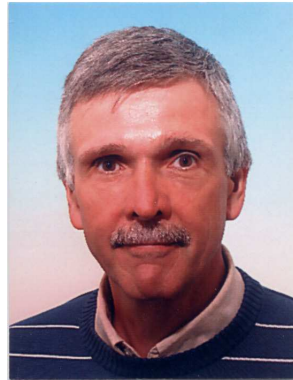


Prof. Dr. Fritz Henneberger

Humboldt-Universität zu Berlin
Institut für Physik
Photonik
Newtonstrasse 15
12489 Berlin

phone: +49 30 2093 7670
fax: +49 30 2093 7886
e-mail: fh@physik.hu-berlin.de



Scientific Career

Diploma in Physics	1975 Humboldt-Universität zu Berlin
Dr. rer. nat.	1980 Humboldt-Universität zu Berlin (Subject: Optical properties of excitonic molecules)
Senior Scientist	1980-81 Ioffe-Institute, Leningrad (USSR)
Research Assistant	1983-1989 Humboldt University zu Berlin
Habilitation	1988 (Subject: Optical nonlinearity and bistability of semiconductors)
Lecturer	1989-1993 Humboldt-Universität zu Berlin
Full Professor (C4)	since 1993 Humboldt-Universität zu Berlin

Major Research Areas

Photonic properties of semiconductor nanostructures, molecular beam epitaxy, semiconductor spintronics, novel semiconductor lasers, organic/inorganic hybrid structures

Publications: ca. 190, **Patents:** 7

Books

- Optics of semiconductor nanostructures, Eds. F. Henneberger, S. Schmitt-Rink, and E. O. Göbel, Akademie-Verlag Berlin, 1993
- Semiconductor quantum bits, Eds. F. Henneberger and O. Benson, Pan Stanford Publishing, 2009

Review Articles/Book Chapters

- Optical bistability at the fundamental absorption edge of semiconductors, *phys. stat. sol. (b)* 137, 371 (1986)
- Visible-bandgap II-VI quantum dot heterostructures, in: *Semiconductor nanostructures*, Ed. D. Bimberg, Springer, 2008, Chapter 12 (p. 237)
- Noninvasive chaos control of semiconductor lasers by delayed optical feedback, in: *Handbook of chaos control*, Eds. E. Schöll and H. G. Schuster, Wiley, 2008, Chapter 21 (p. 455)
- Electronic coupling of optical excitations in organic/inorganic semiconductor hybrid structures, *New J. Phys.* 10, 065010 (2008)

- ZnCdO/ZnO – a new heterosystem for green-wavelength semiconductor lasing, *Laser & Photon. Rev.* 3, 233 (2009)
- Diluted magnetic quantum dots, in: *Introduction to the physics of diluted magnetic semiconductors*, Eds. J. Kossut and J. Gaj, Springer, 2010, Chapter 5 (p. 161)
- Noninvasive optical control of complex semiconductor laser dynamics, in: *Analysis and control of deterministic and stochastic complexity*, Eds. L. Schimansky-Geier et al., *Europ. Phys. J.* 191, 71 (2010)

Participation at Collaborative Research Centers

- SFB 296: Growth correlated properties of low-dimensional semiconductor structures, 1995-2006, project B4: Molecular beam epitaxy and properties of ferromagnetic nanostructures based on ZnO
- SFB 448: Mesoscopically structured composite systems, 2004-2009, project C4: Organic-inorganic semiconductor nanostructures: Investigation of energy transfer processes and nonlinear optical properties
- SFB 555: Complex nonlinear processes, 2001-2010, project A6: Self-organization, coherence, and chaos control in coupled semiconductor lasers
- SFB 951: Hybrid Inorganic/Organic Systems for Opto-Electronics, begin 2011, project A5: All-epitaxial inorganic/organic hybrid semiconductor nanostructures

Further Cooperative Research Activities

- Priority program: II-VI semiconductor structures - physical foundations and opto-electronic applications, 1992-1996, project: Electro-optical elements for the blue spectral range based on ZnSe quantum structures
- Priority program: Ultrafast dynamics of optical excitation in semiconductors, 1991-1993, project: Dynamics of the electronic excitation in II-VI semiconductor microstructures
- Priority program: Quantum coherence in semiconductors, 1995-2001, project: Coherence of zero-dimensional elementary excitations in II-VI quantum dots
- Graduate School 1025: Fundamentals and functionality of size and interface controlled materials: Spin and opto-electronics, 2004-2008, project: Ferromagnet-semiconductor hybrid structures - growth and functionality
- Priority program 1133: Ultrafast magnetization processes, 2002-2008, project: Dynamical properties of nanostructured ferromagnet – diluted magnetic semiconductor hybrids
- Priority program 1285: Semiconductor spintronics, 2009-2013, project: Electron-nuclear spin manipulation by electrical currents

Activities in the scientific community, honours, awards:

- 1995-2000 Senate of the Deutsche Forschungsgemeinschaft, Council for Excellence Centres
- Director of the Physics Department, Humboldt-Universität zu Berlin (1993-1994, 2002-2006)
- Director of the Humboldt Centre of Modern Optics (since 2010)
- Spokesperson of the Collaborative Research Center (SFB) 951 (since 2011)
- Visiting Professor University of Arizona (1994-1995, 2009), Kyoto University (2001-2002), Korea University (2008)

- Humboldt Prize (1979), Heinrich-Hertz Award of the German Physical Society (1986)