



Peter E. Toschek (1933-2020)

Peter E. Toschek was a pioneer in atomic & molecular physics and was a Professor of Physics at the University of Hamburg in Germany. He was born in Hindenburg, Oberschlesien, graduated from Bonn University under Wolfgang Pauli. He initiated a research team at Heidelberg University in 1963 that was involved in laser spectroscopy and quantum optics, in particular on the development of Doppler-free laser spectroscopy, the generation of optical solitons, and on laser intracavity spectroscopy.

Peter was a PhD thesis adviser to Theodor Hänsch, who graduated 1969 with work on the introduction of laser saturation spectroscopy and electromagnetically induced transparency (EIT). In 1978 Toschek and his coworkers demonstrated laser cooling, and 1980 the preparation of an individual trapped and cooled ion. In 1981, he became a professor of physics at the University of Hamburg. In 1986 he and his team experimentally demonstrated the existence of Bohr's "quantum jumps". In 2000 they proved the "Quantum Zeno Paradox".

He was on sabbatical leave at Stanford University (1972), Laboratoire Aimé Cotton, Orsay (1978/79), and as a Fellow at the Joint Institute for Laboratory Astrophysics, University of Colorado, Boulder (1986/87).

Peter was a Fellow of the Optical Society of America and previously served as co-editor of "Optics Communications" (1980-1990). He received Robert Wichard Pohl Prize of the German Physical Society (DPG) awarded (1990). He was a member of the Akademie der Wissenschaften in Hamburg (1994), and received Herbert Walther Prize from Optical Society of America (2015) for his pioneering experiments to laser cooling and trapping of single ions, his contributions to the understanding of principles of laser spectroscopy as well as of atomic physics.