PV industry competition for subsidies in the US market<br>Art Hennessey, Chief Financial Officer, American Capital Energy, U.S. |
| **3:15pm** | Arising opportunities for PV companies in Latin America<br>David Pérez Navarro, Managing Partner, Eclareon, Spain |

## THIN FILM TECHNOLOGY

| FACTS | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 13 B |
| **Time** | 1:30pm–3:35pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Distributers, Investment Companies, |

### Summary

In light of the recent cost reductions achieved in crystalline solar modules, raw material suppliers, cell producers and component manufacturers will present their analysis of thin film PV. Their talks will center on how the technological advances anticipated in thin film applications are intended to guarantee cost competitiveness in future.

| TUESDAY, JUNE 12, 2012 | |
|---|---|
| **1:30pm** | Welcome and introduction<br>Dr. Rutger Schlatmann, Director, PVcomB -Competence Centre Thin-Film- and Nanotechnology for PV Berlin, Germany |
| **1:35pm** | Thin films in PV, status and perspectives<br>Bernhard Dimmler, Chief Strategic Officer, European Photovoltaic Technology Platform, Belgium |
| **2:05pm** | Market pressures create window of opportunity for thin film<br>Christopher O'Brien, Head of Market Development, Oerlikon Solar, U.S. |
| **2:35pm** | CIS technology's growing presence in the global PV market: how far it has come and where it is going<br>James Plastow, Global Product Strategic Manager, Solar Frontier, Japan |
| **3:05pm** | A different approach to CIGS<br>Dr. Atiye Bayman, Vice President Process Technology, MiaSolé, U.S. |

# WORKSHOP SOLAR ENERGY FOR THE WORLD'S LARGEST RADIO TELESCOPE

| FACTS | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 11 |
| **Time** | 1:30pm–3:30pm |
| **Language** | English |
| **Partner** | Fraunhofer Institute for Solar Energy (ISE) & Max Planck Institute for Radio Astronomy |

## Summary

This workshop offers the chance for industry representatives to learn firsthand about the technological challenges and opportunities this exciting project will offer.

| TUESDAY, JUNE 12, 2012 | |
|---|---|
| **1:30pm** | Welcome and introduction<br>Prof. Dr. Eicke Weber, Director, Fraunhofer Institute for Solar Energy Systems ISE, Germany |
| **1:35pm** | The Square Kilometre Array (SKA): "Green Astronomy" made in Germany?!<br>Prof. Dr. Michael Kramer, Director, Max Planck Institute for Radio Astronomy, Germany |
| **1:55pm** | 100% renewable energy for the world's largest radio telescope<br>Prof. Dr. Eicke Weber, Director, Fraunhofer Institute for Solar Energy Systems ISE, Germany |
| **2:15pm** | The SKA: Solar energy concepts, technical challenges and requirements<br>Dr. Matthias Vetter, Head of Department PV Off-Grid Solutions and Battery System Technology, Fraunhofer Institute for Solar Energy Systems ISE, Germany |
| **2:35pm** | Radio astronomical challenge: Electromagnetic compatibility<br>Dr. Axel Jessner, Scientific Member, Max Planck Institute for Radio Astronomy, Germany |
| **2:55pm** | The SKA: Participation possibilities for German industry<br>Dr. Phil Crosby, Manager, Industry Participation Strategy, SKA Organisation, U.K. |
| **3:15pm** | The SKA: Innovation potential and market opportunities<br>Prof. Dr. Eicke Weber, Director, Fraunhofer Institute for Solar Energy Systems ISE, Germany |

## CEO PV PANEL DISCUSSION

| FACTS | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 14 B |
| **Time** | 4:00pm–6:00pm |
| **Language** | English |

### Summary

Industry leaders will share their insights on which business strategies could be applied and designed to cope with the changing solar markets, technological developments and increased international competition.

| TUESDAY, JUNE 12, 2012 | |
|---|---|
| **4:00pm** | Moderator: Prof. Dr. Gerhard Willeke, Manager Photovoltaics, Fraunhofer Institute for Solar Energy Systems ISE, Germany<br>Panelists<br>■ Dr. Peng Fang, Chief Executive Officer, JA Solar Holdings Co. Ltd., China<br>■ Udo Möhrstedt, Chief Executive Officer, IBC SOLAR AG, Germany<br>■ Rafael Schröer, Managing Director, Kyocera Fineceramics GmbH, Germany<br>■ Dr. Shawn Qu, Chairman, President and Chief Executive Officer, Canadian Solar Inc., China |

# OFFICIAL SOLAR THERMAL CONFERENCE OPENING

| FACTS | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 13 A |
| **Time** | 10:00am–12:00pm |
| **Language** | English |

## Summary

The opening session will focus on current and future developments of the solar thermal sector. Global and national market and technology oriented roadmaps will be presented and an overview on latest developments will be given.

| TUESDAY, JUNE 12, 2012 | |
|---|---|
| **10:00am** | Welcome note<br>Dr. Harald Drück, Head of Research and Testing Centre for Thermal Solar Systems (TZS), Institute of Thermodynamics and Thermal Engineering (ITW), University of Stuttgart, Germany |
| **10:30am** | A solar thermal strategy till 2030: challenges and actions for the German industry<br>Jörg Mayer, Managing Director, German Solar Industry Association (BSW-Solar), Germany |
| **11:00am** | New strategies to promote solar thermal markets in the Arab region<br>Ashraf Kraidy, Senior Expert, Regional centre for Renewable Energy and Energy Efficiency (RCREEE), Egypt |
| **11:30am** | The future of global solar heating and cooling - a view from the IEA Solar Heating and Cooling Programme<br>Uwe Trenkner, Communications Manager, IEA Solar Heating and Cooling Programme, France |

## SOLAR THERMAL TECHNOLOGY UPDATE

| FACTS | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 13 A |
| **Time** | 1:30pm-3:35pm |
| **Language** | English |
| **Target groups** | Collector Manufacturers, Equipmet & Material Manufacturers, Component Manufacturers, Distributers, Project Developer & Planners, Government Agencies, Investment Companies & Financial Consultants, R&D Companies, Trade Associations |

### Summary

This session will present the latest technological developments related to solar collectors, heat storage and system technology. So-called PVT collectors delivering both, heat and electricity will be a focal topic.

| TUESDAY, JUNE 12, 2012 | |
|---|---|
| **1:30pm** | Welcome and introduction<br>Dr. Stephan Fischer, Group Leader Testing TZS, Research and Testing Centre for Thermal Solar Systems (TZS), Institute of Thermodynamics and Thermal Engineering (ITW), University of Stuttgart, Germany |
| **1:35pm** | Thermal vacuum power charged technology: a new approach for solar thermal applications<br>Dr. Vittorio Palmieri, Chief Technology Officer, TVP Solar SA, Switzerland |
| **2:05pm** | Maximizing solar efficiency with solar cogeneration: hybrid heat and electricity generation<br>Ratson Morad, Chief Operating Officer, Cogenra Solar, U.S. |
| **2:35pm** | Thermo-chemical heat storage – technology and perspectives<br>Dr. Henner Kerskes, Group Leader Research TZS, Institute of Thermodynamics and Thermal Engineering, University of Stuttgart, Germany |
| **3:05pm** | China: Trends in the largest solar thermal market worldwide<br>Bärbel Epp, Founder and Managing Director, Solrico, Germany |

## SOLAR THERMAL ROUND TABLE: PV HEATING-THREAT OR OPTION?

**FACTS**

| | |
|---|---|
| **Date** | Tuesday, June 12, 2012 |
| **Room** | 13 A |
| **Time** | 4:00pm-6:00pm |
| **Language** | English |

### Summary

It is obvious that solar thermal technology will be one key pillar in the future energy mix. Up to until now it was evident to produce heat by means of solar thermal collectors. However, if the significant cost reduction in photovoltaic technology that occurred during the last years continues, a situation could be reached in the near future where heat produced by PV electricity might be cheaper than solar thermal heat. The round table discussion will focus on the question if this trend will be a thread or an option for the solar thermal branch.

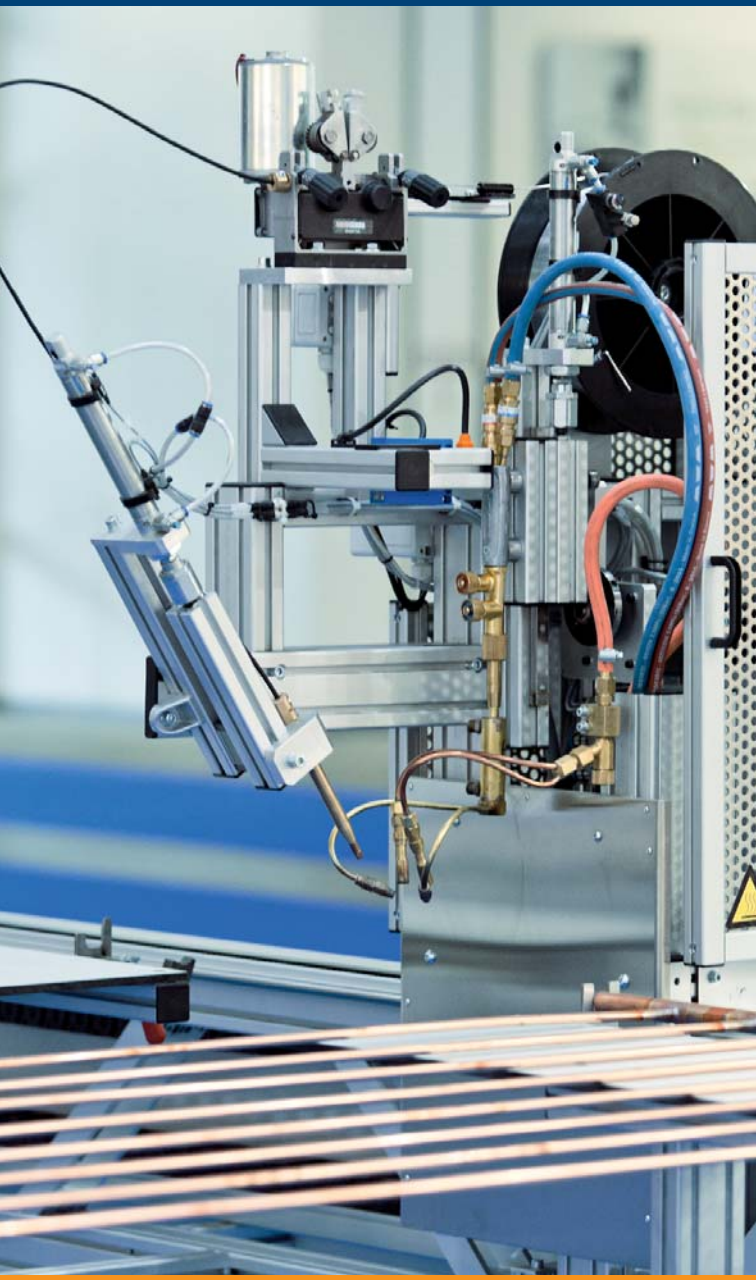
**TUESDAY, JUNE 12, 2012**

**4:00pm**

Moderator: Prof. Dr. Klaus Vajen, Institute of Thermal Engineering, Kassel University, Germany

Panelists

- Dr. Harald Drück, Head of Research and Testing Centre for Thermal Solar Systems (TZS), Institute of Thermodynamics and Thermal Engineering (ITW), University of Stuttgart, Germany
- Prof. Dr. Norbert Fisch, Department Architecture, Technical University of Braunschweig, Germany
- Gerhard Stryi-Hipp, Head of Energy Policy and Head of Group Thermal Processes and Low Temperature Solar Thermal Energy, Fraunhofer Institute for Solar Energy Systems ISE, Germany
- Robin Welling, President, European Solar Thermal Industry Federation ESTIF, Belgium and Managing Director TiSUN GmbH, Austria
- Philippe Welter, Publisher, PHOTON Europe GmbH, Germany



# TESTING & CERTIFICATION & QUALITY ASSURANCE

| FACTS | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 13 B |
| **Time** | 10:00am-12:05pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Investment Companies, Project Developers & Planners,Trade Associations |

## Summary

Advanced module and system technologies are the focus of this session. Presentations given by representatives from international testing and certification institutes include information on the technical requirements needed to comply with IEC standards and on PV power plant certification matters.

| WEDNESDAY, JUNE 13, 2012 | |
|---|---|
| **10:00am** | Welcome and introduction<br>Daniel Dopmeier, PV Module Qualification, TÜV Rheinland Energie und Umwelt GmbH, Germany |
| **10:05am** | Modelling of PV-plants – Experiences in certification activities in German MW power systems<br>Dr. Thomas Weber, Schneider Electrics, France |
| **10:35am** | Testing of PV inverters for the low voltage grid<br>■ Dr. Karl Weber, Principal Smart Grid, Partner, TÜV SÜD AG, Germany<br>■ Dr. Kai Strübbe, Head of Embedded Systems, TÜV SÜD AG, Germany |
| **11:05am** | Bypass-diodes for PV-modules: An outlook to the future based on 10 years of field experience<br>Jos Van Loo, Director Business Development, Diotec Semiconductor AG, Germany |
| **11:35am** | Testing and certification of PV modules- current situation and further requirements<br>Daniel Dopmeier, PV Module Qualification, TÜV Rheinland Energie und Umwelt GmbH, Germany |

## GLOBAL PV MARKETS: MENA REGION

**FACTS**

| | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 14 A |
| **Time** | 10:00am-3:35pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Energy Consultants, Equipment & Material Manufacturers, Government Agencies, Investment Companies, Project Developers & Planners, R&D Companies, Roofing Companies, System Technology Manufacturers, Trade Associations |

**WEDNESDAY, JUNE 13, 2012**

| | |
|---|---|
| **10:00am** | Welcome and introduction |
| **10:05am** | Energy supply in Morocco<br>Obaïd Amrane, Member of Board, Moroccon Agency for Solar Energy MASEN, Morocco |
| **10:35am** | Solar business opportunities in Saudi Arabia<br>Nikolai Dobrott, Founder & Managing Partner, Apricum - The Cleantech Advisory, Germany |
| **11:05am** | Qatar's transition to a sustainable energy mix<br>Khalid Al Hajri, Board Member and Chief Executive Officer, Qatar Solar Technologies, Qatar |
| **11:35am** | Sunrise in the desert - The dawn of solar power in the Middle East<br>Vahid Fotuhi, Chairman, Emirates Solar Industry Association ESIA, United Arab Emirates |
| **12:05pm** | **Lunch break** |
| **1:30pm** | Welcome and introduction |
| **1:35pm** | MENA: A bright energy future<br>Paul van Son, Chief Executive Officer, Dii GmbH, Germany |
| **2:05pm** | National programs for renewable energy and energy efficiency<br>Ali Sokhal, Business Development Manager, New Energy Algeria (NEAL), Algeria |
| **2:35pm** | Solar energy in Egypt<br>Khaled Gasser, Board Member, Solar Energy Development Association (SEDA), Egypt |
| **3:05pm** | Solar energy projects in Jordan<br>Tarek Al-Amad, Chief Executive Officer, European Jordanian Renewable Energy Projects LLC., Jordan |

# GRID INTEGRATION

| FACTS | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 14 C |
| **Time** | 10:00am-12:05pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Energy Consultants, Government Agencies, Installers, Project Developers & Planners, System Technology Manufacturers, Trade Associations, Utility Companies |

## Summary

This session provides information on the growing proportion of electricity generated by PV systems and the implications of this development for networks and consumers. The role of PV in terms of grid stabilization, design of future supply networks, and issues surrounding safety and standardization will also be highlighted.

| WEDNESDAY, JUNE 13, 2012 | |
|---|---|
| **10:00am** | Welcome and introduction |
| **10:05am** | Intelligent integration of decentralized storage systems in low-voltage grids<br>Volker Wachenfeld, Executive Vice President Sales & Technology Off-Grid Systems, SMA Solar Technology AG, Germany |
| **10:35am** | Ensuring a stable and reliable energy supply with harmonic measurement and certification<br>Johannes Sigulla, Schneider Electrics, France |
| **11:05am** | Concepts for integrating high shares of RES into a smart grid<br>Dr. Christof Wittwer, Head of Department Smart Grids, Fraunhofer Institute for Solar Energy Systems ISE, Germany |
| **11:35am** | Current status of grid integration technology - Standardization and network code of ENTSO-E<br>Thomas Schaupp, Development Network Integration, KACO new energy GmbH, Germany |

# Every Day, The Sun Rises.
# And Every Day, We're There to Meet it.

Hanwha Solar

Trust in the Sun

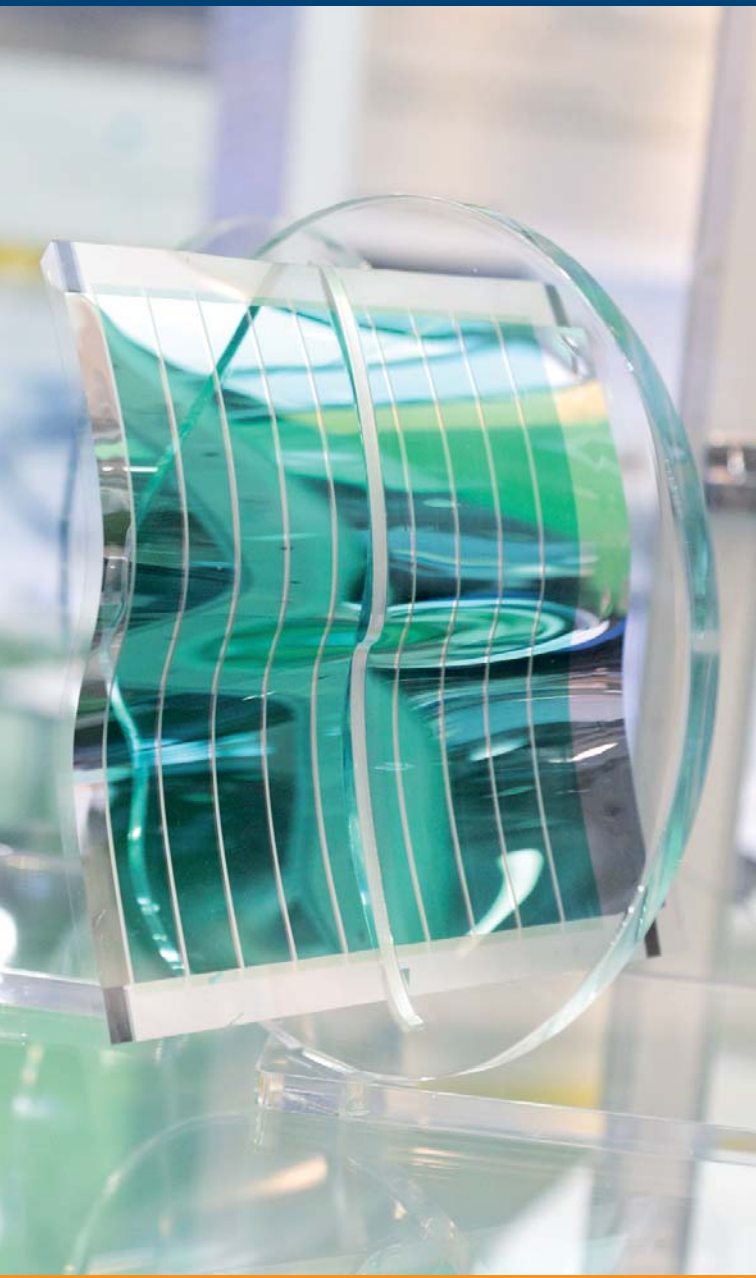
## RECYCLING MANAGEMENT

| FACTS | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 13 B |
| **Time** | 1:30pm-3:30pm |
| **Language** | English |
| **Partner** | PV CYCLE |
| **Target groups** | Cell & Module Manufacturers, Equipment & Material Manufacturers, Governement Agencies, Trade Associations |

### Summary

Co-organized with PV CYCLE, this session covers all aspects of sustainable PV recycling, including new, mandatory European legislation, collection and transport of end-of-life modules, as well as recycling technologies and financial aspects. Speakers from the PV industry, European Commission and national authorities will elaborate the requirements of new waste legislation.

| WEDNESDAY, JUNE 13, 2012 | |
|---|---|
| **1:30pm** | Welcome and introduction<br>Wilfried Taetow, President, PV CYCLE a.i.s.b.l., Belgium |
| **1:35pm** | An overview of the recast WEEE Directive<br>Thorsten Brunzema, Policy Officer, European Commission, Belgium |
| **2:05pm** | Waste management of PV modules in Bavaria<br>Jürgen Beckmann, Bayerisches Landesamt für Umwelt, Germany |
| **2:35pm** | Implementation of the new WEEE Directive – Pan-European management of collecting and recycling end-of-life PV solar modules<br>Wilfried Taetow, President, PV CYCLE a.i.s.b.l., Belgium |



## BALANCE OF SYSTEMS

| FACTS | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 14 C |
| **Time** | 1:30pm-6:05pm |
| **Language** | English |
| **Target groups** | Architects, Cell & Module Manufacturers, Component Manufacturers, Distributers, Installers & Integrators, Project Developers & Planners, System Technology Manufacturers |

### Summary

As the proportion of power generation covered by photovoltaics grows, a radical increase is seen in the challenges facing photovoltaics system engineering. Inverters, for instance, need to provide grid services and contribute to stabilizing the power grid. Furthermore the presentations will elaborate on the balance of energy systems. How can energy production be maximized while reducing energy costs? The optimization of energy management will be discussed.

| WEDNESDAY, JUNE 13, 2012 | |
|---|---|
| **1:30pm** | Welcome and introduction<br>Prof. Bruno Burger, Group Manager Power Electronics, Fraunhofer Institute for Solar Energy Systems ISE, Germany |
| **1:35pm** | PV management systems: Maximizing energy production and ROI<br>Ray Burgess, President and Chief Executive Officer, Solar Power Technologies, U.S. |
| **2:05pm** | Integrated AC modules for the commercial-scale market<br>Wendy Arienzo, Chief Executive Officer, ArrayPower, U.S. |
| **2:35pm** | Microinverter fundamentals: Experiences from the field<br>Raghu Belur, Co-Founder & Vice President of Products, Enphase Energy, U.S. |
| **3:05pm** | Overview on off-grid systems and hybrid systems<br>Michael Müller, Director PV Off Grid, Head of Research, Steca Elektronik GmbH, Germany |
| **3:35pm** | **Coffee break** |
| **4:00pm** | Welcome and introduction<br>Prof. Bruno Burger, Group Manager Power Electronics, Fraunhofer Institute for Solar Energy Systems ISE, Germany |
| **4:05pm** | Stand-alone solar powered refrigeration<br>Ivan Katic, Senior Consultant, Danish Technological Institute, Denmark |
| **4:35pm** | Optimized power management for homes with PV-power generation systems<br>Volko Löwenstein, KACO new energy GmbH, Germany |
| **5:05pm** | Role of BoS in delivering an LCOE competitive with fossil fuels<br>Christian Pho Duc, Vice President Sales & Marketing EMEA & India, Nanosolar GmbH, Germany |
| **5:35pm** | High system voltages of PV systems and the cost savings realized<br>Dr. Michael Seehuber, Managing Board, REFUsol GmbH, Germany |

## WORKSHOP PV-TRAINING: CRYSTALLINE SILICON SOLAR CELLS – BASICS AND WORKING PRINCIPLE

**FACTS**

| | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 22 A |
| **Time** | 1:30pm–5:30pm |
| **Language** | English |
| **Partner** | PSE AG |
| **Target groups** | Newcomers within the field of silicon photovoltaics |

### Summary

The topics of the seminar include fundamentals of the design and working principles of standard industrial crystalline silicon solar cells, as well as some of the limitations and potential of this cell type. The theoretical background for understanding the principal properties of a crystalline silicon solar cell, such as pn junction formation or recombination, will be introduced and thoroughly discussed. Typical characterization methods for the determination of the electrical and optical parameters of crystalline silicon solar cells will be illustrated.

**WEDNESDAY, JUNE 13, 2012**

| | |
|---|---|
| **2:00pm** | Crystalline silicon solar cells - Basics and working principle<br>Dr. Daniel Biro, Head of High Temperature and Printing Technologies - Industrial Cell Structures Department, Fraunhofer Institute for Solar Energy Systems ISE, Germany |

## GLOBAL RURAL PV MARKETS

**FACTS**

| | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 13 B |
| **Time** | 4:00pm–6:05pm |
| **Language** | English |
| **Partner** | Alliance for Rural Electrification ARE |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Energy Consultants, Equipment & Material Manufacturers, Government Agencies, Installers & Integrators, Investment Companies, Project Developers & Planners, System Technology Manufacturers, Trade Associations |

### Summary

Price reductions have made PV applications some of the most favored solutions for supplying power to remote regions. Local governments in Africa, Latin-America, and Asia are therefore increasingly considering PV systems as a viable, long-term option for rural electrification. Experienced practitioners will present the latest findings on the current and future potential of selected markets. Co-organized with the Alliance for Rural Electrification ARE, Belgium.

**WEDNESDAY, JUNE 13, 2012**

| | |
|---|---|
| **4:00pm** | Welcome and introduction<br>Ernesto Macias Galan, President, Alliance for Rural Electrification (ARE), Belgium |
| **4:05pm** | Off-grid in Ghana<br>John Freelove Mensah, Founder & Chief Executive Officer, Sunrise Solar Solutions Limited, Ghana |
| **4:35pm** | Rural electrification in south east Asia and the Pacific – The challenges and possible solutions<br>Andy Schroeter, Owner, Sunlabob Renewable Energy Ltd., Laos |
| **5:05pm** | Indian off-grid market prospects<br>Rabindra Satpathy, President, Solar Energy, Reliance Solar Group, India |
| **5:35pm** | Rural electrification in Latin America<br>Dean Middleton, Director of Renewable Energy Sales, Trojan Battery Company, U.S. |

## GLOBAL PV MARKETS INDIA

| FACTS | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 14 A |
| **Time** | 4:00pm–6:00pm |
| **Language** | English |
| **Partner** | Conferderation of Indian Industry CII |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributers, Energy Consultants, Equipment & Material Manufacturers, Government Agencies, Investment Companies, Project Developers & Planners, R&D Companies, Roofing Companies, System Technology Manufacturers, Trade Associations |

### Summary

On the occasion of Intersolar Europe 2012, the Confederation of Indian Industry is organizing this session. The session will focus and deliberate on: Why invest in India?; Potential of Solar Energy– why this is the best time to invest in solar in India?; Existing solar technologies, opportunities and challenges, with a focus on India; How European experiences can be incorporated in India for successful implementation of solar projects?; Existing conducive policy framework for the development of solar energy sector in India.

| WEDNESDAY, JUNE 13, 2012 | |
|---|---|
| **4:00pm** | Welcome remarks<br>Shubashis Goldar, Acting Consul General, Consulate General of India, Germany |
| **4:15pm** | Moderator: Dr. Tariq Alam, Member, CII National Committee on Renewable Energy & Chief Executive Officer, Punj Lloyd Delta Renewables Pvt. Ltd., India<br>Panelists<br>■ Shaibal Ghosh, President International Business & Special Projects, Vikram Solar Pvt. Ltd., India<br>■ V. Saibaba, Chief Executive Officer, Lanco Solar Pvt. Ltd., India<br>■ Parag Shah, Managing Partner, Mahindra Partners, India |

# SOLAR HEAT FOR INDUSTRIAL PROCESSES

| FACTS | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 13 A |
| **Time** | 10:00am–12:00pm |
| **Language** | English |
| **Target groups** | Componenet Manufacturers, Distributers, Energy Consultants, Equipment & Material Manufacturers, , Installer, Investment Companies & Financial Consultants, Manufacturers, Project Developers & Planners, R&D Campanies, Trade Associations |

## Summary

This session will provide an introduction to solar heat for industrial processes. The key concepts of solar process heat systems will be presented and experience gained with built examples using different collector technologies will be reported.

| WEDNESDAY, JUNE 13, 2012 | |
|---|---|
| **10:00am** | Welcome and introduction<br>Dr. Andreas Häberle, Chief Executive Officer, PSE AG, Germany |
| **10:05am** | Solar heat for industrial processes – Technology and potential<br>Christoph Lauterbach, Research Associate, University of Kassel, Germany |
| **10:35am** | IEA SHC Task 49 - Solar process heat for production and advanced applications<br>Christoph Brunner, Head of Department Industrial Processes and Energy Systems, AEE INTEC, Austria |
| **11:05am** | Medium temperature solar heating & cooling in Indian process industry<br>G.S. Deshpande, General Manager Engg Developments, Thermax Ltd., India |
| **11:20am** | Experience with linear fresnel collectors for solar process heat<br>Christian Zahler, Managing Director, Industrial Solar GmbH, Germany |
| **11:35am** | Experience with parabolic through collectors for solar process heat<br>Stefan Minder, Chief Executive Officer, NEP SOLAR AG, Switzerland |
| **11:50am** | Question round |

# SOLAR COOLING

| FACTS | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 13 A |
| **Time** | 1:30pm–3:35pm |
| **Language** | English |
| **Target groups** | Collector Manufacturers, Energy Consultants, Installers, Investment Companies & Financial Consultants, Project Developers & Planners, Facility Manager, R&D Companies |

## Summary

The generation of cold by means of solar thermal energy is a very interesting application since in most cases cold demand and solar radiation occur simultaneously. During this session an overview on the different solar cooling technologies will be given, latest developments of systems and components will be introduced and operational experience will be presented.

| WEDNESDAY, JUNE 13, 2012 | |
|---|---|
| **1:30pm** | Welcome and introduction<br>Dr. Uli Jakob, General Manager, Solem Consulting Europe, Germany |
| **1:35pm** | Solar thermal energy for cooling and refrigeration: status and perspectives<br>Dr. Daniel Mugnier, Head of R&D Department, TECSOL SA, France |
| **2:05pm** | Where does solar cooling stand today?<br>Dr. Uli Jakob, General Manager, Solem Consulting Europe, Germany |
| **2:35pm** | An application of solar cooling in the Gulf region<br>Shane Caher, Operations Director, Kingspan Renewables Ltd., U.K. |
| **3:05pm** | Solar thermal or photovoltaic cooling?<br>Prof. Dr. Ursula Eicker, Director IAF, University of Applied Sciences HFT Stuttgart, Germany |

## LARGE-SCALE SOLAR THERMAL SYSTEMS

| FACTS | |
|---|---|
| **Date** | Wednesday, June 13, 2012 |
| **Room** | 13 A |
| **Time** | 4:00pm–6:05pm |
| **Language** | English |
| **Target groups** | Collector Manufacturers,, Energy Consultants, Installer, Investment Companies & Financial Consultants, Manufacturers, Project Developers & Planners, R&D Companies, Trade Associations |

### Summary

Using solar thermal energy by means of large scale systems is a very promising and cost effective way. This session will introduce the technology of large scale solar thermal systems as well as the combination with solar district heating and seasonal heat storage. Furthermore selected examples of build systems including the experience gained during their operation will be presented.

| WEDNESDAY, JUNE 13, 2012 | |
|---|---|
| **4:00pm** | Welcome and introduction<br>Prof. Jan-Olof Dalenbäck, Professor, Energy Area of Advance, Chalmers University of Technology, Sweden |
| **4:05pm** | Current developments and prospects of solar district heating in Europe<br>Thomas Pauschinger, Member of Board, Solites, Germany |
| **4:35pm** | Princess Noura Bint Abdulrahman University (PNUW) solar heating system<br>Hisham Mikhi, General Manager, Millennium Energy Industries, Jordan |
| **5:05pm** | Operation results and news about XL Solar Thermal Water Systems<br>Rolf Meissner, General Manager, Ritter XL Solar, Germany |
| **5:35pm** | Positive trends for solar district heating development in Sweden and Denmark<br>Prof. Jan-Olof Dalenbäck, Professor, Energy Area of Advance, Chalmers University of Technology, Sweden |

# WORKSHOP THERMISCHE SOLARANLAGEN (TEIL 1) – GRUNDLAGEN

| FACTS | |
|---|---|
| **Datum** | Mittwoch, 13. Juni 2012 |
| **Raum** | 11 |
| **Uhrzeit** | 13.30 Uhr-17.30 Uhr |
| **Sprache** | Deutsch/German |
| **Partner** | Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart |
| **Zielgruppe** | Architekten, Bauherren, Energieberater, Fachhandwerker, Planer |

## Inhalt

Thermische Solaranlagen können einen erheblichen Beitrag zur Verringerung des Energieverbrauchs, zur Senkung der Energiekosten und zur Schonung unserer Ressourcen leisten.

Der zweitägige Workshop vermittelt praxisnah und auf verständliche Weise Wissen über die Funktionsweise, den Stand der Technik sowie die Auslegung, Planung und den Bau von thermischen Solaranlagen. Innovative Anwendungsmöglichkeiten der thermische Solartechnik werden vorgestellt.

Im ersten Teil des Workshops stehen die Grundlagen sowie die Systemtechnik von thermischen Solaranlagen im Vordergrund. Die für Ein- und Mehrfamilienhäuser auf dem Markt angebotenen Solaranlagen zur Trinkwassererwärmung und zur kombinierten Trinkwassererwärmung und Heizungsunterstützung (Kombianlagen) werden vorgestellt und unter technischen und ökologischen Gesichtspunkten diskutiert.

Jeder Teilnehmer erhält schriftliches Begleitmaterial mit den wichtigsten Inhalten des Workshops.

| MITTWOCH, 13. JUNI 2012 | |
|---|---|
| **13.30 Uhr** | Einführung<br>Dr. Henner Kerskes, Gruppenleiter Forschung TZS, Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |
| **13.45 Uhr** | Grundlagen thermischer Solarenergienutzung – Strahlungsangebot und Kollektortechnik<br>Dr. Henner Kerskes, Gruppenleiter Forschung TZS, Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |
| **14.30 Uhr** | Solaranlagen zur Trinkwassererwärmung – Ein Blick auf den Stand der Technik<br>Florian Bertsch, Wissenschaftlicher Mitarbeiter, Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |
| **15.10 Uhr** | Kombianlagen – Heizen mit der Sonne<br>Dominik Bestenlehner, Wissenschaftlicher Mitarbeiter, Solar und Wärmetechnik Stuttgart (SWT), Deutschland |
| **15.45 Uhr** | **Kaffeepause** |
| **16.15 Uhr** | Bauformen von Kombispeichern<br>Stephan Bachmann, Wissenschaftlicher Mitarbeiter, Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |
| **16.45 Uhr** | Kombianlagen in der Praxis - Ergebnisse einer europaweiten Felduntersuchung<br>Dr. Henner Kerskes, Gruppenleiter Forschung TZS, Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |
| **17.15 Uhr** | Abschlussdiskussion |

# WORKSHOP PV-TRAINING: PRODUCTION TECHNOLOGY – INNOVATIVE PROCESS AND TECHNOLOGIES

| FACTS | |
|---|---|
| **Date** | Thursday, June 14, 2012 |
| **Venue** | ICM |
| **Room** | 22 A |
| **Time** | 9:00am–1:00pm |
| **Language** | English |
| **Partner** | PSE AG |
| **Target groups** | Participants with prior knowledge about crystalline silicon solar cell technology |

## Summary

The industrial realization of new and innovative cell concepts causes high demands for the corresponding production technologies. Within the seminar innovative technologies and processes, e.g. contactless metallisation concepts, cost efficient cleaning as well as structuring methods are introduced. The potential of these technologies for further integration into high efficiency cell manufacturing are discussed. Synergistic effects offered with the integration of novel production techniques are illustrated. Their relevance for a cost effective mass production process is verified.

Career changers from other fields of technology like the printed board industry will gain additional insight into the field of PV production technology.

| THURSDAY, JUNE 14, 2012 | |
|---|---|
| **9:00am** | Production technology - Innovative processes and technologies<br>Dr. Jochen Rentsch, Wet Chemical and Plasma Technologies/ Cell Process Transfer, Fraunhofer Institute for Solar Energy Systems ISE, Germany |

# CONCENTRATING PV

| FACTS | |
|---|---|
| **Date** | Thursday, June 14, 2012 |
| **Room** | 14 A |
| **Time** | 10:00am–12:05pm |
| **Language** | English |
| **Target groups** | Cell & Module Manufacturers, Component Manufacturers, Distributors, Equipment & Material Manufacturers, Installers & Integrators, Project Developers & Planners, R&D Companies, System Technology Manufacturers |

## Summary

The high efficiency and scalability of concentrating photovoltaics (CPV) have made it a fast-moving technology segment. As a result, CPV recently reached major milestones in the commercial deployment of distributed generation systems, becoming a key element in utility-scale contracts. In addition to technological advancements, this session also covers the market potential of concentrating solar technology.

| THURSDAY, JUNE 14, 2012 | |
|---|---|
| **10:00am** | Welcome and introduction |
| **10:05am** | Commercial breakthrough of concentrating photovoltaics<br>Hansjörg Lerchenmüller, Senior VP Customer Group and Managing Director of the Solar Energy Business Unit, Soitec, Germany |
| **10:35am** | CPV - The right choice for large scale solar<br>Fabio Mondini, Managing Director, Amonix Inc., Italy |
| **11:05am** | The ignition phase starts. HCPV ready for takeoff?<br>Dr. Karsten Heuser, CPV Business Manager, Siemens AG, Germany |
| **11:35am** | HCPV technology at ISOFOTON<br>Vicente Díaz, HCPV Business Unit, ISOFOTON, Spain |

# BUILDING INTEGRATED SOLUTIONS

| FACTS | |
|---|---|
| **Date** | Thursday, June 14, 2012 |
| **Room** | 14 A |
| **Time** | 1:30pm–3:35pm |
| **Language** | English |
| **Target groups** | Architects, Cell & Module Manufacturers, Component Manufacturers, Distributers, Equipment & Material Manufacturers, Installers & Integrators, Project Developers & Planners, System Technology Manufacturers |

## Summary

Today, an increasing number of architects, manufacturers, and installers are re-assessing building integrated solutions, largely due to significant cost reductions achieved during the last 1-2 years. Against this background, presentations given in this session highlight present building integrated technology trends and anticipate future developments.

| THURSDAY, JUNE 14, 2012 | |
|---|---|
| **1:30pm** | Welcome and introduction |
| **1:35pm** | Future prospects for roof-integrated photovoltaic (RIPV) – An empirical approach<br>Jens Milnikel, General Manager, Monier Technical Centre GmbH, Germany |
| **2:05pm** | Certification of building integrated PV products (BIPV)<br>Andreas Faißt, Business Development PV, TÜV SÜD Product Service GmbH, Germany |
| **2:35pm** | Special PV solutions for extraordinary buildings<br>Bart van Ouytsel, Solar Integrated Technologies GmbH, Germany |
| **3:05pm** | Radiative cooling using new hybrid PV/T collectors as an option for low energy cooling of buildings<br>Prof. Jan Cremers, Professor, University of Applied Sciences HFT Stuttgart, Germany |

## WORKSHOP PV-TRAINING: HIGH EFFIENCY SOLAR CELLS – CONCEPTS AND POTENTIALS

| FACTS | |
|---|---|
| **Date** | Thursday, June 14, 2012 |
| **Room** | 22 A |
| **Time** | 2:00pm–6:00pm |
| **Language** | English |
| **Partner** | PSE AG |
| **Target groups** | Participants with detailed knowledge of solar cell physics and common production technologies |

### Summary

With the intended increase of solar cell efficiency and by further decrease of the silicon substrate thickness new and innovative cell concepts gain even greater importance. Within this seminar, fundamental device patterns of typical high efficiency solar cell concepts, e.g. passivated and locally contacted rear side structures or the use of alternative silicon materials like n-type silicon are discussed. New concepts like PERC, PERL, MWT, EWT or IBC-BJ are introduced and compared in relation to their potential efficiency limits.

| THURSDAY, JUNE 14, 2012 | |
|---|---|
| **2:00pm** | High efficiency solar cells - Concepts and potentials<br>Dr. Ralf Preu, Department Head PV Production Technology and Quality Assurance, Fraunhofer Institute for Solar Energy Systems ISE, Germany |

## SOLARE HEIZKONZEPTE (TEIL 1–3)

| FACTS | |
|---|---|
| **Datum** | Donnerstag, 14. Juni 2012 |
| **Raum** | 13 B |
| **Uhrzeit** | 10.00 Uhr–18.30 Uhr |
| **Sprache** | Deutsch/German |
| **Partner** | Sonnenhaus-Institut e.V. & DGS - Deutsche Gesellschaft für Sonnenenergie Landesverband Berlin Brandenburg e.V |
| **Zielgruppe** | Architekten, Energieberater, Energieagenturen, Industrieverbände, Installateure, Investoren, Projektentwickler und Planer, PV und ST Hersteller, Regierungsvertreter |

### Inhalt

Es ist offensichtlich, dass der Anteil der Solarenergie zur Wärmeversorgung von Gebäuden kontinuierlich zunehmen wird. In diesem Spannungsfeld stehen die Fragen, wie sich eine optimale Balance zwischen dem Einsatz von Solarthermie und Wärmedämmung darstellt und welchen Beitrag Solarstrom zur Heizwärmeversorgung in Zukunft leisten wird. Beide Fragestellungen werden in separaten Veranstaltungsblöcken behandelt und in einer abschließenden, gemeinsamen Podiumsdiskussion erörtert und bewertet.

| DONNERSTAG, 14. JUNI 2012 | |
|---|---|
| | **Solarthermie versus Wärmedämmung** |
| **10.00 Uhr** | Sonnenhaus - Energieplushaus – Ein Vergleich<br>Georg Dasch, Mitglied des Vorstands, Sonnenhaus-Institut e.V., Deutschland |
| **10.40 Uhr** | Effiziente Balance zwischen Dämmung und Solarthermie<br>Peter Rubeck, Geschäftsführer, Sonnenhaus-Institut e.V., Deutschland |
| **11.20 Uhr** | Das energieautarke Haus – Mit Speicherung von Sonnenwärme und Sonnenstrom<br>Prof. Timo Leukefeld, Mitglied des Vorstands, Sonnenhaus-Institut e.V., Deutschland |
| **12.00 Uhr** | **Mittagspause** |

## DONNERSTAG, 14. JUNI 2012

**Solarthermie versus Solarstrom**

**13.15 Uhr** Einführung
Dr. Uwe Hartmann, Geschäftsführer, DGS - Deutsche Gesellschaft für Sonnenenergie Landesverband Berlin Brandenburg e.V., Deutschland

**13.25 Uhr** Wärme für Wärme - Strom für Strom Der Fahrplan Solarwärme des BSW
Jörg Mayer, Geschäftsführer, BSW - Bundesverband Solarwirtschaft e.V., Deutschland

**13.55 Uhr** Die zukünftige Wärmeversorgung Deutschlands – Welche Rolle spielt EE Strom?
Dr. Rolf-Michael Lüking, Mitglied des Vorstands, Gesellschaft für Rationelle Energieverwendung, Deutschland

**14.25 Uhr** PV Strom im Überfluss – Wo geht die Reise hin?
Prof. Dr. Volker Quaschning, Professor, Hochschule für Technik und Wirtschaft – HTW Berlin, Deutschland

**14.55 Uhr** Solare Wärme für den Bestand-Was ist zu tun?
Prof. Timo Leukefeld, Mitglied des Vorstands, Sonnenhaus-Institut e.V., Germany

**15.30 Uhr** **Kaffeepause**

**15.55 Uhr** Der optimale Einsatz von Wärmepumpen in Deutschland
Karl-Heinz Stawiarski, Geschäftsführer, Bundesverband Wärmepumpe (BWP) e. V., Deutschland

**16.25 Uhr** Power to Gas: Stand der Entwicklung, Chance für dezentrale Konzepte, Kostenperspektiven
Prof. Dr. Michael Sterner, Universität Regensburg, Deutschland

**16.55 Uhr** Die Zukunft der Strom-Speichertechnologien
Dr. Matthias Leuthold, Wissenschaftlicher Mitarbeiter, RWTH Aachen, Deutschland

**17.30 Uhr** **Abschlussdiskussion**
Moderator: Dr. Detlef Könemann, Journalist, Deutschland

- Georg Dasch, Mitglied des Vorstands, Sonnenhaus-Institut e.V., Deutschland
- Helmut Jäger, Geschäftsführer, Solvis GmbH & Co.KG, Deutschland
- Dr. Rolf-Michael Lüking, Mitglied des Vorstands, Gesellschaft für Rationelle Energieverwendung, Deutschland
- Jörg Mayer, Geschäftsführer, BSW Solar – Bundesverband Solarwirtschaft e.V., Deutschland
- Prof. Dr. Volker Quaschning, Professor, Hochschule für Technik und Wirtschaft – HTW Berlin, Deutschland

# CSP MARKET PROSPECTS

**FACTS**

| | |
|---|---|
| **Date** | Thursday, June 14, 2012 |
| **Room** | 13 A |
| **Time** | 10:00am-12:00pm |
| **Language** | English |
| **Partner** | German Aerospace Center - DLR |
| **Target groups** | Architects, Collector Manufacturers, Energy Consultants, Installer, Manufacturers, Project Developers & Planners, Trade Associations |

## Summary

Concentrating solar power plants offer the option to deliver renewable electrical power in a cost effective way. Depending on the technology used, energy storage is an integral part of the overall system concept. According to studies performed by the International Energy Agency (IEA) a share of 12 % of the global electricity production in 2050 is expected to be generated by CSP plants. The market prospects for different regions and technologies will be presented and analyzed during this session, also taking into account supporting policies and incentive programs.

**THURSDAY, JUNE 14, 2012**

| | |
|---|---|
| **10:00am** | Welcome and introduction<br>Dr. Christoph Richter, Project Manager Solar Research Almería, DLR German Aerospace Center - Solar Research, Spain |
| **10:05am** | CSP market perspective<br>Dr. Luis Crespo, General Secretary of PROTERMOSOLAR and President of ESTELA, PROTERMOSOLAR, Spain |
| **10:35am** | R&D market perspective<br>Prof. Dr. Robert Pitz-Paal, Co-Director, German Aerospace Center DLR, Germany |
| **11:05am** | CSP in Australia<br>Mark Twidell, Executive Director, Mayfield West/Australian Solar Institute, Australia |

Joint Forces for solar @ Booth A1.236

Joint Forces for Solar Europe

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Intersolar Europe | Munich
June 14, 2012 | 4.00 - 6.00 pm | Innovation Exchange Area (B3.450)

- Intersolar North America | San Francisco, CA | July 11, 2012
- Orlando, FL | September 11 - 13, 2012
- New Jersey, NJ | November, 2012
- Intersolar China | Beijing, China | December 12 - 14, 2012

**★ Installers join for free ★**

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## WORKSHOP THERMISCHE SOLARANLAGEN (TEIL 2)

| FACTS | |
|---|---|
| **Datum** | Donnerstag, 14. Juni 2012 |
| **Raum** | 11 |
| **Uhrzeit** | 10.00 Uhr–13.00 Uhr |
| **Sprache** | Deutsch/German |
| **Partner** | Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart |
| **Zielgruppe** | Architekten, Bauherren, Energieberater, Fachhandwerker, Planer |

### Inhalt

Thermische Solaranlagen können einen erheblichen Beitrag zur Verringerung des Energieverbrauchs, zur Senkung der Energiekosten und zur Schonung unserer Ressourcen leisten.

Der zweitägige Workshop vermittelt praxisnah und auf verständliche Weise Wissen über die Funktionsweise, den Stand der Technik sowie die Auslegung, Planung und den Bau von thermischen Solaranlagen. Innovative Anwendungsmöglichkeiten der thermischen Solartechnik werden vorgestellt.

Beim zweiten Teil liegt der Fokus auf innovativen Anwendungsmöglichkeiten der thermischen Solartechnik. Die Konzepte und Möglichkeiten der solaren Gebäudebeheizung mit hohen solaren Deckungsanteilen werden vorgestellt. Weitere Thermenschwerpunkte sind die Kombination von Solaranlagen und elektrisch betriebener Wärmepumpen sowie die solare Kühlung bzw. Klimatisierung. Eine Einführung in die solar unterstützten Nahwärmeversorgung rundet das Vortragsprogramm ab.

Jeder Teilnehmer erhält schriftliches Begleitmaterial mit den wichtigsten Inhalten des Workshops.

## DONNERSTAG, 14. JUNI 2012

| | |
|---|---|
| **10.00 Uhr** | Einführung<br>Dr. Henner Kerskes, Gruppenleiter Forschung TZS, Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |
| **10.15 Uhr** | Solare Kombianlagen für Gebäude mit hohen solaren Deckungsanteilen und innovativen Speicherkonzepten<br>Dr.-Ing. Harald Drück, Leiter Forschungs- und Testzentrum für Solaranlagen (TZS), Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |
| **11.00 Uhr** | Solarthermie und Wärmepumpe – Eine Heiztechnologie der Zukunft?<br>Dr. Anja Loose, Wissenschaftliche Mitarbeiterin, Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |
| **11.30 Uhr** | **Kaffeepause** |
| **11.45 Uhr** | Solare Klimatisierung – Grundlagen und realisierte Anlagen<br>Björn Ehrismann, Wissenschaftlicher Mitarbeiter, Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |
| **12.20 Uhr** | Solarunterstützte Nahwärme-Versorgung mit saisonaler Wärmespeicherung<br>Roman Marx, Institut für Thermodynamik und Wärmetechnik (ITW), Universität Stuttgart, Deutschland |

## CSP-TECHNOLOGY UPDATE

**FACTS**

| | |
|---|---|
| **Date** | Thursday, June 14, 2012 |
| **Room** | 13 A |
| **Time** | 1:30pm–3:30pm |
| **Language** | English |
| **Partner** | German Aerospace Center - DLR |
| **Target groups** | Architects, Collector Manufacturers, Energy Consultants, Installer, Manufacturers, Project Developers & Planners, Trade Associations |

### Summary

This session will highlight recent developments in core CSP technology areas like Parabolic Trough, tower technology and storage system development. Latest developments on component level will be presented and innovative system concepts will be introduced.

**THURSDAY, JUNE 14, 2012**

| | |
|---|---|
| **1:30pm** | Welcome and introduction<br>Dr. Christoph Richter, Project Manager Solar Research Almería, DLR German Aerospace Center - Solar Research, Spain |
| **1:35pm** | Hybrid-Plant<br>Dr. Shmuel Fledl, Chief Execucitive Officer Solar Thermal Energy Business Unit, Siemens AG, Israel |
| **2:05pm** | Thermal energy storage technologies for CSP plants<br>Doerte Laing, Head of Department Thermal Process Technology, DLR German Aerospace Center - Solar Research, Germany |
| **2:35pm** | Parabolic trough technology<br>Paul Nava, Manager Business Development, FLABEG Holding GmbH, Germany |

## CSP-OPERATIONAL EXPERIENCE

**FACTS**

| | |
|---|---|
| **Date** | Thursday, June 14, 2012 |
| **Room** | 13 A |
| **Time** | 4:00pm–6:00pm |
| **Language** | English |
| **Partner** | German Aerospace Center - DLR |
| **Target groups** | Architects, Collector Manufacturers, Energy Consultants, Installer, Manufacturers, Project Developers & Planners, Trade Associations |

### Summary

During the last few years several solar thermal power plants have started operation predominantly in Spain, but also in other countries. The experience gained during the construction, start-up and operation of selected plants will be presented. Furthermore, strategies for the establishment and technology of future systems will be discussed.

**THURSDAY, JUNE 14, 2012**

| | |
|---|---|
| **4:00pm** | Welcome and introduction<br>Dr. Christoph Richter, Project Manager Solar Research Almería, DLR German Aerospace Center - Solar Research, Spain |
| **4:05pm** | Commercial CSP plants based on fresnel collector technology<br>Martin Selig, Founder and Board Member for Market & Product Development, Novatec Solar GmbH, Germany |
| **4:35pm** | BrigthSource Ivanpah 392 MW Tower CSP and its validation steps<br>Yoel Gilon, Senior Vice President, BrightSource Energy, Israel |
| **5:05pm** | Experience in operation of parabolic through plants in Spain<br>José Manuel Nieto, Thermoelectric Business Manager, ACCIONA Energía S.A., Spain |

## INTERSOLAR EUROPE CONFERENCE SIDE EVENTS

### Tuesday, June 12, 2012

- Destination India: Investment Opportunities for Solar Energy in India,
  ICM Room 3,
  Federation of Indian Chambers of Commerce and Industry

### Wednesday, June 13, 2012

- German Solar Investment: Reconfiguring along the value chain for global success,
  ICM Room 2,
  Deloitte
- Indo-German Standardization Expert Dialogue I: Photovoltaics,
  ICM Room 3,
  Physikalisch-Technische Bundesanstalt
- SEMI International Standards Meetings,
  ICM Room 21A/B,
  SEMI PV Group
- Sino-German Workshop on PV Industry,
  ICM Room 12,
  Chinese Renewable Energy Industries Association
- Solar Investment Forum,
  ICM Room 4,
  Green Power Conferences

### Thursday, June 14, 2012

- 50.2 Hertz Nachrüstung von Photovoltaikanlagen,
  ICM Room 4,
  German Solar Industry Association (BSW-Solar)
- A clean energy future for Australia-the role of PV and CSP,
  Hall B2, Room B21,
  Australian Trade Commission

- Indo-German Standardization Expert Dialogue II: Solar thermal,
  ICM Room 3,
  Physikalisch-Technische Bundesanstalt
- Prospects of success for German PV technology in North Africa,
  ICM Room 5,
  Solarvalley Mitteldeutschland e.V., EESA
- Workshop on analytical test methods for PV materials
  (feedstock, ingot, wafer),
  ICM Room 21A,
  SEMI PV Group
- SEMI International Standards Meetings,
  ICM Room 21B,
  SEMI PV Group
- Solare Wärmeversorgungskonzepte für Kommunen
  und Wohngebiete,
  ICM Room 2,
  AGFW | Der Energieeffizienzverband für Wärme, Kälte und KWK e.V.
- Systemtransformation durch die Photovoltaik:
  deutsch-französische Perspektiven,
  ICM Room 4,
  Koordinierungsstelle Erneuerbare Energien in Partnerschaft
  mit dem Bundesverband Solarwirtschaft e.V.
- Women in Solar,
  Hall B1, Room B13,
  Jinko Solar

Registration for each Side Event is only possible via the respective organizers.

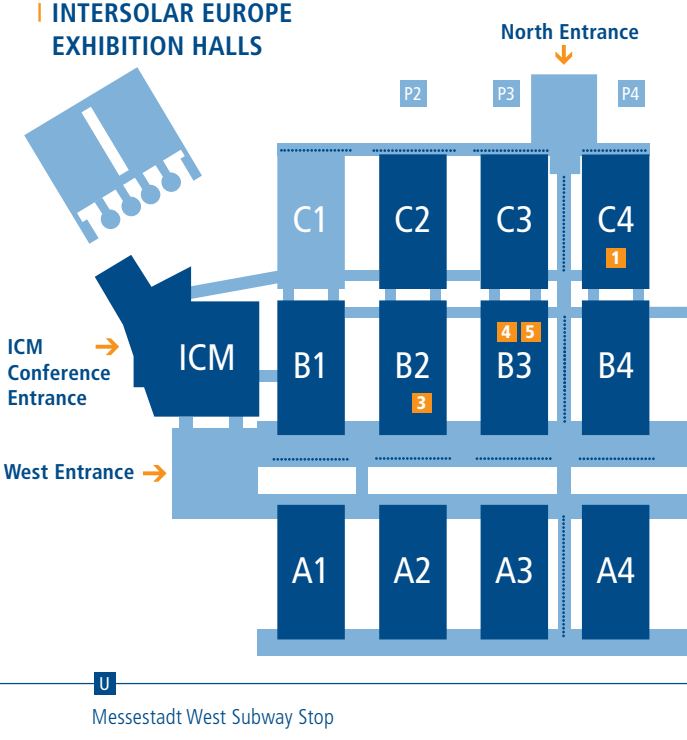
→ www.intersolar.de → Conference → Program → Side Events

## EXHIBITION QUICK FACTS

| | | |
|---|---|---|
| Dates | June 13–15, 2012 | |
| Venue | Messe München, 81823 Munich | |
| | Halls A1-A6, B1-B6, C2-C4 | |
| Hours | Wednesday, June 13, 2012 | 9:00am–6:00pm |
| | Thursday, June 14, 2012 | 9:00am–6:00pm |
| | Friday, June 15, 2012 | 9:00am–5:00pm |
| Visitors | 80,000 | |
| Exhibitors | 2,000 | |
| Exhibition Space | 170,000 sqm | |
| Online Registration | Day Ticket | €19 |
| | Three-Day Ticket | €36 |
| On-site | Day Ticket | €29 |
| | Three-Day Ticket | €46 |
| | Registration opens at 8:00am | |


Location: Rovigo, Italy
System Size: 70 MW

## INTERSOLAR EUROPE EXHIBITION HALLS




**A1** PV Cells and Modules
**A2** PV Cells and Modules
**A3** PV Cells and Modules
**A4** PV Cells and Modules
**A5** PV Cells and Modules
PV Manufacturing Equipment
Materials and Components
**A6** PV Manufacturing Equipment
Materials and Components

**B1** Solar Thermal Technologies
**B2** Solar Thermal Technologies
PV Systems Technologies
PV Distributors
PV Products and Services
**B3** PV Systems Technologies
PV Distributors
PV Products and Services
PV Mounting Systems

1 PV ENERGY WORLD special exhibit

2 PV and E-Mobility special exhibit

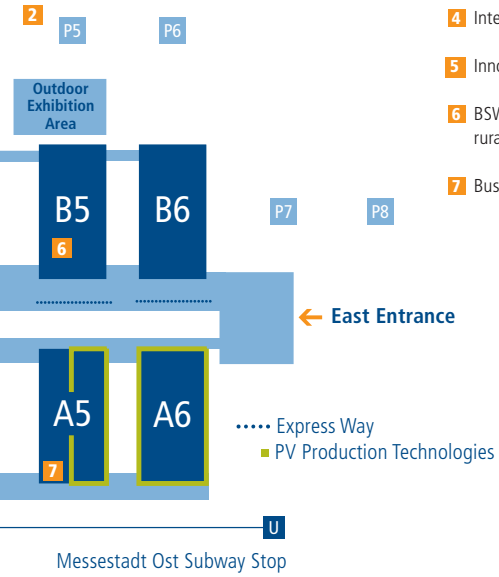
3 Job & Career Forum

4 Intersolar Global Pavilion

5 Innovation Exchange

6 BSW-Solar special exhibit rural electrification

7 Business Meeting Area




**B4** PV Systems Technologies
PV Distributors
PV Products and Services
**B5** PV Systems Technologies
PV Distributors
PV Products and Services
**B6** PV Systems Technologies
PV Distributors
PV Products and Services
PV Components
PV Installation Aids

**C2** Mounting Systems
Tracking Systems
**C3** Inverters
**C4** Inverters

## INNOVATION EXCHANGE

The hottest trends and innovations across the solar industry are in the spotlight at the Innovation Exchange in hall B3, booth B3.450. Here, Intersolar AWARD winners and nominees, along with other exhibitors, showcase their innovations in 15-minute presentations. Company experts are available afterwards to discuss their pioneering products and services with trade visitors and offer more information. SolarEdge Technologies Inc. from Hod Hasharon, Israel is sponsoring this year's Innovation Exchange.

The Innovation Exchange program is available at:
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**Intersolar Europe, Innovation Exchange**
**Hall B3, booth B3.450**

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