

# Bibliography

- [Adl62] S. L. Adler. *Quantum Theory of the Dielectric Constant in Real Solids*. Physical Review **126**, (1962) 413.
- [All71] P. B. Allen. *Electron-Phonon Effects in the Infrared Properties of Metals*. Physical Review B **3**(2), (1971) 305.
- [All87] P. B. Allen. *Theory of Thermal Relaxation of Electrons in Metals*. Physical Review Letters **59**, (1987) 1460.
- [Ani74] S. I. Anisimov, B. L. Kapeliovich, and T. L. Perel'man. *Electron Emission from Metal Surfaces Exposed to Ultrashort Laser Pulses*. Soviet Physics–JETP **39**, (1974) 375.
- [Ash76] N. W. Ashcroft and N. D. Mermin. *Solid State Physics*. Saunders (1976).
- [Ave02] R. D. Averitt and A. J. Taylor. *Ultrafast Optical and Far-Infrared Quasiparticle Dynamics in Correlated Electron Materials*. J. Phys.: Condens. Matter **14**, (2002) R1357.
- [Avo04] P. Avouris and J. Appenzeller. *Electronic and Optoelectronic with Carbon Nanotubes*. The Industrial Physicist **06/07**, (2004) 18.
- [Bas75] F. Bassani and G. Pastori Parravicini. *Electronic States and Optical Transitions in Solids*. Pergamon Press (1975).
- [Bea02] M. C. Beard, G. M. Turner, and C. A. Schmuttenmaer. *Terahertz Spectroscopy*. Journal of Physical Chemistry B **106**, (2002) 7146.
- [Bon99] M. Bonn, S. Funk, Ch. Hess, D. N. Denzler, C. Stampfl, M. Scheffler, M. Wolf, and G. Ertl. *Phonon vs Electron Mediated Desorption and Oxidation of CO on Ru(0001)*. Science **285**, (1999) 1042.
- [Boy92] R. W. Boyd. *Nonlinear Optics*. Academic Press (1992).
- [Bra00] T. Brabec and F. Krausz. *Intense Few-Cycle Laser Fields: Frontiers of Nonlinear Optics*. Reviews of Modern Physics **72**, (2000) 545.

## Bibliography

- [Bul02] A. Bultel, B. van Ootegem, A. Bourdon, and P. Vervisch. *Influence of  $Ar_2^+$  in an Argon Collisional-Radiative Model*. Physical Review E **65**, (2002) 046406.
- [Chr00] L. G. Christophorou and J. K. Olthoff. *Electron Interactions with SF<sub>6</sub>*. Journal of Physical and Chemical Reference Data **29**, (2000) 267.
- [Czy04] G. Czycholl. *Theoretische Festkörperphysik*. Springer (2004).
- [Del98] P. Delaney, H. J. Choi, J. Ihm, S. G. Louie, and M. L. Cohen. *Broken Symmetry and Pseudogaps in Ropes of Carbon Nanotubes*. Nature **391**, (1998) 466.
- [Die96] J.-C. Diels and W. Rudolph. *Ultrashort Laser Pulse Phenomena*. Academic Press (1996).
- [Din02] J. W. Ding, X. H. Yan, and J. X. Cao. *Analytical Relation of Band Gaps to Both Chirality and Diameter of Single-Wall Carbon Nanotubes*. Physical Review B **66**, (2002) 073401.
- [Dre88] M. S. Dresselhaus, G. Dresselhaus, K. Sugihara, J. L. Spain, and H. A. Goldberg. *Graphite Fibers and Filaments*. Springer (1988).
- [Dum61] W. P. Dumke. *Quantum Theory of Free Carrier Absorption*. Physical Review **124**, (1961) 1813.
- [Dun94] M. Dunne, T. Afshar-Rad, J. Edwards, A. J. MacKinnon, S. M. Viana, O. Willi, and G. Pert. *Experimental Observations of the Expansion of an Optical-Field-Induced Ionization Channel in a Gas Jet Target*. Physical Review Letters **72**, (1994) 1024.
- [Dyr00] J. C. Dyre and T. B. Schröder. *Universality of ac Conduction in Disordered Solids*. Reviews of Modern Physics **72**, (2000) 873.
- [Ell05] R. J. Ellingson, C. Engtrakul, M. Jones, M. Samec, G. Rumbles, A. J. Nozik, and M. J. Heben. *Ultrafast Response of Metallic and Semiconducting Single-Wall Carbon Nanotubes*. Physical Review B **71**, (2005) 115444.
- [Els89] T. Elsaesser, R. J. Bäuerle, and W. Kaiser. *Hot Phonons In InAs Observed via Picosecond Free-Carrier Absorption*. Physical Review B **40**, (1989) 2976.
- [Fon99] B. La Fontaine, F. Vidal, Z. Jiang, C. Y. Chien, D. Comtois, A. Desparois, T. W. Johnston, J.-C. Kieffer, and H. Pépin. *Filamentation of Ultrashort Pulse Laser Beams Resulting From Their Propagation over Long Distances in Air*. Physics of Plasmas **6**, (1999) 1615.
- [Für96] C. Fürst, A. Leitenstorfer, A. Laubereau, and R. Zimmermann. *Quantum-Kinetic Electron-Phonon Interaction in GaAs: Energy-Nonconserving Scattering Events and Memory Effects*. Physical Review Letters **78**, (1996) 3733.

## Bibliography

- [Ger99] D. O. Gericke, S. Kosse, M. Schlanges, and M. Bonitz. *T-matrix Approach to Equilibrium and Nonequilibrium Carrier-Carrier Scattering in Semiconductors*. Physical Review B **59**, (1999) 10639.
- [Ger05] D. O. Gericke. Private Communication (2005).
- [GN05] G. Gómez-Navarro, P. J. de Pablo, J. Gómez-Herrero, B. Biel, and F. J. García-Vidal. *Tuning the Conductance of Single-Walled Carbon Nanotubes by Ion Irradiation in the Anderson Localization Regime*. Nature Materials **4**, (2005) 534.
- [Gra78] G. Grau. *Quantenelektronik*. Vieweg (1978).
- [Gri81] G. Grimvall. *The Electron-Phonon Interaction in Metals*. North-Holland (1981).
- [Hag03] A. Hagen and T. Hertel. *Quantitative Analysis of Optical Spectra from Individual Single-Wall Carbon Nanotubes*. Nano Letters **3**, (2003) 383.
- [Hag04] A. Hagen, G. Moos, V. Talalaev, and T. Hertel. *Electronic Structure and Dynamics of Optically Excited Single-Wall Carbon Nanotubes*. Applied Physics A **78**, (2004) 1137.
- [Hag05a] A. Hagen. *Ladungsträgerdynamik in Kohlenstoff-Nanoröhren*. Ph.D. thesis, Freie Universität Berlin (2005).
- [Hag05b] A. Hagen, M. Steiner, M. B. Raschke, C. Lienau, T. Hertel, H. Qian, A. J. Meixner, and A. Hartschuh. *Exponential Decay Lifetimes of Excitons in Individual Single-Walled Carbon Nanotubes*. Physical Review Letters **95**, (2005) 197401.
- [Hak03] H. Haken and H. C. Wolf. *Molekülphysik und Quantenchemie*. Springer (2003).
- [Hen05] E. Hendry. *Charge Dynamics in Novel Semiconductors*. Ph.D. thesis, University of Amsterdam (2005).
- [Her66] G. Herzberg. *Molecular Spectra and Molecular Structure II. Infrared and Raman Spectra of Polyatomic Molecules*. Van Nostrand Reinhold (1966).
- [Her00] T. Hertel and G. Moos. *Electron-Phonon Interaction in Single-Wall Carbon Nanotubes: A Time-Domain Study*. Physical Review Letters **84**, (2000) 5002.
- [Hil00] O. Hilt, H. B. Brom, and M. Ahlskog. *Localized and Delocalized Charge Transport in Single-Wall Carbon Nanotubes*. Physical Review B **61**, (2000) R5129.
- [Hir98] C. Hirlmann. *Femtosecond Laser Pulses: Principles and Experiments*. Springer (1998).
- [Hoh98] J. Hohlfeld. *Ultrafast Electron, Lattice, and Spin Dynamics in Metals*. Ph.D. thesis, Freie Universität Berlin (1998).

## Bibliography

- [Hol65] E. H. Holt and R. E. Haskell. *Foundations of Plasma Physics*. Macmillan (1965).
- [Hol92] N. A. W. Holzwarth. *Graphite Intercalation Compounds II*. Springer (1992).
- [Hub00] R. Huber, A. Brodschelm, F. Tauser, and A. Leitenstorfer. *Generation and Field-Resolved Detection of Femtosecond Electromagnetic Pulses Tunable up to 41 THz*. Applied Physics Letters **76**, (2000) 3191.
- [Hub01] R. Huber, F. Tauser, A. Brodschelm, M. Bichler, G. Abstreiter, and A. Leitenstorfer. *How Many-Particle Interactions Develop after Ultrafast Excitation of an Electron-Hole Plasma*. Nature **414**, (2001) 286.
- [Hub05a] R. Huber, R. A. Kaindl, B. A. Schmid, and D. S. Chemla. *Broadband Terahertz Study of Excitonic Resonances in the High-Density Regime in GaAs/Al<sub>x</sub>Ga<sub>1-x</sub>As Quantum Wells*. Physical Review B **72**, (2005) 161314.
- [Hub05b] R. Huber, C. Kübler, S. Tübel, A. Leitenstorfer, Q. T. Vu, H. Haug, F. Köhler, and M.-C. Amann. *Femtosecond Formation of Coupled Phonon-Plasmon Modes in InP: Ultrabroadband THz Experiment and Quantum Kinetic Theory*. Physical Review Letters **94**, (2005) 027401.
- [Ich73] S. Ichimaru. *Basic Principles of Plasma Physics: A Statistical Approach*. Benjamin (1973).
- [Int05] Homepage Intel (2005).  
URL <http://www.intel.com/technology/silicon/index.htm>
- [Isl04] M. F. Islam, D. E. Milkie, C. L. Kane, A. G. Yodh, and J. M. Kikkawa. *Direct Measurement of the Polarized Optical Absorption Cross Section of Single-Wall Carbon Nanotubes*. Physical Review Letters **93**, (2004) 037404.
- [Itk02] M. E. Itkis, S. Niyogi, M. E. Meng, M. A. Hamon, H. Hu, and R. C. Haddon. *Spectroscopic Study of the Fermi Level Electronic Structure of Single-Walled Carbon Nanotubes*. Nano Letters **2**, (2002) 155.
- [Jac83] J. D. Jackson. *Klassische Elektrodynamik*. Walter de Gruyter (1983).
- [Jam03] S. P. Jamison, J. Shen, D. R. Jones, E. C. Isaac, B. Ersfeld, D. Clark, and D. A. Jaroszynski. *Plasma Characterization with Terahertz Time-Domain Measurements*. Journal of Applied Physics **93**, (2003) 4334.
- [Jas02] J. Jasapara, M. Mero, and W. Rudolph. *Retrieval of the Dielectric Function of Thin Films from Femtosecond Pump-Probe Experiments*. Applied Physics Letters **80**, (2002) 2637.
- [Jav04] A. Javey, J. Guo, M. Paulsson, Q. Wang, D. Mann, M. Lundstrom, and H. Dai. *High-Field Quasiballistic Transport in Short Carbon Nanotubes*. Physical Review Letters **92**, (2004) 106804.

## Bibliography

- [Jen91] E. T. Jensen, R. E. Palmer, W. Allison, and J. F. Annett. *Temperature-Dependent Plasmon Frequency and Linewidth in a Semimetal*. Physical Review Letters **66**, (1991) 492.
- [Jen01] M. J. Jensen, H. B. Pedersen, C. P. Safvan, K. Seiersen, X. Urbain, and L. H. Andersen. *Dissociative recombination and excitation of  $H_3^+$* . Physical Review A **63**, (2001) 052701.
- [Kai99] R. A. Kaindl, F. Eickemeyer, M. Woerner, and T. Elsaesser. *Broadband Phase-Matched Difference-Frequency Mixing of Femtosecond Pulses in GaSe: Experiment and Theory*. Applied Physics Letters **75**, (1999) 1060.
- [Kai02] R. A. Kaindl, M. A. Carnahan, J. Orenstein, D. S. Chemla, H. M. Christen, H.-Y. Zhai, M. Paranthaman, and D. H. Lowndes. *Far-Infrared Optical Conductivity Gap in Superconducting  $MgB_2$  Films*. Physical Review Letters **88**, (2002) 027003.
- [Kas03] J. Kasparian, M. Rodriguez, G. Méjean, J. Yu, E. Salmon, H. Wille, R. Bou-rayou, S. Frey, Y.-B. André, A. Mysyrowicz, R. Sauerbrey, J.-P. Wolf, and L. Wöste. *White-Light Filaments for Atmospheric Analysis*. Science **301**, (2003) 61.
- [Kav84] M. Kaveh and N. Wiser. *Electron-Electron Scattering in Conducting Materials*. Advances in Physics **33**, (1984) 257.
- [Kim05] U. J. Kim, X. M. Liu, C. A. Furtado, G. Chen, R. Saito, J. Jiang, M. S. Dresselhaus, and P. C. Eklund. *Infrared-Active Vibrational Modes of Single-Walled Carbon Nanotubes*. Physical Review Letters **95**, (2005) 157402.
- [Kit96] C. Kittel. *Introduction to Solid State Physics*. Wiley, 7 edition (1996).
- [Kno01] E. Knoesel, M. Bonn, J. Shan, and T. F. Heinz. *Charge Transport and Carrier Dynamics in Liquids Probed by THz Time-Domain Spectroscopy*. Physical Review Letters **86**, (2001) 340.
- [Kor04] O. J. Korovyanko, C.-X. Sheng, Z. V. Vardeny, A. B. Dalton, and R. H. Baughman. *Ultrafast Spectroscopy of Excitons in Single-Walled Carbon Nanotubes*. Physical Review Letters **92**, (2004) 017403.
- [Krö05] J. Kröll, J. Darmo, and K. Unterrainer. *Time and Frequency Resolved THz Spectroscopy of Micro- and Nano-Systems*. Acta Physica Polonica A **107**, (2005) 92.
- [Lab05] Homepage Bell Labs (2005).  
URL <http://www.bell-labs.com/org/physicalsciences/projects/qcl>

## Bibliography

- [Lei99a] A. Leitenstorfer, S. Hunsche, J. Shah, M. C. Nuss, and W. H. Knox. *Detectors and Sources for Ultrabroadband Electro-Optic Sampling: Experiment and Theory*. Applied Physics Letters **74**, (1999) 1516.
- [Lei99b] A. Leitenstorfer, S. Hunsche, J. Shah, M. C. Nuss, and W. H. Knox. *Femtosecond Charge Transport in Polar Semiconductors*. Physical Review Letters **82**, (1999) 5140.
- [Lin04] S. Linden, C. Enkrich, M. Wegener, J. Zhou, T. Koschny, and C. M. Soukoulis. *Magnetic Response of Metamaterials at 100 Terahertz*. Science **306**, (2004) 1351.
- [Ma05] Y.-Z. Ma, L. Valkunas, S. L. Dexheimer, S. M. Bachilo, and G. R. Fleming. *Femtosecond Spectroscopy of Optical Excitations in Single-Walled Carbon Nanotubes: Evidence for Exciton-Exciton Annihilation*. Physical Review Letters **94**, (2005) 157402.
- [Mad78] O. Madelung. *Introduction to Solid-State Theory*. Springer (1978).
- [Mal79] P. F. Maldague and C. A. Kukkonen. *Electron-Electron Scattering and the Electrical Resistivity of Metals*. Physical Review B **19**, (1979) 6172.
- [Mal86] A. M. Malvezzi, N. Bloembergen, and C. Y. Huang. *Time-Resolved Picosecond Optical Measurements of Laser-Excited Graphite*. Physical Review Letters **57**, (1986) 146.
- [Man05] C. Manzoni, A. Gambetta, E. Menna, M. Meneghetti, G. Lanzani, and G. Cerullo. *Intersubband Exciton Relaxation Dynamics in Single-Walled Carbon Nanotubes*. Physical Review Letters **94**, (2005) 207401.
- [Mar04] A. E. Martirosyan, C. Altucci, A. Bruno, C. de Lisio, A. Porzio, and S. Solimeno. *Time Evolution of Plasma Afterglow Produced by Femtosecond Laser Pulses*. Journal of Applied Physics **96**, (2004) 5450.
- [Mau94] H. Maurey and T. Gihamarchi. *Transport Properties of a Quantum Wire in the Presence of Impurities and Long-Range Coulomb Forces*. Physical Review B **51**, (1994) 10833.
- [Mau04] J. Maultzsch, S. Reich, C. Thomsen, H. Requardt, and P. Ordejón. *Phonon Dispersion in Graphite*. Physical Review Letters **92**, (2004) 075501.
- [McQ76] D. A. McQuarrie. *Statistical Mechanics*. Harper & Row (1976).
- [Meh69] F. J. Mehr and M. A. Biondi. *Electron Temperature Dependence of Recombination of  $O_2^+$  and  $N_2^+$  Ions with Electrons*. Physical Review **181**, (1969) 264.
- [Mey97] K. Meyberg and P. Vachenauer. *Höhere Mathematik 2*. Springer (1997).

## Bibliography

- [Mic05] Z. Mics, F. Kadlec, P. Kužel, P. Jungwirth, S. E. Bradforth, and V. A. Apkarian. *Nonresonant Ionization of Oxygen Molecules by Femtosecond Pulses: Plasma Dynamics Studied by Time-Resolved Terahertz Spectroscopy*. Journal of Chemical Physics **123**, (2005) 1.
- [Mil98] D. L. Mills. *Nonlinear Optics*. Springer (1998).
- [Mis00] T. Mishina, K. Nitta, and Y. Masumoto. *Coherent Lattice Vibration of Interlayer Shearing Mode in Graphite*. Physical Review B **62**, (2000) 2908.
- [Mit73] M. Mitchner and C. H. Kruger. *Partially Ionized Gases*. Wiley (1973).
- [Moo01] G. Moos, C. Gahl, R. Fasel, M. Wolf, and T. Hertel. *Anisotropy of Quasiparticle Lifetimes and the Role of Disorder in Graphite from Ultrafast Time-Resolved Photoemission Spectroscopy*. Physical Review Letters **87**, (2001) 267402.
- [Něm02] H. Němec, F. Kadlec, and P. Kužel. *Methodology of an Optical Pump-Terahertz Probe Experiment: An Analytical Frequency-Domain Approach*. Journal of Chemical Physics **117**, (2002) 8454.
- [Nih03] T. Nihira and T. Iwata. *Temperature Dependence of Lattice Vibrations and Analysis of the Specific Heat of Graphite*. Physical Review B **68**, (2003) 134305.
- [Noh91] T. W. Noh, P. H. Song, and A. J. Sievers. *Self-consistency conditions for the effective-medium approximation in composite materials*. Physical Review B **44**, (1991) 5459.
- [Nol01] W. Nolting. *Vielteilchentheorie*. Springer (2001).
- [Nov04] K. S. Novoselov, A. K. Geim, S. V. Morozov, D. Jiang, Y. Zhang, S. V. Dubonos, I. V. Grigorieva, and A. A. Firsov. *Electric Field Effect in Atomically Thin Carbon Films*. Science **306**, (2004) 666.
- [O'C02] M. J. O'Connell, S. M. Bachilo, C. B. Huffman, V. C. Moore, M. S. Strano, E. H. Haroz, K. L. Rialon, P. J. Boul, W. H. Noon, C. Kittrell, J. Ma, R. H. Hauge, R. B. Weisman, and R. E. Smalley. *Band Gap Fluorescence from Individual Single-Walled Carbon Nanotubes*. Science **297**, (2002) 593.
- [ohl97] M. Ohler, J. Baruchel, A. W. Moore, Ph. Galez, and A. Freund. *Direct Observation of Mosaic Blocks in Highly Oriented Pyrolytic Graphite*. Nuclear Instruments and Methods in Physics Research B **129**, (1997) 257.
- [Oni02] G. Onida, L. Reining, and A. Rubio. *Electronic Excitations: Density-Functional Theory versus Many-Body Green's-Function Approaches*. Reviews of Modern Physics **74**, (2002) 601.

## Bibliography

- [oS05] National Institute of Standards and Technology Chemistry WebBook (2005). URL <http://webbook.nist.gov/chemistry/>
- [Ouy01] M. Ouyang, J.-L. Huang, C. L. Cheung, and C. M. Lieber. *Energy gaps in “Metallic” Single-Walled Carbon Nanotubes*. Science **292**, (2001) 702.
- [Pal91] E. D. Palik (Editor). *Handbook of Optical Constants of Solids II*. Academic Press (1991).
- [Ped03] T. G. Pedersen. *Analytic Calculation of the Optical Properties of Graphite*. Physical Review B **67**, (2003) 113106.
- [Pel98] H. P. M. Pellemans and P. C. M. Planken. *Effect of Nonequilibrium LO Phonons and Hot Electrons on Far-Infrared Intraband Absorption in n-type GaAs*. Physical Review B **57**, (1998) R4222.
- [Pet05] A. Petrignani, W. J. van der Zande, P. C. Cosby, F. Hellberg, R. D. Thomas, and M. Larsson. *Vibrationally Resolved Rate Coefficients and Branching Fractions in the Dissociative Recombination of  $O_2^+$* . Journal of Chemical Physics **122**, (2005) 014302.
- [Phi77] H. R. Philipp. *Infrared Optical Properties of Graphite*. Physical Review B **16**, (1977) 2896.
- [Pis04] S. Piscanec, M. Lazzeri, F. Mauri, A. C. Ferrari, and J. Robertson. *Kohn Anomalies and Electron-Phonon Interactions in Graphite*. Physical Review Letters **93**, (2004) 185503.
- [Pla01] P. C. M. Planken, H.-K. Nienhuys, H. J. Bakker, and T. Wenckebach. *Measurement and Calculation of the Orientational Dependence of Terahertz Pulse Detection in ZnTe*. Journal of the Optical Society of America B **18**, (2001) 313.
- [Pop05] E. Pop, D. Mann, J. Cao, Q. Wang, K. Goodson, and H. Dai. *Negative Differential Conductance and Hot Phonons in Suspended Nanotube Molecular Wires*. Physical Review Letters **95**, (2005) 155505.
- [Pos04] J. H. Posthumus. *The Dynamics of Small Molecules in Intense Laser Fields*. Reports on Progress in Physics **67**, (2004) 623.
- [Pri91] C. Priester and M. Lannoo. *Analog of the  $\mathbf{k} \cdot \mathbf{p}$  Theory for a Localized-Orbital Description of the Band Structure of Zinc-Blende-Structure Semiconductors*. Physical Review B **44**, (1991) 10559.
- [Rei00] H. Reinholz, R. Redmer, G. Röpke, and A. Wierling. *Long-Wavelength Limit of the Dynamical Local-Field Factor and Dynamical Conductivity of a Two-Component Plasma*. Physical Review E **62**, (2000) 5648.

## Bibliography

- [Rei03] K. Reimann, R. P. Smith, A. M. Weiner, T. Elsaesser T, and M. Woerner. *Direct Field-Resolved Detection of Terahertz Transients with Amplitudes of Megavolts per Centimeter*. Optics Letters **28**, (2003) 471.
- [Röm94] H. Römer. *Theoretische Optik*. VCH (1994).
- [Ros05] Homepage Forschungszentrum Rossendorf (2005).  
URL <http://www.fz-rossendorf.de/pls/rois/Cms?pNid=471>
- [Rot04] S. V. Rotkin and K. Hess. *Possibility of a Metallic Field-Effect Transistor*. Applied Physics Letters **84**, (2004) 3139.
- [Rub05] A. Rubio. Private Communication (2005).
- [Ruf00] T. Ruf, M. Cardona, C. S. J. Pickles, and R. Sussmann. *Temperature Dependence of the Refractive Index of Diamond up to 925K*. Physical Review B **62**, (2000) 16578.
- [Sai98] R. Saito, G. Dresselhaus, and M. S. Dresselhaus. *Physical Properties of Carbon Nanotubes*. Imperial College Press, London (1998).
- [Say94] K. El Sayed, S. Schuster, H. Haug, F. Herzel, and K. Henneberger. *Subpicosecond Plasmon Response: Buildup of Screening*. Physical Review B **49**(11), (1994) 7337.
- [Sch93] F. Schwabl. *Quantenmechanik*. Springer (1993).
- [Sch05] F. Schapper. *THz-Spektroskopie von Graphit und Erzeugung geformter Laserpulse im mittleren Infrarot*. Master's thesis, Freie Universität Berlin (2005).
- [Sei90] K. Seibert, G. C. Cho, W. Kütt, H. Kurz, D. H. Reitze, J. I. Dadap, H. Ahn, M. C. Downer, and A. M. Malvezzi. *Femtosecond Carrier Dynamics in Graphite*. Physical Review B **42**, (1990) 2842.
- [Sfe04] M. Y. Sfeir, F. Wang, L. Huang, C.-C. Chuang, J. Hone, S. P. O'Brien, T. F. Heinz, and L. E. Brus. *Probing Electronic Transitions in Individual Carbon Nanotubes by Rayleigh Scattering*. Science **306**.
- [Sha99] J. Shah. *Ultrafast Spectroscopy of Semiconductors and Semiconductor Nanostructures*. Springer (1999).
- [Sha03] J. Shan, F. Wang, E. Knoesel, M. Bonn, and T. F. Heinz. *Measurement of the Frequency-Dependent Conductivity in Sapphire*. Physical Review Letters **90**, (2003) 247401.
- [She05] C.-X. Sheng, Z. V. Vardeny, A. B. Dalton, and R. H. Baughman. *Exciton Dynamics in Single-Walled Carbon Nanotubes: Transient Photoinduced Dichroism and Polarized Emission*. Physical Review B **71**, (2005) 125427.

## Bibliography

- [Shy02] F. L. Shyu and M. F. Lin. *Electronic and Optical Properties of Narrow-Gap Carbon Nanotubes*. Journal of the Physical Society of Japan **71**, (2002) 1820.
- [Spa04] C. D. Spataru, S. Ismail-Beigi, L. X. Benedict, and S. G. Louie. *Quasiparticle Energies, Excitonic Effects and Optical Absorption Spectra of Small-Diameter Single-Walled Carbon Nanotubes*. Applied Physics A **78**, (2004) 1129.
- [Spi56] L. Spitzer. *Physics of Fully Ionized Plasmas*. Interscience (1956).
- [Sty02] W. A. Stygar, G. A. Gerdin, and D. L. Fehl. *Analytical Electrical-Conductivity Tensor of a Nondegenerate Lorentz Plasma*. Physical Review E **66**, (2002) 046417.
- [Tzo00] S. Tzortzakis, B. Prade, M. Franco, and A. Mysyrowicz. *Time-Evolution of the Plasma Channel at the Trail of a Self-Guided IR Femtosecond Laser Pulse in Air*. Optics Communications **181**, (2000) 123.
- [Uga99] A. Ugawa, A. G. Rinzler, and D. B. Tanner. *Far-Infrared Gaps in Single-Wall Carbon Nanotubes*. Physical Review B **60**, (1999) R11305.
- [vB72] R. von Baltz and W. Escher. *Quantum Theory of Free Carrier Absorption*. physica status solidi (b) **51**, (1972) 499.
- [Wal47] P. R. Wallace. *The Band Theory of Graphite*. Physical Review **71**, (1947) 622.
- [Wan04] F. Wang, G. Dukovic, L. E. Brus, and T. F. Heinz. *Time-Resolved Fluorescence of Carbon Nanotubes and Its Implication for Radiative Lifetimes*. Physical Review Letters **92**, (2004) 177401.
- [Wan05] F. Wang, G. Dukovic, L. E. Brus, and T. F. Heinz. *The Optical Resonances in Carbon Nanotubes Arise from Excitons*. Science **308**, (2005) 838.
- [Wu04] Z. Wu, Z. Chen, X. Du, J. M. Logan, J. Sippel, M. Nikolou, K. Kamaras, J. R. Reynolds, D. B. Tanner, A. F. Hebard, and A. G. Rinzler. *Transparent, Conductive Carbon Nanotube Films*. Science **305**, (2004) 1273.
- [Ye04] L.-H. Ye, B.-G. Liu, D.-S. Wang, and R. Han. *Ab Initio Phonon Dispersions of Single-Wall Carbon Nanotubes*. Physical Review B **69**, (2004) 235409.
- [Yeh88] P. Yeh. *Optical Waves in Layered Media*. Wiley (1988).
- [Yen87] W. M. Yen and M. D. Levenson. *Lasers, Spectroscopy and New Ideas*, pages 121–122. Springer (1987).
- [Yu99] P. Y. Yu and M. Cardona. *Fundamentals of Semiconductors*. Springer (1999).
- [Zam05] M. Zamkov, N. Woody, B. Shan, Z. Chang, and P. Richard. *Lifetime of Charge Carriers in Multiwalled Nanotubes*. Physical Review Letters **94**, (2005) 056803.

## Bibliography

- [Zha95] X. M. Zhao, J.-C. Diels, C. Y. Wang, and J. M. Elizondo. *Femtosecond Ultraviolet Laser Pulse Induced Lightning Discharges in Gases*. IEEE Journal of Quantum Electronics **31**, (1995) 599.

*Bibliography*