

FRAUNHOFER INSTITUTE FOR SOLAR ENERGY SYSTEMS ISE

# PRESS RELEASE

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## Professor Adolf Goetzberger Turns 90: Pioneer of the Energy Transformation and Founder of Fraunhofer ISE

"I have always been interested in problems that were thought to be unsolvable." This quote stemming from Prof. Dr. Adolf Goetzberger stands both for his scientific career as well as for his unwavering conviction as founder of Fraunhofer ISE, which he launched and led to success. Goetzberger not only advanced photovoltaic technology, a key pillar of a sustainable future energy system, but from the beginning on also incorporated research on the systemic aspects of the energy transformation at the institute, already perceiving the importance.

Seeing solar energy as a viable alternative to fossil fuels, Prof. Goetzberger began working on this vision at the end of the 70's. In 1981 he successfully founded the Fraunhofer Institute for Solar Energy Systems ISE in Freiburg despite the difficult conditions. Today with over 1200 employees, Fraunhofer ISE is the largest institute for solar energy research in Europe.

"Adolf Goetzberger not only recognized early on that solar energy would be the most important energy source, but also that it is important to consider and work on the energy system as a whole. That is exactly what we are doing today at the institute with respect to the energy transformation," says Prof. Dr. Hans-Martin Henning, director of Fraunhofer ISE. Also, Dr. Andreas Bett, director of Fraunhofer ISE together with Henning as part of the dual leadership position, adds: "Without Adolf Goetzberger and the consequent path he followed despite encountering resistance, we wouldn't be where we are today in the field of photovoltaic research. We share his happiness that he can experience the worldwide photovoltaic boom today, not least as the fruition of his lifetime achievements."

Adolf Goetzberger dedicated the first 25 years of his professional life to semiconductor technology and electronic devices. During the pioneering period of microelectronics, he worked at the most renowned research centers in the US: five years in Palo Alto, California with Nobel Prize winner and co-inventor of the transistor, William Shockley, and another five years at Bell Laboratories in Murray Hill, New Jersey. In 1968, the Fraunhofer-Gesellschaft brought him back to Germany. Before founding Fraunhofer ISE, Adolf Goetzberger was director of the Fraunhofer Institute for Applied Solid State Physics IAF in Freiburg. In 1971, the University of Freiburg appointed him honorary professor in the Faculty of Physics. During his active working life, he supervised many degree candidates and doctoral students.



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By the time Prof. Goetzberger retired in 1993, bowing out of his role as director of Fraunhofer ISE, the institute had grown from just under 20 employees into the world's second largest solar research institute, after the National Renewable Energy Laboratory in the USA. The institute has continued to thrive under his successors Prof. Joachim Luther, from 1993 to 2006, and Prof. Eicke R. Weber, since 2006. With more than 1,200 employees at present, the institute is not only the second largest solar research institute in the world, but also the second largest institute within the Fraunhofer-Gesellschaft.

In addition to his work at Fraunhofer ISE, Prof. Goetzberger has rendered outstanding services to important solar energy organizations. From 1991 to 1993, he was president of the International Solar Energy Society ISES, and between 1993 and 1997, president of the German Solar Energy Society DGS. He also played a considerable role in shaping and supporting conferences and symposiums – such as the symposiums in Bad Staffelstein on photovoltaic solar energy and solar thermal energy. In 2009, the organizers of the OTTI Symposium on solar thermal energy awarded the Spirit of Energy prize to Prof. Dr. Adolf Goetzberger, the OTTI's honorary president, for his unwavering commitment – he shared the prize with the ISE's Deputy Director at the time, Prof. Dr. Volker Wittwer. Goetzberger still calls for the tighter integration of solar heat into the energy policy today. Adolf Goetzberger is a fellow of the IEEE (Institute for Electrical and Electronic Engineers). His commitment also involves supporting international photovoltaics conferences held by the European Commission, for whom he acted as chairman in Seville in 1998. He remained there as part of the Scientific Committee for many years, and is still a member of the Becquerel Prize jury today.

Prof. Goetzberger's dedication extends far beyond science. Providing objective information to political and economic institutes has always been his mission. As a member of the EU high-level advisory council in 2004, he helped devise the PV-TRAC vision report for 2030. He was a member of the scientific advisory board of the Instituto de Energía Solar at the Universidad Politécnica de Madrid, as well as the Spanish Institute for Concentration Photovoltaics Systems ISFOC.

Today Adolf Goetzberger still follows the work at Fraunhofer ISE with great interest. Of late, he was particularly pleased about the successful implementation of the agrophotovoltaic plant installed in Heggelbach near Lake Constance. The concept behind this project is based on an idea that he had very early on. Fraunhofer ISE wholeheartedly wishes its founder a very happy 90th birthday and continued enjoyment on the fruits of his labor.

## **Prizes and Awards**

Adolf Goetzberger's outstanding services to the future of solar energy supply have been honored in many different ways:

In 1983, Adolf Goetzberger became the first German to receive the J.J. Ebers Award from the American IEEE Electron Devices Society for his exceptional technological

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achievements in the field of electronic components. In 1989, he received the Medal of Merit from the state of Baden-Württemberg and in 1992 he was awarded the Federal Cross of Merit 1st class. In August 1993, he received the Achievement through Action Award from the ISES. 1995 saw Adolf Goetzberger receive an honorary degree from Uppsala University as well as the Farrington Daniels Award from the ISES. He was awarded the Karl Böer Medal of Merit in 1997. During the same year, he also received the Becquerel Prize and the William R. Cherry Award. In September 2006, SolarWorld AG awarded him the Einstein Award 2006 for his life's work, his extensive scientific achievements as well as for founding the Fraunhofer ISE. EUROSOLAR honored his achievements in December 2006 with the European Solar Prize. In 2009, the European Patent Office accorded Adolf Goetzberger the title "European Inventor of the Year" for his life's work, celebrating his contribution to the commercial use of solar energy, which paved the way to establishing solar cells as a convincing alternative to fossil fuels.

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Up to today, Prof. Adolf Goetzberger can be seen at events on the energy transformation. The photo shows him at a Fraunhofer ISE event in the Freiburg Konzerthaus. ©Fraunhofer ISE

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