

Press Release

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Solar electricity from large power plants: Concentrating photovoltaics ready for take off

International conference was a success!

Around 400 scientists and company representatives from 32 countries met in Freiburg from 7-9 April, 2010 for the sixth **International Conference on Concentrating Photovoltaic Systems – CPV-6**. "At this year's conference, the number of participants increased by more than 40 percent. The industry, represented by 20 companies, also showed a strong presence. We view this as a huge success and milestone for the market entry of this industry," says a pleased Dr. Andreas Bett, Scientific Head of the Conference and Deputy Director of Fraunhofer ISE.

The international conference audience exchanged ideas about state-of-the-art research and production as well as the execution of CPV solar power plant technology. Solar power plants play a key role in the mix of renewable energy, especially in sun-rich countries with a large amount of direct sunlight. Concentrating photovoltaics, in which sunlight is concentrated onto a highly efficient solar cell, is one of the leading technologies today. Several megawatts of this technology executed in different variations have already been installed in Spain, thus the threshold to industrial manufacturing has been crossed. Information covering the entire added value chain of the technology was presented at the **CPV-6**: from the cell and module development through to optics and tracking and up to the costs, market development and quality standards.

The Conference highlights included the presentation of numerous successful results. Among these was a measured AC system efficiency of over 25 percent. The AC efficiency is the efficiency at which the electricity is fed into the grid

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(after the conversion of the solar direct current into the alternating current required by the grid). Worldwide a production capacity of more than 50 MW concentrating photovoltaic systems exists. First operation results over the course of the last two years were presented as well as various test results showing system reliability.

Over the past eight years, the direction of the International Conference on Concentrating Photovoltaic Systems has alternated between different international research institutes. This year's conference was hosted by the Fraunhofer Institute for Solar Energy Systems ISE in Freiburg.

For more than 20 years, researchers at Fraunhofer ISE have been working on the development of highly efficient solar cells based on III-V semiconductors. With 41.1 percent, the team of Andreas Bett and Frank Dimroth achieved a world record efficiency for concentrator solar cells at the beginning of 2009. At the photovoltaic conference PVSEC 2009 held in Hamburg, Andreas Bett received the Becquerel Prize, honouring him for his achievements in the field. Five years ago, the Fraunhofer ISE spin-off company Concentrix Solar was founded. Today the company operates a 25 MW production for concentrator systems in Freiburg and has built a first power plant in Spain.

The next CPV Conference is to take place in Las Vegas, Nevada USA from the 4 -7 April 2011. Further information can be found at: www.cpv-conference.org

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CPV-6 Conference: Panel discussion. ©Fraunhofer



Even more concentration: The Fraunhofer ISE works on increasing the efficiency of CPV modules using e.g. secondary optics. ©Fraunhofer ISE

CPV-6

6. International Conference on
Concentrating Photovoltaic Systems

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