

**Prof. Dr. rer. nat. Andreas Knorr**

Full Professor (W3)

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**Scientific Education**

Habilitation	1998: Habil. in theoretical physics at the Philipps-University Marburg, Mentor: Prof. Dr. S.W. Koch
Dissertation	1993: Ph.D. in physics at the Friedrich-Schiller-University Jena Thesis advisor: Prof. Dr. D. G. Welsch, Prof. Dr. W. Rudolph (University of New Mexico), Prof. Dr. S.W. Koch (Optical Sciences Center, Tucson)
Studies	1986 – 1990: Study of Physics (Diploma) at the Friedrich-Schiller-University Jena Thesis advisor: Prof. Dr. B. Wilhelmi, Prof. Dr. K. Süße

**Scientific Career**

Full Professor (W3)	Since 2000: Institute of Theoretical Physics, Technische Universität Berlin
Guest Professor	2006: Sandia National Labs, Albuquerque, USA 2005: NTT, Tokio, Japan 2003: University of Arizona
Research Assistant	1994-2000: Philipps-University Marburg, Department director: Prof. Dr. S. W. Koch
Postdoc	1993: Georg-August-University Göttingen, Department director: Prof. Dr. K. Schönhammer
Phd studies	1992: Optical Science Center, University of Arizona, USA 1991: Department of Physics, University of New Mexico, USA Supervisor: Prof. Dr. S.W. Koch, Prof. Dr. W. Rudolph

**Miscellaneous**

Referee for Nature, Physical Review Letters, Humboldt-Foundation etc.  
 Co-organizer of various International Workshops and Conferences

Since 2013: Divisional Associate Editor of Physical Review Letters  
 2013: Book *Graphene and Carbon Nanotubes*, E Malic, and A Knorr, John Wiley & Sons, 2013 (monograph, 330 pages)  
 Since 2011: Steering committee Collaborative Research Centers: *Hybrid Inorganic/Organic Systems; Control of nonlinear systems*  
 Since 2008: Chairman of School of Nanophotonics (TU Berlin)  
 Since 2007: Vice chairman Collaborative Research Center: Nanophotonics  
 2007: Outstanding referee award of the American Physical Society

2004 – 2012: Spokesman of the Physical Institutes at TU Berlin

2004 – 2006: Vice chairman Collaborative Research Center:  
Mesoscopic Semiconductors

1991 – 1992: Fellow of the Studienstiftung des Deutschen Volkes

Publication record      More than 300 publications and 10 book chapters

### **Selected Publications**

F. Wendler, A. Knorr, and E. Malic,  
*Carrier multiplication in graphene under Landau quantization*,  
Nature Communications **5** (2014) 3703.

A. Carmele, J. Kabuss, F. Schulze, S. Reitzenstein, and A. Knorr,  
*Single Photon delayed feedback: A Way to stabilize intrinsic quantum cavity electrodynamicics*,  
Phys. Rev. Lett. **110** (2013) 013601.

J. Kabuss, A. Carmele, T. Brandes, and A. Knorr,  
*Optically driven quantum dots as source of coherent cavity phonons: A proposal for a phonon laser scheme*,  
Rev. Lett. **109** (2012) 054301.

T. Winzer, A. Knorr, and E. Malic,  
*Carrier multiplication in graphene*,  
Nano Lett. **10** (2010) 4839.

M. Richter, A. Carmele, A. Sitek, and A. Knorr,  
*Few-photons model of optical emission of semiconductor quantum dots*,  
Phys. Rev. Lett. **103** (2009) 087407.

J. Förstner, C. Weber, J. Danckwerts, and A. Knorr,  
*Phonon-assisted damping of Rabi-oscillations in semiconductor quantum dots*,  
Phys. Rev. Lett. **91** (2003) 127401.

S. Ramakrishna, F. Willig, V. May, and A. Knorr,  
*Femtosecond spectroscopy of heterogeneous electron transfer*,  
J. Phys. Chem. B **107** (2003) 607.

M. Hübner, J. Kuhl, T. Stroucken, A. Knorr, S. W. Koch, R. Hey, and K. Ploog,  
*Collective effects on excitons in multiple-quantum-well Bragg and anti-Bragg structures*,  
Phys. Rev. Lett. **76** (1996) 4199.

S. T. Cundiff, A. Knorr, J. Feldmann, S. W. Koch, E. O. Göbel, and H. Nickel,  
*Rabi-flopping in semiconductors*,  
Phys. Rev. Lett. **73** (1994) 1178.

A. Knorr, R. Binder, M. Lindberg, and S. W. Koch,  
*Theoretical study of resonant ultrashort-pulse propagation in semiconductors*,  
Phys. Rev. A **46** (1992) 7179.