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Prestigious award by the Bayer Science & Education Foundation:
Hansen Family Award for 2011 goes to Professor Stefan W. Hell

Researcher at the Max Planck Institute for Biophysical Chemistry in Göttingen and the German Cancer Research Center in Heidelberg honored for his work in the field of light microscopy

The winner of the 2011 Hansen Family Award has been decided. The Board of Trustees of the Bayer Science & Education Foundation and the Scientific Committee for this award have presented Professor Stefan W. Hell with the EUR 75,000 prize, which is one of Germany's most prestigious scientific accolades. His breakthroughs in the field of light microscopy provide insights into living cells and tissue that until recently would have been inconceivable. The discoveries made by Professor Hell, who conducts research work at the Max Planck Institute for Biophysical Chemistry in Göttingen and the German Cancer Research Center in Heidelberg, led to a new class of light microscopes that can probe far deeper into the molecular scale of life. The Hansen Family Award is regarded as one of the most prestigious and coveted prizes for natural scientists in Germany. The award will be officially presented by Chairman of the Board of Management of Bayer AG Dr. Marijn Dekkers at a ceremony in Berlin on March 15, 2011.

The Hansen Family Award honors scientists who have made pioneering research contributions in innovative fields of biology and medicine. It has been presented since 2000 in memory of its endower Professor Kurt Hansen. The late former Chairman of the Board of Management and the Supervisory Board of Bayer AG established the award in 1999 out of "gratitude for a fulfilled life as a natural scientist and business manager".

With his invention and development of Stimulated Emission Depletion (STED) microscopy, Hell revolutionized fluorescence microscopy, which plays a key role in biology and fundamental medical research today. The 47-year-old physicist was the first person to find a way of radically overcoming the light microscope's resolution barrier of 200 nanometers as established by Ernst Abbe in 1873. STED microscopy and related processes now enable up to 10 times greater detail in cells, something that was previously deemed impossible. For the first time, structures much finer than 200 nanometers can now be viewed in living cells or tissue. This provides a better understanding of cellular mechanisms and makes it easier to identify the causes of illnesses and diseases.

According to Professor Ernst-Ludwig Winnacker, Secretary General of the Human Frontier Science Program Organization and Chairman of the foundation's Board of Trustees, "Stefan Hell did not allow himself to be deterred by Abbe's resolution barrier, which was widely established in text books. He demonstrated that the fluorescence microscope's resolution can break the diffraction-limited barrier and thus be increased to fractions of the light wavelength. Due to his outstanding scientific work, which may find broad application above all in life sciences, Professor Hell is especially deserving of this prestigious award."

"Germany's future will be shaped by advances in fundamental and industrial research. We want to promote research and strengthen excellence, especially in Germany," said Dr. Wolfgang Plischke, member of the Board of Management of Bayer AG responsible for Innovation, Technology and Environment, and member of the Board of Directors of the foundation. "Research plays a central role for the inventor company Bayer. Knowledge, acceptance and application of technologies of the future are key social framework conditions

to which Bayer AG wants to contribute, including through its foundations and the presentation of this award," he continued.

The prize is awarded by the Bayer Science & Education Foundation. The primary objectives of the foundation are the recognition of outstanding research achievements, the promotion of talented scientists and support for significant school projects of a scientific nature. In terms of content, the sponsorship activities focus on natural science and medicine. The foundation honors outstanding research achievements every two years with the Hansen Family Award and in the off years with the Otto Bayer Award, each of which carries a purse of EUR 75,000. In 2008, the foundation established a third scientific prize – the EUR 50,000 Bayer Climate Award. This prize, which is unique worldwide, honors outstanding achievements in the interdisciplinary area of climate and climate impact research.

The future Hansen Family Award winner Professor Stefan W. Hell studied physics in Heidelberg and obtained his doctorate under Professor Hunklinger in 1990. This was followed by a postdoctoral period at the European Molecular Biology Laboratory (EMBL) in Heidelberg and a three-and-a-half-year period at Turku University in Finland and Oxford University in the United Kingdom. In 1996, Hell qualified as a professor of physics at Heidelberg University. Until 2002, he was in charge of an independent research group at the Max Planck Institute for Biophysical Chemistry in Göttingen. In 2002, he was appointed a director of the institute and took charge of the Department of NanoBiophotonics. Since 2003, Hell has also been head of the Department of Optical Nanoscopy at the German Cancer Research Center and adjunct professor of physics at Heidelberg University. Since 2004, he has lectured at the University of Göttingen as honorary professor of experimental physics.

Hell's other accolades include the "Deutscher Zukunftspreis" (German Future Prize) for innovation and technology awarded by the German President (2006), the Gottfried Wilhelm Leibniz Prize from the German Research Foundation (2008) and the Otto Hahn Award for physics (2009).

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