

Retirement Prof. Hans-Werner Fink

Hans-Werner Fink was born in 1952 in Salzgitter-Bad, Niedersachsen. He studied physics, mathematics and chemistry at the Technical University of Clausthal where he obtained his diploma in physics in 1979. His thesis was awarded with the E.W. Mueller “Outstanding Young Scientist Award” for the studies on long range interaction between adatom pairs. Three years later Hans-Werner got his PhD from the Technical University of Munich for his studies of the “Atomistics of Monolayer Formation” that he performed in the group of Gert Ehrlich at the University of Illinois at Urbana-Champaign. His engagement concerning the understanding of the interaction of individual atoms on metal surfaces represents an important contribution to the foundation of the field of physics on the nanometer scale. In fact, Hans-Werner was awarded with the Max Auwärter price in 1983 for the discovery of non-pair wise trio interaction.



In 1984 Hans-Werner joined the IBM Zurich Research Laboratory in Rüschlikon – just at the times of the upgrowth of the nobel years. Here he started to develop the Low Energy Electron Point Source (LEEPS) microscope - a novel type of electron microscope based on the principle of inline holography. In the course of these activities he received the IBM Outstanding Innovation Award for the invention of a coherent electron source.

Of great impact certainly was also his work concerning DNA molecules, that Hans-Werner carried out in the later nineteen nineties, when he was a visiting professor at the Physics Institute of the University of Basel. Applying the LEEPS microscope to measure the conductivity of free-standing DNA ropes not only provided insight into a pivotal and highly debated question in life science but also demonstrated the versatility of his new instrument.

In September 1999 Hans-Werner became a professor here at the Physics Institute of the University of Zurich where he eventually moved into newly built and specifically designed laboratory premises to establish a new branch of research involving the novel LEEPS technology. Along the lines of his research he introduced the lecture “Physik auf der Nanometerskala” and made it an inherent part of the lecture calendar.

Over the past two decades he persistently advanced his research with a small team of coworkers making fundamental contributions to the field of coherent optics concerning all, experimental, theoretical as well as computational aspects. Owing to his analytic expertise, intuition and ingenuity Hans-Werner successfully refined the LEEPS technology to become a unique tool for structural analysis of individual proteins. Still, his activities have always been accompanied by little divergent and playful projects.

As a subtle experimentalist he still spends a lot of time in the laboratory to further research with his agile and vigilant spirit. It is hence no surprise that he is going to proceed in a non-strictly academic environment to enhance the LEEPS technology for the purpose of routine pharmaceutical analysis and the in-situ study of chemical bonding among individual ligands.

We thank him for all his valuable achievements and wish him all the best for his plentiful future plans!