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### An ideal Fraunhofer Researcher

### Volker Wittwer – Deputy Director of Fraunhofer ISE and Founding Member turns 65

Prof. Dr. Volker Wittwer, deputy director of the Fraunhofer Institute for Solar Energy Systems ISE and supernumerary professor at the University of Freiburg, Germany celebrated his 65<sup>th</sup> birthday on June 25, 2009. Following German civil service regulations, he retires from his position at the Institute at the end of June. On Friday June 26<sup>th</sup>, Fraunhofer ISE held a celebration in his honour. With the leaving of Volker Wittwer, Fraunhofer ISE loses a founding member, who has greatly contributed in shaping the Institute from its very beginning in 1981. Already before the founding of ISE, which today has 880 employees and is Europe's largest solar research institute, he worked alongside Prof. Dr. Adolf Goetzberger on solar technology developments. Numerous personalities from, for example, the Fraunhofer Gesellschaft, the EU Platform Solar Thermal, the German Federal Ministry for Economics and Technology, the City of Freiburg and the Albert-Ludwig University of Freiburg, congratulated him on his successful scientific career.

One particular highlight among the many of Volker Wittwer's scientific achievements is his leadership in the area of solar thermal energy as well as in energy efficient and solar buildings over the many years. For over 24 years, he was head of this department at Fraunhofer ISE. Prof. Dr. Eicke R. Weber says, "The excellent scientific networking of Fraunhofer ISE in the European and international context is, to a large extent, due to Wittwer's activities in this area. Therefore, we are extremely happy that Prof. Wittwer will act as a consultant for the Institute in the future."

Since 1997, Volker Wittwer served as Deputy Director of Fraunhofer ISE, first in parallel to being Department Head and then exclusively in the last years. He carried out this

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function first under Joachim Luther for ten years until 2006 when Luther handed over his position as Institute Director to Eicke Weber. In the words of Joachim Luther, Volker Wittwer is "the ideal personification of a very successful Fraunhofer researcher. Throughout his Fraunhofer career he consistently thought about both science and innovation, and by always keeping sight of concrete applications, he brought science and innovation together in a perfect way."

In 1974, Volker Wittwer graduated with a Ph.D. in solid state physics from the Technical University of Munich. Directly following, he began his Fraunhofer career as a staff scientist at the Fraunhofer Institute for Applied Solid State Physics (IAF) in Freiburg. Under the direction of Adolf Goetzberger, he became head of the Fluorescent Collector Group in 1979. This technology for concentrating sunlight is experiencing a considerable rebirth today due to the progress in the field of nanoparticles. "FLUKO", the name used by insiders, was a technological idea that led to the founding of Fraunhofer ISE. "Prof. Wittwer was directly involved in the strategic preparation for the founding of Fraunhofer ISE," remembers Adolf Goetzberger. Already in the founding year of 1981, Wittwer became department head of an area, later to be entitled "Thermal and Optical Systems." At that time, he concentrated his research especially on the transparent insulation material (TIM) which, due to its optical transparence, leads to a solar energy gain on the inner wall behind the installed insulation. First industrial pilot products are installed on Wittwer's as well as Goetzberger's homes.

In 1993 through the University of Oldenburg, the habilitation treatise on the theme "Materials for the solar energy conversion – selective and spatially selective structures" followed. This topic characterized the further, ever-widening field of work of Volker Wittwer: materials, components and systems for intelligent conversion of solar radiation. In the course of the following years, these topics are among some of the many to be counted: spectrally selective absorber coatings for thermal solar collectors and thermal solar power

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stations, electro-optical and thermal-optical switches for controlling light transmission of components (windows, collectors), interference lithography for mechanical structuring of optical surfaces and Sol-Gel coatings of optical surfaces with the goal of antireflection coatings for solar systems as well as other functional surfaces. Many of the technologies worked on by Wittwer have been transferred to industrial processing level and have been realized on the pilot scale, in part by spin-off companies of Fraunhofer ISE. He decisively contributed to many demonstration systems which have achieved widespread recognition, including the Villa Tannheim, the Self-Sufficient Solar House and the new Institute Building of the Fraunhofer ISE.

In 2001, the call as professor was transferred from Oldenburg to Freiburg, where Volker Wittwer lectures as supernumerary professor since 2006. He has supervised many excellent diploma and doctoral theses and is author of many excellent publications and lectures. He received international recognition through his appointments on the editorial teams of two of the most renowned journals in the field of solar energy: "Solar Energy" and "Solar Energy Materials and Solar Cells."

In 2006 Prof. Wittwer was awarded the "Solar Heating and Cooling Award" of the International Energy Agency (IEA). In May 2009, together with Prof. Goetzberger, he was bestowed with the "Spirit of Energy" prize on the occasion of the 19<sup>th</sup> OTTI Symposium "Thermische Solarenergie." In 1991 both Wittwer and Goetzberger initiated the solar thermal energy forum in the OTTI Symposium series and continued to develop it further in the following years. Fraunhofer ISE extends the best of wishes to its outgoing Deputy Director and looks forward to the future cooperation already planned.

#### Information material:

Fraunhofer ISE, Presse und Public Relations

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Prof. Dr. Eicke R. Weber (left) and Prof. Dr. Volker Wittwer, celebrating Prof. Wittwer's 65<sup>th</sup> birthday. Source: Fraunhofer ISE

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