

List of Publications – Synthetic Nanostructures Stuttgart

- [001] 1980 Peo, M., S. Roth, K. Dransfeld, B. Tieke, J. Hocker, H. Gross, A. Grupp, and H. Sixl: "Apparent Absence of Pauli Paramagnetism in Metallic Polyparaphenylene", *Solid State Communications* **35** (1980) 119.
- [002] 1981 Peo, M., S. Roth, J. Hocker, and K. Dransfeld: "Magnetic Behaviour of Polyacetylene, Polyparaphenylene and Polypyrrole", In: *Physics in One Dimension* **218**, J. Bernasconi, T. Schneider (Eds.), Springer Verlag, Berlin (1981).
- [003] 1981 Peo, M. and S. Roth: "Magnetic Investigations of the Metallic Polymers Polyacetylene, Polyparaphenylene and Polypyrrole", *Chemica Scripta* **17** (1981) 133.
- [004] 1981 Roth, S. and M. Peo: "Magnetische Eigenschaften von metallisch leitenden Polymeren", *Colloid und Polymer Science* **259** (1981) 279.
- [005] 1981 Peo, M., H. Förster, K. Menke, J. Hocker, J.A. Gardner, S. Roth, and K. Dransfeld: "Absence of Knight-Shift in the Metallic State of Polyacetylene", *Solid State Communications* **38** (1981) 467.
- [006] 1981 Guckelsberger, K., P. Rödhammer, E. Gmelin, M. Peo, K. Menke, J. Hocker, S. Roth, and K. Dransfeld: "Anomalous Thermal Conductivity of Polyacetylene", *Zeitschrift für Physik B* **43** (1981) 189.
- [007] 1981 Peo, M., H. Förster, K. Menke, J. Hocker, J.A. Gardner, S. Roth, and K. Dransfeld: "Absence of Knight-Shift in the Metallic State of Polyacetylene", *Molecular Crystals and Liquid Crystals* **77** (1981) 103.
- [008] 1982 Kaindl, G., G. Wortmann, S. Roth, and K. Menke: "¹²⁹I-Mößbauer Study of Iodine-Doped Polyacetylene", *Solid State Communications* **41** (1982) 75.
- [009] 1982 Riekell, C., H.W. Hässlin, K. Menke, and S. Roth: "Crystalline Features of AsF₅-Doped Polyacetylene", *Journal Chemical Physics* **77** (1982) 4254.
- [010] 1982 Menke, K., M. Peo, R.J. Schweizer, and S. Roth: "Thermal Isomerisation and Decomposition of Doped and Undoped Polyacetylene", *Polymer Preprints* **23** (1982) 79.
- [011] 1983 Röss W., A. Philipp, K. Seeger, K. Ehinger, K. Menke, and S. Roth: "Magnetoresistance and Corbino Resistance of Iodine-Doped Polyacetylene", *Solid State Communications* **45** (1983) 933.
- [012] 1983 Davidov, D., S. Roth, W. Neumann, and H. Sixl: "ESR and Conductivity Studies of Doped Polyacetylene", *Zeitschrift für Physik B* **51** (1983) 145 (1983).
- [013] 1983 Davidov, D., S. Roth, and W. Neumann: "ESR and Conductivity Studies of Doped Polyacetylene", *Journal de Physique C* **3** (1983) 295.
- [014] 1983 Ehinger, K., W. Bauhofer, K. Menke, and S. Roth: "Electrical Transport Properties of Iodine Doped Polyacetylene", *Journal de Physique C* **3** (1983) 115.
- [015] 1983 Aktualisiert am 15.02.2008 Godler, F., B. Perscheid, G. Kaindl, K. Menke, and S. Roth: "Mößbauer Study of SbF₅-Doped Polyacetylene", *Journal de Physique C* **3** (1983) 233.

- [016] 1983 Roth, S., K. Ehinger, K. Menke, M. Peo, and R.J. Schweizer :
« Polyacetylene : La Chasse aux Solitons », *Journal de Physique C* **3**
(1983) 69.
- [017] 1983 Roth, S. and K. Menke: „Metallisch leitende Kunststoffe – ein neues
Konzept in den Werkstoffwissenschaften“, *Kunststoffe* **73** (1983) 520.
- [018] 1983 Roth, S. and K. Menke: „Metallisch leitende Polymere – Jagdgründe für
Solitonen?“, *Die Naturwissenschaften* **70** (1983) 550.
- [019] 1983 Yacoby, Y., S. Roth, K. Menke, F. Keilmann, and J. Kuhl: “Carrier
Drifttime from Pulsed Photoconductivity in as-grown trans-
Polyacetylene”, *Solid State Communications* **47** (1983) 869.
- [020] 1984 Roth, S., K. Ehinger, and K. Menke: “Electrical Transport Properties of
Polyacetylene and Related Compounds”, In: “*Quantum Theory of
Polymers – Solid State Aspects*”, J. Ladik (Ed.), Reidel Publishing
Company (1984) 165.
- [021] 1984 Davidov, D., S. Roth, W. Neumann, and H. Sixl: “ESR Study of Local
Moment Formation and Relaxation in Iodine-Doped Polyacetylene”,
Solid State Communications **52** (1984) 375.
- [022] 1984 Genzel, L., F. Kremer, A. Poglitsch, G. Bechtold, K. Menke, and S.
Roth: “Millimeterwave and Far Infrared Conductivity of Iodine- and AsF₅-
Doped Polyacetylene”, *Physical Review B* **29** (1984) 4595.
- [023] 1984 Hässlin, H.W., C. Riekel, K. Menke, and S. Roth: “A Neutron Diffraction
Study on the Doping of Polyacetylene by AsF₅”, *Makromolekulare
Chemistry* **185** (1984) 397.
- [024] 1984 Ehinger, K., S. Summerfield, W. Bauhofer, and S. Roth: “DC and
Microwave Conductivity of Iodine-Doped Polyacetylene”, *Journal of
Physics C: Solid State Physics* **17** (1984) 3753.
- [025] 1984 Roth, S.: “Conductive Polymers”, *Physica B* **127** (1984) 151-157.
- [026] 1984 Roth, S.: “Charge Transport in Conducting Polymers”, In:
Festkörperprobleme: Advances in Solid State Physics XXIV (1984) 119;
P. Grosse (Ed.), Vieweg, Braunschweig (1984).
- [027] 1984 Baumann, T., K.J. Donovan, E. Göbel, and S. Roth: “Photoconductivity
in Polyacetylene and Polydiacetylene – A Comparative Study”, *Material
Science X* (1984) 23.
- [028] 1984 Markowitsch W., F. Kuchar, K. Seeger, and S. Roth: “IR Reflection
Spectra of Polyacetylene: Influence of Sample Compaction”, *Solid State
Communications* **51** (1984) 271.
- [029] 1985 Müller, H.K., J. Hocker, K. Menke, K. Ehinger, and S. Roth: “Long-Time
Conductivity Decrease in Polyacetylene Samples”, *Synthetic Metals* **10**
(1985) 273.
- [030] 1985 Riekel, C., H.W. Hässlin, K. Menke, and S. Roth: “A Neutron Diffraction
Study of the Doping of Polyacetylene by SbF₅, I₂ and IBr”, *Synthetic
Metals* **10** (1985) 31.
- [031] 1984 Krone W., G. Wortmann, K.H. Frank, G. Kaindl, K. Menke, and S. Roth:
“Polarization-dependent EXAFS in Bromine-doped Polyacetylene”, *Solid
State Communications* **52** (1984) 253.

- [032] 1984 Schweizer, R.J., K. Menke, and S. Roth: "Thermal Conductivity of Polyacetylene", *Journal of Chemical Physics* **81** (1984) 6301.
- [033] 1984 Roth, S.: „Metallisch leitende Polymere“, *Physikalische Blätter* **40** (1984) 321.
- [034] 1985 Sixl, H., H. Hübsch, W. Rühle, and S. Roth: "Thermal Reactions of trans-Polyacetylene – ESR Kinetics", *Molecular Crystals and Liquid Crystals* **117** (1985) 479.
- [035] 1985 Roth, S., K. Ehinger, T. Baumann, H. Bleier, and W. Göhring: "Short-time Transport Phenomena in Polyacetylene", *Molecular Crystals and Liquid Crystals* **117** (1985) 227.
- [036] 1985 Riekkel, C., H.W. Hässlin, K. Menke, and S. Roth: "Dynamics of SbF₅, IBr and I₂ Sorption by Polyacetylene", *Molecular Crystals and Liquid Crystals* **117** (1985) 99.
- [037] 1985 Schweizer, R.J., K. Menke, W. Göhring, and S. Roth: "Thermal Properties of Polyacetylene", *Molecular Crystals and Liquid Crystals* **117** (1985) 181.
- [038] 1985 Stender, K., G. Klar, M. Peo, W. Bauhofer, and S. Roth: "Electric and Magnetic Properties of 4,4',5,5'-Tetramethoxy-2,2'-Dithiobiphenyl-iodide(6/7) – A New Radical Cation Salt Containing Polyiodide Chains", *Molecular Crystals and Liquid Crystals* **120** (1985) 277.
- [039] 1985 Bechtold, G., L. Genzel, and S. Roth: "Far Infrared Spectra of the Lattice Modes in trans and cis Polyacetylene", *Solid State Communications* **53** (1985) 1.
- [040] 1985 Ehinger, K., S. Summerfield, and S. Roth: "Electrical Conductivity of Polyacetylene: Nonsoliton Mechanism", *Colloid and Polymer Science* **263** (1985) 714.
- [041] 1986 Ehinger, K. and S. Roth: "Non-Soliton Conductivity in Polyacetylene", *Philosophical Magazine B* **53** (1986) 301.
- [042] 1985 Roth, S. and K. Ehinger: „Mechanisms of Electrical Conductivity in Conductive Polymers“, In: *Niedrigdimensionale leitfähige Systeme*, B. Pietraß, A. Bartl (Ed.), Wissenschaftliche Berichte **29** (Supplement), Akademie der Wissenschaften der DDR, Dresden (1985) 1.
- [043] 1985 Roth, S.: "Conductive Polymers", In: *Electronic Properties of Polymers and Related Materials* (Kirchberg I), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences, Springer Verlag Heidelberg (1985) 2.
- [044] 1985 Ehinger, K. and S. Roth "Non Solitonic Transport Mechanism in Polyacetylene", In: *Electronic Properties of Polymers and Related Materials* (Kirchberg I), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences, Springer Verlag Heidelberg (1985) 87.
- [045] 1985 Lindenberger, H., M. Hanack, and S. Roth: "Composites from Polypyrrole and Polyether/Polyester Thermoplastic Elastomer", In: *Electronic Properties of Polymers and Related Materials* (Kirchberg I), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences, Springer Verlag Heidelberg (1985) 4.

- [046] 1985 Bleier, H., W. Göhring, and S. Roth: "Time Dependent Photoconductivity of Polyacetylene and b-Carotene", In: *Electronic Properties of Polymers and Related Materials* (Kirchberg I), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences, Springer Verlag Heidelberg (1985) 96.
- [047] 1985 Wortmann, G., W. Krone, V. Biebesheimer, G. Kaindl, and S. Roth: "Local Structure in Halogen-Doped Polyacetylene", In: *Electronic Properties of Polymers and Related Materials* (Kirchberg I), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences, Springer Verlag Heidelberg (1985) 41.
- [048] 1985 Yacoby, Y. and S. Roth: "Resonant Raman Scattering in Polyacetylene under Hydrostatic Pressure", *Solid State Communications* **56** (1985) 319.
- [049] 1986 Yacoby, Y. and S. Roth: "Resonance Raman Scattering of Polyacetylene Doped with Bromine, Iodine and AsF₅ and Compensated by Ammonia", *Synthetic Metals* **13** (1986) 299.
- [050] 1985 Iwahana, K., H. Kuzmany, and S. Roth: "Optical Phonons of a Bond-Alternated Zig-Zag-Chain", In: *Phonon Physics*, J. Kollar, N. Kroo, N. Menyhard, T. Siklos (Eds.), World Scientific Publishing Company, Singapore (1985) 774.
- [051] 1986 Kuhlmann, T., S. Roth, J. Rozière, and W. Siebert: „Polymeres (g⁵,I-2,3-Dihydro-1,3-diborolyl)nickel – die erste Polydecker-Sandwichverbindung“, *Angewandte Chemie* **98** (1986) 87.
- [052] 1986 Budrowski, C., A. Pron, J. Przyluski, K. Ehinger, and S. Roth: "Electrical Conductivity of Iodine-, Ironchlorid- and Indiumchlorid-Doped Polyacetylene", *Synthetic Metals* **16** (1986) 117.
- [053] 1986 Roth, S.: „Selbstleitende Kunststoffe“, In: *Elektrisch leitende Kunststoffe*, H.J. Mair, S. Roth (Eds.), Carl Hanser Verlag, München (1986) 176.
- [054] 1986 Menke, K. and S. Roth: „Chemische Stabilität metallisch leitender Polymere“, In: *Elektrisch leitende Kunststoffe*, H.J. Mair, S. Roth (Eds.), Carl Hanser Verlag, München (1986) 225.
- [055] 1986 Bradley, D.D.C., R.H. Friend, H. Lindenberger, and S. Roth: "Infra-red Characterization of Oriented Poly(phenylenevinylene)", *Polymer* **27** (1986) 1709.
- [056] 1986 Menke, K. and S. Roth: „Metallisch leitfähige Polymere I“, *Chemie in unserer Zeit* **20** (1986) 1.
- [057] 1986 Menke, K. and S. Roth: „Metallisch leitfähige Polymere II“, *Chemie in unserer Zeit* **20** (1986) 33.
- [058] 1986 Roth, S.: "Polyene Chains in Molecular Electronics", *Z. Physik B – Condensed Matter* **64** (1986) 25.
- [059] 1987 Roth, S.: "Concluding Remarks: Conductive Polymers", *Synthetic Metals* **18** (1987) 869.
- [060] 1987 Bleier, H., G. Leising, and S. Roth: "Anisotropy of Transient Photoconductivity in trans-Polyacetylene", *Synthetic Metals* **17** (1987) 521.

- [061] 1987 Roth, S. and H. Bleier: "Temperature Dependent of Transient Photoconductivity in Polyacetylene", *Synthetic Metals* **17** (1987) 503.
- [062] 1987 Lindenberger H., S. Schäfer-Siebert, S. Roth, and M. Hanack: "Synthesis and Properties of Polypyrrole Prepared by Electrochemical Polymerisation of α -Bipyrrole", *Synthetic Metals* **18** (1987) 37.
- [063] 1987 Göhring, W., S. Roth, and M. Hanack: "Synthesis of Polyenes with Electron Donor and Electron Acceptor Groups", *Synthetic Metals* **17** (1987) 259.
- [064] 1987 Krone W., G. Wortmann, V. Biebesheimer, G. Kaindl, and S. Roth: "Local-Structure Determination in Interhalogen-Doped Polyacetylene by X-Ray Absorption Spectroscopy", *Synthetic Metals* **17** (1987) 479.
- [065] 1986 Budrowski, C., S. Roth, H. Kuzmany, and J. Przyluski: "Studies of the Reaction of p-type Doped Polyacetylene with H_2O ", *Synthetic Metals* **16** (1986) 291.
- [066] 1987 Janossy, A., G. Mihaly, S. Pekker, and S. Roth: "Rigidity of Charge Density Wave Current under Inhomogeneous Conditions in the Blue Bronze $Rb_{0.3}MoO_3$ ", *Solid State Communications* **61** (1987) 33.
- [067] 1987 Schäfer-Siebert, D., C. Budrowski, H. Kuzmany, and S. Roth: "Influence of the Conjugation Length of Polyacetylene-Chains on the DC-Conductivity", *Synthetic Metals* **21** (1987) 285.
- [068] 1987 Ruckh, R., E. Sigmund, H. Sixl, and S. Roth: "Model Calculations of Polymer Heterostructures: *Quantum Wells in Conjugated Molecular Chains *Spacer Molecules in Molecular Wires", *Synthetic Metals* **21** (1987) 305.
- [069] 1987 Roth, S.: "Polyene Chains in Molecular Electronics", *Synthetic Metals* **21** (1987) 51.
- [070] 1987 Roth, S. and H.-U. Habermeier: „Molekulare Elektronik“, *Technische Rundschau Bern* **18** (1987) 72.
- [071] 1987 Bleier, H., H. Lobentanzer, G. Leising, and S. Roth: "Anisotropic Kinetics of Optically Excited Charge Carriers in trans-Polyacetylene", *Europhysics Letters* **4** (1987) 1397.
- [072] 1987 Wong, K.S., D.D.C. Bradley, W. Mayes, J.F. Ryan, R.M. Friend, H. Lindenberger, and S. Roth: "Correlations between conjugation length and non-radiative relaxation rate in poly(p-phenylenevinylene): a picosecond photoluminescence study", *Journal of Physics C: Solid State Physics* **20** (1987) L187.
- [073] 1987 Bleier, H., H. Lobentanzer, G. Leising, and S. Roth: "Picosecond Measurements of "Soliton"-Lifetime in Oriented Polyacetylene", *Material Science* **XIII** (1987) 31.
- [074] 1987 Kuhlmann, T., S. Roth, J. Rozière, W. Siebert, and U. Zennek: "Polyeder Sandwich Complexes", *Synthetic Metals* **19** (1987) 757.
- [075] 1987 Bleier, H., S. Roth, and G. Leising: "Polarization Dependence of Recombination Kinetics in Stretch-Oriented trans-Polyacetylene", In: *Electronic Properties of Conjugated Polymers* (Kirchberg II), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **76**, Springer Verlag Heidelberg (1987) 88.

- [076] **1987** Bradley, D.D.C., R.H. Friend, F.L. Pratt, K.S. Wong, W. Mayes, H. Lindenberger, and S. Roth: "Photoinduced Absorption in Poly(p-phenylene-vinylene)", In: *Electronic Properties of Conjugated Polymers* (Kirchberg II), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **76**, Springer Verlag Heidelberg (1987) 113.
- [077] **1987** Fink, J., N. Nücker, B. Scheerer, A. vom Felde, H. Lindenberger, and S. Roth: "Electronic Structure of Undoped and Doped Polyphenylenevinylene", In: *Electronic Properties of Conjugated Polymers* (Kirchberg II), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **76**, Springer Verlag Heidelberg (1987) 79.
- [078] **1987** Bradley, D.D.C., R.H. Friend, K.S. Wong, W. Mayes, H. Lindenberger, and S. Roth: "Radiative and Non-radiative Recombination Process in Photoexcited Poly(p-phenylene-vinylene)", In: *Electronic Properties of Conjugated Polymers* (Kirchberg II), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **76**, Springer Verlag Heidelberg (1987) 107.
- [079] **1987** Schäfer-Siebert, D. C. Budrowski, H. Kuzmany, and S. Roth: "Influence of the Conjugation Length of Polyacetylene-Chains on the DC-Conductivity", In: *Electronic Properties of Conjugated Polymers* (Kirchberg II), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **76**, Springer Verlag Heidelberg (1987) 38.
- [080] **1987** Bradley, D.D.C., T. Hartmann, R.H. Friend, E.A. Marseglia, H. Lindenberger, and S. Roth: "Control of the State of Order in Poly(p-phenylene-vinylene). And its Effect on Iodine Doping", In: *Electronic Properties of Conjugated Polymers* (Kirchberg II), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **76**, Springer Verlag Heidelberg (1987) 308.
- [081] **1987** Joss, W., J.A. van Ruitarbeek, I. Vagner, M. Rachdi, and S. Roth: "Study of 2D-Electron Gas Properties in Acceptor Graphite Intercalation Compounds", *Japanese Journal of Applied Physics, Supplement* **26-3** (1987) 633.
- [082] **1987** Roth, S.: "Introduction to the Physics of Conducting Polymers", *Material Science Forum* **21** (1987) 1.
- [083] **1987** Roth, S. and H. Bleier: "Solitons in Polyacetylene", *Advances in Physics* **36** (1987) 385.
- [084] **1988** Bleier, H., S. Roth, Y.Q. Shen, D. Schäfer-Siebert, and G. Leising: "Photoconductivity in trans-Polyacetylene Transport and Recombination of Photogenerated Charged Excitations", *Physical Review B* **382** (1988) 6031.
- [085] **1987** Baeriswyl, D. and A.R. Bishop: "Halogen-Bridged Metal Complexes: Model Compounds for High- T_c Superconductors?", *Physica Scripta T* **19** (1987) 239.
- [086] **1987** Baeriswyl, D.: "On the Role of Coulomb Interaction in Conjugated Polymers", In: *Electronic Properties of Conjugated Polymers* (Kirchberg II), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **76**, Springer Verlag Heidelberg (1987) 198.
- [087] **1988** Jost, F., S. Roth, and Y. Yacoby: "New Method to Determine the Dielectric Constants of Acceptor Type GIC", *Synthetic Metals* **23** (1988) 333.

- [088] **1988** Bradley, D.D.C., Y.Q. Shen, H. Bleier, and S. Roth: "Transient Photoconductivity in Highly Oriented Poly(p-phenylene-vinylene).", *Journal of Physics C: Solid State Physics* **21** (1988) L515.
- [089] **1989** Bleier, H., P. Bernier, D. Schäfer-Siebert, and S. Roth: "Magnetic Resonance Experiments on Segmented Polyacetylene", *Synthetic Metals* **28** (1989) D407.
- [090] **1989** Roth, S., G. Mahler, Y.Q. Shen, and F. Coter: "Molecular Electronics of Conducting Polymers", *Synthetic Metals* **28** (1989) C815.
- [091] **1989** Bleier, H., Y.Q. Shen, D.D.C. Bradley, H. Lindenberger, and S. Roth: "Transient Photoconductivity in Highly Oriented Poly(p-phenylene-vinylene)", *Synthetic Metals* **29** (1989) E73.
- [092] **1989** Schäfer-Siebert, D. and S. Roth: "Limitation of the Conductivity of Polyacetylene by Conjugational Defects", *Synthetic Metals* **28** (1989) D369.
- [093] **1989** Bleier, H., K. Donovan, R.H. Friend, S. Roth, L. Rothberg, R. Tubino, Z. Vardeny, and G. Wilson: "Non-Solitonic Nature of Picosecond Photoconductivity in trans-Polyacetylene", *Synthetic Metals* **28** (1989) D189.
- [094] **1988** Jost, F., S. Roth, and Y. Yacoby: "New Method to Determine the Dielectric Constants of Acceptor Type GIC", In: *Chemical Physics of Intercalation*, Plenum Press (1988) 365.
- [095] **1989** Plochanski, J.: "Mechanisms of Conductivity in Conjugated Polymers and Relations to Morphology", *Material Science Forum* **42** (1989) 17.
- [096] **1989** Roth, S.: "Conducting Polymers – Present State of Physical Understanding", *Material Science Forum* **42** (1989) 1.
- [097] **1989** Plochanski, J. and S. Roth: "Conductivity of Doped Polyacetylene with Mechanically Modified Morphology", *Synthetic Metals* **30** (1989) 109.
- [098] **1989** Heywang, G., L. Born, H.-G. Fitzky, T. Hassel, J. Hocker, H.-K. Müller, B. Pittel, and S. Roth: „Radikalionensalze von Naphthalintetracarbonsäurederivaten – eine neue Klasse elektrisch leitfähiger Verbindungen“, *Angewandte Chemie* **101** (1989) 462.
- [099] **1989** Jost, F., Y. Yacoby, D. Heitmann, and S. Roth: "Intercalant Vibrations in a Graphit Intercalation Compound Observed by Infrared Reflectivity at a Graphite-Germanium Interface", *Physical Review B* **39** (1989) 5444.
- [100]* **1989** Roth, S. and S. Schäfer-Siebert: „Transportmechanismen in elektrisch leitenden Polymeren“, *Beitrag zur 2. Tagung über Polymere für Elektrotechnik/Elektronik (Mikroelektronik)*, Berlin, DDR (1989).
- [101] **1989** Roth, S. and H. Bleier: "Electrically Conducting Polymers – Physical Concepts and Experimental Investigations of Transport Mechanisms", In: *Disordered Systems and New Materials*, M. Borissov, N. Kirov, A. Vavrek (Eds.), World Scientific Singapore (1989) 218.
- [102] **1990** Shen, Y.Q., W. Göhring, S. Hagen, S. Roth, and M. Hanack: "NMR and Pariser-Parr-Pople Investigations of Donor-Acceptor Substituted Polyenes", *Journal of Molecular Electronics* **6** (1990) 31.

- [103] **1991** Roth, S.: "Hopping Conduction in Electrically Conducting Polymers", In: *Hopping Transport in Solids*, M. Pollak, B.I. Shklovskii (eds.), Elsevier Science Publishers, North-Holland, Amsterdam **28** (1991) 377 (1991).
- [104] **1989** Roth, S. and H. Bleier: "Can Polyacetylene-Solitons be Used in Molecular Electronics?", In: *Molecular Electronics – Science and Technology*, A. Aviram (Ed.), Engineering Foundation Conferences, New York (1989) 317.
- [105] **1989** Roth, S.: "Switching Processes in Molecules and Conducting Polymers", *Physica Scripta T* **29** (1989) 206-208.
- [106] **1989** Roth, S.: „Selbstleitende Kunststoffe“, In: *Elektrisch leitende Kunststoffe (zweite und erweiterte Auflage)*, H.J. Mair, S. Roth (Ed.), Carl Hanser Verlag, München (1989) 251.
- [107] **1989** Shen, Y.Q., H. Lindenberger, H. Bleier, and S. Roth: "Transient Photoconductivity in PPV – Influence of the Conjugation Length on Transport and Recombination", In: *Electronic Properties of Conjugated Polymers* (Kirchberg III), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **91**, Springer Verlag Heidelberg (1989) 96.
- [108] **1989** Shen, Y.Q., J. Reichenbach, and S. Roth: "Investigation of Transient Photocurrent in b-Carotene and Donor-Acceptor Substituted Polyene", In: *Electronic Properties of Conjugated Polymers* (Kirchberg III), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **91**, Springer Verlag Heidelberg (1989) 394.
- [109] **1989** Bleier, H.: "Phototransport in trans-Polyacetylene – a short Review", In: *Electronic Properties of Conjugated Polymers* (Kirchberg III), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **91**, Springer Verlag Heidelberg (1989) 80.
- [110] **1989** Hagen, S., H. Schier, S. Roth, and M. Hanack: "Langmuir-Blodgett Films from Donor-Acceptor Substituted Polyenes", In: *Electronic Properties of Conjugated Polymers* (Kirchberg III), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **91**, Springer Verlag Heidelberg (1989) 398.
- [111] **1991** Roth, S.: "Physical Properties of Conducting Polymers", *Chim. Ind. (Milan)*. **73** (1991) 385.
- [112] **1989** Roth, S., H. Bleier, and W. Pukacki: "Charge Transport in Conductive Polymers", *Faraday Discussion of the Chemical Society* **88** (1989) 223.
- [113] **1989** Roth, S.: "Conducting Polymers and Intercalation", *Synthetic Metals* **34** (1989), 617.
- [114] **1989** Joss, W., J.M. van Ruitenbeek, I.D. Vagner, F. Jost, F. Rachdi, and S. Roth: "Electronic Structure of AsF₅ Intercalated Graphite from de Haas-van Alphen Measurements", *Synthetic Metals* **34** (1989) 381.
- [115] **1989** Plocharski, J.: "Super-molecular structure of polyacetylenes and electrical conductivity", In: *Electronic Properties of Conjugated Polymers* (Kirchberg III), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **91**, Springer Verlag Heidelberg (1989) 24.
- [116] **1989** Schreck, M., D. Schmeisser, W. Göpel, H. Schier, H.-U. Habermeier, S. Roth, and L. Dulog: "Interaction of metals with cadmium arachidate Langmuir-Blodgett films studies by X-ray photoelectron spectroscopy", *Thin Solid Films* **175** (1989) 95.

- [117]* 1989 Jost, F., D. Heitmann, Y. Yacoby, and S. Roth: "Intercalant Vibrations in a Graphite Intercalation Compound Observed by IR-Reflectivity", In: *Proceedings of the International Conference on Chemical and Electrochemical Insertion in Low Dimensional Compounds*, Frankreich, (1989).
- [118] 1991 Hagen, S., H. Schier, S. Roth, and M. Hanack: "Langmuir-Blodgett Films from Donor-Acceptor Substituted Polyenes", In: *Lower-Dimensional Systems and Molecular Electronics*, R.M. Metzger, P. Day, G.C. Papavassiliou (Eds.), *NATO ASI Series* (1991) 531, Plenum Press, New York.
- [119] 1991 Reichenbach, J., H. Bleier, Y.Q. Shen, and S. Roth: "Transient Photoconductivity in Oriented Conjugated Polymers", In: *Lower-Dimensional Systems and Molecular Electronics*, R.M. Metzger, P. Day, G.C. Papavassiliou (Eds.), *NATO ASI Series* (1991) 415, Plenum Press, New York.
- [120] 1990 Bloor, D., M. Hanack, A. Le Méhauté, J.P. Raabe, S. Roth, and H. Sassabe: "Molecular Electronic Prospects", In: *Conjugated Polymeric Materials: Opportunities in Electronics, Optoelectronics, and Molecular Electronics*, J.L. Bredas, R.R. Chance (eds.), *NATO ASI Series E: Applied Sciences* **182** (1990) 587, Kluwer Academic Publishers, Dordrecht.
- [121] 1990 Roth, S., J. Anders, and J. Reichenbach: "Transient Photoconductivity in Polyacetylene and Molecular Electronic Aspects", In: *Conjugated Polymeric Materials: Opportunities in Electronics, Optoelectronics, and Molecular Electronics*, J.L. Bredas, R.R. Chance (eds.), *NATO ASI Series E: Applied Sciences* **182** (1990) 293, Kluwer Academic Publishers, Dordrecht.
- [122] 1989 Roth, S.: "Physical Concepts and Technological Aspects of Electrically Conducting Polymers", *Rendiconti del Seminario Matematico e Fisico di Milano* **LIX** (1989) 197.
- [123] 1990 Plochanski, J., W. Pukacki, and S. Roth: "Conductivity of Doped Polyacetylenes and Their Morphology", *Synthetic Metals* **37** (1990) 7-12.
- [124] 1992 Rachdi, F., F. Jost, D. Dominguez, and S. Roth: "Shubnikov-de Haas oscillations in stage-1 AsF₅ intercalated graphite", *Synthetic Metals* **48** (1991) 161.
- [125]* Roth, S., W. Pukacki, D. Schäfer-Siebert, and R. Zuzok: "Electrical Conductivity of Conducting Polymers", to be published in *M. Aldissi (Ed.): "Science and Technology of Conducting Polymers"*, CRC Press
- [126] 1990 Roth, S.: "Evaluation of Conjugated Polymers as Materials for Molecular Electronics", *Material Science Forum* **62-64** (1990) 403.
- [127] 1990 Roth, S. and M. Filzmoser: "Conducting Polymers – Thirteen Years of Polyacetylene Doping", *Advanced Materials* **2** (1990) 356-360.
- [128] 1991 Reichenbach, J., J. Anders, S. Roth, I. Belaish, and D. Davidov: "Phototransport in Ladder Type Polymers", *Molecular Crystals and Liquid Crystals* **194** (1991) 317.
- [129] 1991 Roth, S.: "Conductive Polymers in Molecular Electronics – Conductivity and Photoconductivity", In: *Science and Applications of Conducting Polymers*, W.R. Salaneck, D.T. Clark, E.J. Samuelsen (Eds.), Adam Hilger, IOP Publishing Ltd., Bristol, Philadelphia, New York (1991) 129.

- [130]* 1990 Plochanski, J., W. Pukacki, and S. Roth: "DC Conductivity of Stretch Oriented Polyacetylene Doped with Iodine", *Material Science, Proceedings of the Conference in Wroclaw, Poland* (1990).
- [131] 1992 Roth, S.: "Mechanisms of electrical conductivity in doped polymers", *Publication Series of the Japanese-German Center Berlin* **6** (1992) 99.
- [132] 1991 Filzmoser, M. and S. Roth: "Photoinduced Absorption Investigations on Donor-Acceptor Polyenes", *Synthetic Metals* **41** (1991) 1263-1266.
- [133] 1991 Wagner, Th., S. Hagen, H. Schier, and S. Roth: "Langmuir-Blodgett-Films of Donor-Acceptor-Substituted Polyenes", *Synthetic Metals* **41-43** (1991) 1519-1522.
- [134] 1991 Hagen, S., S. Roth, and M. Hanack: "Synthesis of Donor-Acceptor Substituted Polyenes", *Synthetic Metals* **41-43** (1991) 1557-1561.
- [135] 1991 Pellegrin, E., H. Fritzsche, N. Nücker, J. Fink, S.L. Drechsler, J. Malek, K. Meerholz, J. Heinze, and S. Roth: "Electronic Structure of Conjugated Oligomers", *Synthetic Metals* **41** (1991) 1207.
- [136] 1991 Heywang, G. and S. Roth: „Radikalkationsalze des Tetramethylmercaptopyrens – neue, leicht zugängliche Verbindungen mit hoher elektrischer Leitfähigkeit und hervorragender Stabilität“, *Angewandte Chemie International Edition* **30** (1991) 176.
- [137] 1991 Roth, S.: "Conductive polymers for molecular electronics", In: *New Physical Problems in Electronic Materials*, M. Borissov, N. Kirov, J.M. Marshall, A. Vavrek (Eds.), *World Scientific Publishing, Singapore* (1991) 334-353.
- [138] 1990 Schreck, M., M. Abraham, W. Göpel, and H. Schier: "HREELS-studies of selectively deuterated cadmium-stearate Langmuir-Blodgett films", *Surface Science Letters* **237** (1990) L405-L410.
- [139] 1991 Zuzok, R., W. Pukacki, and S. Roth: "Electronic transport properties of stretch oriented "new", polyacetylene", *Synthetic Metals* **41-43** (1991) 197-200.
- [140] 1991 Meyer, E., L. Howald, R.M. Overney, H. Heinzelmann, J. Frommer, H.J. Güntherodt, Th. Wagner, H. Schier, and S. Roth: "Molecular-resolution images of Langmuir-Blodgett films using atomic force microscopy", *Nature* **349** (1991) 398.
- [141] 1991 Zuzok, R., A.B. Kaiser, W. Pukacki, and S. Roth: "Thermoelectric power and conductivity of iodine-doped "new", polyacetylene", *Journal of Chemical Physics* **95** (1991) 1270.
- [142] 1991 Zuzok, R., W. Pukacki, and S. Roth: "Influence of additional sp^3 -defects on thermopower of stretch oriented highly conductive new polyacetylene", *Synthetic Metals* **45** (1991) 405.
- [143] 1991 Schreck, M., H. Schier, and W. Göpel: "Thermodesorption of Langmuir-Blodgett films studied by mass spectroscopy", *Langmuir* **7** (1991) 2287.
- [144] 1991 Zuzok, R., S. Roth, and F. Kremer: "AC conductivity of highly conducting oriented polyacetylene and influence of sp^3 defects", *Synthetic Metals* **41-43** (1991) 193-196.

- [145] **1992** Wagner, Th., H. Schier, S. Hagen, S. Roth, S. Akari, and K. Dransfeld: "Langmuir-Blodgett-Films of Polyenes", In: *Electronic Properties of Polymers – Orientation and Dimensionality of Conjugated Systems* (Kirchberg IV), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **107**, Springer Verlag Heidelberg (1992) 443.
- [146] **1992** Pukacki W., R. Zuzok, S. Roth, and W. Göpel: "Charge transport and its anisotropy of pristine and segmented new $(CH)_x$ ", In: *Electronic Properties of Polymers – Orientation and Dimensionality of Conjugated Systems* (Kirchberg IV), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **107**, Springer Verlag Heidelberg (1992) 106.
- [147] **1992** Ahmed, M.T., S. Roth, and M.D. Migahed: "DC electrical anisotropy of stretchoriented polyacetylene: doping and temperature dependence", In: *Electronic Properties of Polymers – Orientation and Dimensionality of Conjugated Systems* (Kirchberg IV), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **107**, Springer Verlag Heidelberg (1992) 112.
- [148] **1992** Paasch, G., R. Zuzok, W. Pukacki, and S. Roth: "The general temperature dependence of the fluctuation-induced exciton current. Application to Naarmann-polyacetylene", In: *Electronic Properties of Polymers – Orientation and Dimensionality of Conjugated Systems* (Kirchberg IV), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **107**, Springer Verlag Heidelberg (1992) 102.
- [149] **1992** Bartl, A., R. Zuzok, S. Roth: "EPR studies of segmented polyacetylene", In: *Electronic Properties of Polymers – Orientation and Dimensionality of Conjugated Systems* (Kirchberg IV), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **107**, Springer Verlag Heidelberg (1992) 227.
- [150] **1992** Walsh, E., M. Cavanagh, Z.R. Tang, W. Blau, J. McGilp, T. Wagner, S. Hagen, S. Roth: "Second harmonic generation from Langmuir-Blodgett films of donor acceptor carotinoids", In: *Electronic Properties of Polymers – Orientation and Dimensionality of Conjugated Systems* (Kirchberg IV), H. Kuzmany, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **107**, Springer Verlag Heidelberg (1992) 209.
- [151] **1992** Ahmed, M.T., A.B. Kaiser, S. Roth, and M.D. Migahed: "Doping and temperature dependence of anisotropic conductivity in new polyacetylene", *Journal of Physics D: Applied Physics* **25** (1992) 79.
- [152] **1992** Wagner, Th., S. Hagen, S. Roth, S. Akari, and K. Dransfeld: "Structural Investigations of Donor-Acceptor-Substituted Polyenes", *Thin Solid Films* **210/211** (1992) 652.
- [153] **1991** Roth, S.: "Synthetic Metals in Tübingen", *Advanced Materials* **3** (1991) 164.
- [154] **1992** Zhu, Q., J.E. Fischer, R. Zuzok, and S. Roth: "Crystal structure of polyacetylene revisited: an X-ray study", *Solid State Communications* **83** (1992) 179.
- [155] **1991** G. Heywang, L. Born, and S. Roth: "New radical cation salts of substituted pyrenes", *Synthetic Metals* **41-43** (1991) 1073.

- [156]* 1991 Bartl, A., R. Zuzok, and S. Roth: „Charakterisierung von segmentiertem Polyacetylen mittels Elektronenspinresonanz“, *Tagungsband, 2. Symposium Materialforschung*, August 1991.
- [157] 1992 Roth, S.: “Microswitches in molecular electronics – from molecular conductors to molecular electronics”, *International Journal of Electronics* **73** (1992) 1019.
- [158] 1992 Reichenbach, J., M. Kaiser, J. Anders, H. Byrne, and S. Roth: “Picosecond Photoconductivity in $(\text{CH})_x$ measured by cross-correlation”, *Europhysics Letters* **18** (1992) 251.
- [159] 1992 Roth, S.: “The cellular automaton and shift register – concepts of electronics on a molecular level”, In: *Nanostructures Based on Molecular Materials*, W. Göpel, Ch. Ziegler (Eds.), VCH Weinheim (1992) 65.
- [160] 1992 Kaiser, M., J. Reichenbach, H.J. Byrne, J. Anders, W. Maser, S. Roth, A. Zahab, and P. Bernier: “Steady state photoconductive response of $\text{C}_{60}/\text{C}_{70}$ films”, *Solid State Communications* **81** (1992) 261-264.
- [161] 1992 Schaumburg, K., J.-M. Lehn, V. Goulle, S. Roth, H. Byrne, S. Hagen, J. Poplawski, K. Brunfeldt, K. Bechgaard, T. Bjornholm, P. Frederiksen, M. Jorgensen, K. Lerstrup, P. Sommer-Larsen, O. Goscinski, J.-L. Calais, and L. Eriksson: “Switching molecules for molecular electronics: Esprit BR Action”, In: *Nanostructures Based on Molecular Materials*, W. Göpel, Ch. Ziegler (Eds.), VCH Weinheim (1992) 153.
- [162] 1992 Kaiser, M., J. Reichenbach, H.J. Byrne, J. Anders, W. Maser, S. Roth, A. Zahab, and P. Bernier: “Photoconductivity of $\text{C}_{60}/\text{C}_{70}$ films”, *Synthetic Metals* **51** (1992) 251.
- [163] 1992 Maser W., S. Roth, J. Anders, J. Reichenbach, M. Kaiser, H. Byrne, H. Schier, M. Filzmoser, E. Sohmen, J. Fink, P. Bernier, A. Zahab, H.-U. Siehl, and M. Hanack: „p-type doping of C_{60} films“, *Synthetic Metals* **51** (1992) 103.
- [164] 1992 Bartl, A., J. Fröhner, T. Kniess, G. Domschke, R. Mayer, and S. Roth: “New charge-transfer complexes with polyconjugated sulfur compounds”, *Synthetic Metals* **51** (1992) 115.
- [165] 1992 Bartl, A., J. Fröhner, R. Zuzok, and S. Roth: “Characterization of segmented and highly oriented polyacetylene by electron spin resonance”, *Synthetic Metals* **51** (1992) 197.
- [166] 1992 Raptis, Y.S., D.W. Snoke, K. Syassen, S. Roth, P. Bernier, and A. Zahab: “Raman study of $\text{C}_{60}/\text{C}_{70}$ under pressure”, *High Pressure Research* **9** (1992) 41.
- [167] 1992 Reichenbach, J., M. Kaiser, J. Anders, H. Byrne, and S. Roth: “Picosecond photoconductivity in $(\text{CH})_x$ ”, *Synthetic Metals* **51** (1992) 245.
- [168] 1992 Schreck, M., M. Abraham, A. Lehmann, H. Schier, and W. Göpel: “Interaction of slow electrons with organic films: theoretical and experimental HREELS studies on selectively deuterated molecules”, *Surface Science* **262** (1992) 128.
- [169] 1993 Prigodin, V.N. and S. Roth: “The Anderson metal-insulator transition in quasi-1d systems: implication to polyacetylene”, *Synthetic Metals* **53** (1993) 237.

- [170] **1992** Roth, S., M. Kaiser, and J. Reichenbach: "Conductivity and photoconductivity of conducting polymers", *Physica Scripta T* **45** (1992) 230.
- [171]* **1992** Hamann, C. and S. Roth: "Molecular electronics", *Technische Universität Chemnitz*, Preprint Nr. **214/6** (1992).
- [172] **1994** Movaghar, B. and S. Roth: "Magnetotransport in polyacetylene", *Synthetic Metals* **63** (1994) 163.
- [173] **1993** Byrne, H.J., W.K. Maser, W.W. Rühle, A. Mittelbach, W. Hönle, H.G. von Schnering, B. Movaghar, and S. Roth: "Photoluminescence of solid state fullerenes", *Synthetic Metals* **54** (1993) 265.
- [174] **1993** Wagner, Th. And S. Roth: "Surface-plasmon-resonance investigations of Langmuir-Blodgett films of donor-acceptor substituted polyenes: linear optical and electro-optic properties", *Synthetic Metals* **54** (1993) 307.
- [175] **1993** Roth, S.: "On the control of electronic and optical properties for molecular electronic application", In: *Electricity and Magnetism in Biology and Medicine*, M. Blank (Ed.), San Francisco Press **179** (1993).
- [176] **1993** Byrne, H.J., W. Maser, W.W. Rühle, A. Mittelbach, W. Hönle, H.G. von Schnering, B. Movaghar, and S. Roth: "Time resolved photoluminescence of solid state fullerenes", *Chemical Physics Letters* **204** (1993) 461.
- [177] **1994** J. Plochanski, J., W. Pukacki, and S. Roth: "Conductivity study of stretch-oriented new polyacetylene", *Journal of Polymer Science B: Polymer Physics* **32** (1994) 447.
- [178]* **1992** Pukacki W., J. Plochanski, and S. Roth: "Anisotropy of charge transport properties in highly conductive oriented polyacetylene", In: *Proceedings of ERPOS-6*, Capri, May 1992.
- [179] **1993** Movaghar, B. and S. Roth: "Defect assisted high-field phototransport in highly oriented polyacetylene", *Synthetic Metals* **55-57** (1993) 4894.
- [180] **1993** Kaiser, M., W.K. Maser, H.J. Byrne, J. Reichenbach, J. Anders, A. Mittelbach, and S. Roth: "Steady State Photoconductivity of Fullerene Films", In: *Electronic Properties of Novel Materials: Fullerenes and Related Compounds* (Kirchberg V), H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **117**, Springer Verlag Heidelberg (1993) 418.
- [181] **1993** Poplawski, J., J. Anders, H.J. Byrne, S. Roth, P. Sommer-Larsen, M. Jörgensen, T. Björnholm, and K. Schaumburg: "Time resolved fluorescence and solvatochromism in donor-substituted bianthrones", *Synthetic Metals* **55-57** (1993) 307 (1993).
- [182] **1993** Anders, J., H.J. Byrne, J. Poplawski, S. Roth, P. Sommer-Larsen, T. Björnholm, M. Jörgensen, and K. Schaumburg: "Time resolved excited state spectroscopy of anthracene based photochromic systems", *Molecular Crystals and Liquid Crystals* **235** (1993) 231.
- [183] **1993** Bartl, A., J. Fröhner, and S. Roth: "Chain orientation in 'new', polyacetylene studied by electron spin resonance", *Synthetic Metals* **55-57** (1993) 613.

- [184] 1993 Anders, J., H.J. Byrne, J. Poplawski, S. Roth, T. Björholm, M. Jörgensen, P. Sommer-Larsen, and K. Schaumburg: "Excited state transient spectroscopy of anthracene based photochromic systems", *Synthetic Metals* **55-57** (1993) 4820.
- [185] 1993 Sommer-Larsen, P., T. Björholm, M. Jörgensen, K. Lerstrup, P. Frederiksen, K. Schaumburg, K. Brunfeldt, K. Bechgaard, S. Roth, J. Poplawski, H. Byrne, J. Anders, L. Eriksson, R. Wilbrandt, and J. Frederiksen: "A molecular switch involving large conformational changes. A theoretical study", *Molecular Crystals and Liquid Crystals* **234** (1993) 89.
- [186] 1993 Schmelzer, M., S. Roth, C.-P. Niesert, F. Effenberger, and R. Li: "Highly ordered LB films of DHAP: a donor acceptor substituted polyene", *Thin Solid Films* **235** (1993) 210.
- [187] 1992 Broo, A. and S. Hagen: "Characterization and improvements of presumptive molecular switch molecules", *Chemical Physics Letters* **196** (1992) 239.
- [188] 1993 Davey, A.P., H. Page, W. Blau, H.J. Byrne, and D.J. Cardi: "Linear and third order nonlinear optical properties of one dimensional organometallic systems", *Synthetic Metals* **57** (1993) 3980.
- [189] 1993 Roth, S. and W. Graupner: "Conductive polymers: Evaluation of industrial applications", *Synthetic Metals* **55-57** (1993) 3623.
- [190] 1993 Zuzok, R., P. Wzietek, M. Fourmigue, P. Batail, P. Auban-Senzier, S. Roth, and D. Jerome: "C₆₀ doped with organic cations: magnetic resonance measurements", *Synthetic Metals* **55-57** (1993) 3235.
- [191] 1993 Anders, J., H.J. Byrne, J. Reichenbach, M. Kaiser, M. Schmelzer, Th. Wagner, and S. Roth: "Transient spectroscopy of donor-acceptor complexes", *Berichte der Bunsen-Gesellschaft für Physikalische Chemie* **97** (1993) 483.
- [192] 1993 Byrne, H.J., W.K. Maser, W.W. Rühle, A. Mittelbach, and S. Roth: "Nonlinear luminescence phenomena in fullerene crystallites", *Applied Physics A* **56** (1993) 235.
- [193] 1993 Byrne, H.J., W.K. Maser, M. Kaiser, L. Akselrod, J. Anders, W.W. Rühle, X.-Q. Zhou, A. Mittelbach, and S. Roth: "Nonlinear phenomena in the highly excited state of C₆₀", In: *Electronic Properties of Novel Materials: Fullerenes and Related Compounds* (Kirchberg V), H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **117**, Springer Verlag Heidelberg (1993) 301.
- [194] 1993 Akselrod, L., H.J. Byrne, J. Callaghan, A. Mittelbach, and S. Roth: "Optical and SEM studies of morphology in C₆₀ films", In: *Electronic Properties of Novel Materials: Fullerenes and Related Compounds* (Kirchberg V), H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **117**, Springer Verlag Heidelberg (1993) 219.
- [195] 1993 Roth, S., J. Anders, H.J. Byrne: "Conducting polymers for molecular electronics", In: *Intrinsically Conducting Polymers: An Emerging Technology*, M. Aldissi (Ed.), *NATO ASI Series E: Applied Sciences* **246** (1993) 157, Kluwer Academic Publishers, Dordrecht.
- [196] 1991 Coter, F., E. Ehrenfreund, H. Bleier, and S. Roth: "Doping-induced and photoinduced absorption in b-carotene", *Chemtronics* **5** (1991) 145.

- [197] **1993** Werner, A.T., J. Anders, H.J. Byrne, W.K. Maser, M. Kaiser, A. Mittelbach, and S. Roth: "Broadband electroluminescence in Fullerene crystals", In: *Electronic Properties of Novel Materials: Fullerenes and Related Compounds* (Kirchberg V), H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), Springer Series in Solid State Sciences **117**, Springer Verlag Heidelberg (1993) 297.
- [198] **1993** Byrne, H.J., W.K. Maser, M. Kaiser, L. Akselrod, J. Anders, W.W. Rühle, X.-Q. Zhou, A. Mittelbach, and S. Roth: "Fullerenes in the highly excited state", *Applied Physics A* **57** (1993) 81.
- [199] **1993** Byrne, H.J., W.K. Maser, W.W. Rühle, A. Mittelbach, W. Hönle, H.G. von Schnering, B. Movaghar, and S. Roth: "Photoluminescence of solid state fullerenes", In: *Chemical Physics of Intercalation II*, P. Bernier, J.E. Fischer, S. Roth, S.A. Solin (Eds.), *Nato ASI Series B: Physics* **305** (1993) 239, Plenum Press, New York.
- [200] **1993** Schmelzer, M., S. Roth, P. Bäuerle, and R. Li: "Two dimensional arrangement of thiophene: highly ordered structures prepared by the LB technique", *Thin Solid Films* **229** (1993) 255.
- [201] **1993** Werner, A.T., J. Anders, H.J. Byrne, W.K. Maser, M. Kaiser, A. Mittelbach, and S. Roth: "Broadband electro-luminescent emission from fullerene crystals", *Applied Phys. A* **57** (1993) 157.
- [202] **1994** Pukacki W., J. Plochanski, and S. Roth: "Anisotropy of thermoelectric power of stretch oriented new polyacetylene", *Synthetic Metals* **62** (1994) 253.
- [203]* **1993** Roth, S., J. Anders, and H.J. Byrne: "Dynamics of light-induced changes in switching molecules", to appear in the *Proceedings of Korean Molecular Electronics*, April 1993
- [204] **1993** Kremer, R.K., T. Rabenau, W.K. Maser, M. Kaiser, A. Simon, M. Haluska, and H. Kuzmany: "High-temperature conductivity study on single-crystal C₆₀", *Applied Physics A* **56** (1993) 211.
- [205] **1993** Kaiser, M., W.K. Maser, H.J. Byrne, A. Mittelbach, and S. Roth: "Photoconductivity of thin film fullerenes; effect of oxygen and thermal annealing", *Solid State Communications* **87** (1993) 281.
- [206] **1993** Akselrod, L., H.J. Byrne, C. Thomsen, A. Mittelbach, S. Roth: "Raman studies of photochemical reactions in fullerene films", *Chemical Physics Letters* **212** (1993) 384.
- [207] **1993** Schmelzer, M., M. Burghard, P. Bäuerle, and S. Roth: "Detailed structural investigations of highly aligned LB structures of thiophene derivatives", *Synthetic Metals* **61** (1993) 97.
- [208] **1993** Anders J., H.J. Byrne, J. Poplawski, S. Roth, P. Sommer-Larsen, T. Björnholm, M. Jörgensen, and K. Schaumburg: "Influence of substitution on the electronic properties of bianthrones", *Synthetic Metals* **61** (1993) 177.
- [209] **1993** Byrne, H.J., W.K. Maser, M. Kaiser, W.W. Rühle, L. Akselrod, A.T. Werner, J. Anders, X.-Q. Zhou, G. Mahler, T. Kuhn, A. Mittelbach, and S. Roth: "Many-body effects in the highly excited state of fullerenes; comparison to indirect band gap semiconductors", *Applied Physics A* **57** (1993) 303.

- [210] **1994** Schmelzer, M., M. Burghard, P. Bäuerle, and S. Roth: "Structural information on thiophene LB heterostructures", *Thin Solid Films* **243** (1994) 620.
- [211] **1993** Byrne, H.J., L. Akselrod, C. Thomsen, A. Mittelbach, and S. Roth: "Raman studies of nonlinear phenomena in fullerene crystallites", *Applied Physics A* **57** (1993) 299.
- [212] **1993** Akselrod, L., H.J. Byrne, C. Thomsen, and S. Roth: "Reversible photochemical processes in Fullerenes: a Raman study", *Chemical Physics Letters* **215** (1993) 131.
- [213] **1994** Roth, S.: „Leitfähige Polymere – Physikalische Konzepte und praktische Anwendungen“, In: *Kunststoffmetallisierung und leitende Polymere – 15. Ulmer Gespräch*, DGO VDI-TZ, Eugen G. Leuze Verlag 1993, S. 65
Galvanotechnik – Leiterplatten-Technik **85** (11), 3618 (1994).
- [214] **1993** Bäuerle, P., G. Götz, M. Hiller, S. Scheib, T. Fischer, U. Segelbacher, M. Bennati, A. Grupp, M. Mehring, M. Stoldt, C. Seidel, F. Geiger, H. Schweizer, E. Umbach, M. Schmelzer, S. Roth, H.J. Engelhaaf, D. Oelkrug, P. Emele, and H. Port: „Design, synthesis, and assembly of new thiophene-based molecular functional units with controlled properties“, *Synthetic Metals* **61** (1993) 71.
- [215] **1995** Byrne, H.J., W.K. Maser, M. Kaiser, L. Akselrod, J. Anders, W.W. Rühle, X.-Q. Zhou, C. Thomsen, A.T. Werner, A. Mittelbach, and S. Roth: "Photophysical and photochemical processes in fullerenes under high intensity illumination", *Journal of Materials Processing Technology* **54** (1995) 149.
- [216] **1993** Kamaras, K., L. Akselrod, S. Roth, A. Mittelbach, W. Hönle, and H.G. von Schnering: "The orientational phase transition in C₆₀ films followed by infrared spectroscopy", *Chemical Physics Letters* **214** (1993) 338.
- [217] **1994** Byrne, H.J., W.K. Maser, M. Kaiser, L. Akselrod, W.W. Rühle, C. Thomsen, A. Mittelbach, and S. Roth: "Excited state phenomena in solid state fullerene", *Molecular Crystals and Liquid Crystals* **252** (1994) 49.
- [218] **1994** Schmelzer, M., M. Burghard, S. Roth, and P. Bäuerle: "New LB heterostructures containing electron donating and accepting molecules", *Molecular Crystals and Liquid Crystals* **253** (1994) 173.
- [219] **1994** Roth, S.: "Conducting polymers – physical concepts and practical applications", *Indian Journal of Chemistry A* **33** (1994) 453.
- [220] **1993** Reichenbach, J., M. Kaiser, and S. Roth: "Transient Picosecond Photoconductivity in Polyacetylene", *Physical Review B* **48** (1993) 14104.
- [221] **1994** Byrne, H.J., A.T. Werner, J. Anders, W.K. Maser, M. Kaiser, L. Akselrod, W.W. Rühle, A. Mittelbach, and S. Roth: "Nonlinear excited state phenomena and electro-luminescence in fullerene crystals", *Journal of Modern Optics* **41** (1994) 1243.
- [222] **1994** Burghard, M., M. Schmelzer, S. Roth, and W. Göpel: "A new LB film forming molecule containing both an electro- and photoactive part", *Molecular Crystals and Liquid Crystals* **252** (1994) 39.
- [223] **1993** Graupner, W. and S. Roth: "Industrial applications of conducting polymers", *Materials Science Forum* **122** (1993) 229 .

- [224]* [Leditzky, G., J. Reichenbach, S. Roth, G. Leising: "Picosecond photoconduction of p-phenylene type materials", *Europhysics Letters*, submitted](#)
- [225] **1994** Akselrod, L., H.J. Byrne, C. Thomsen, and S. Roth: "A Study of reversible photochemical phenomena in C₆₀", *Molecular Crystals and Liquid Crystals* **256** (1994) 833.
- [226] **1994** Werner, A.T., H.J. Byrne, D. O'Brien, and S. Roth: "Electroluminescence in fullerene crystals", *Molecular Crystals and Liquid Crystals* **256** (1994) 795.
- [227] **1994** Byrne, H.J., A.T. Werner, D. O'Brien, W.K. Maser, M. Kaiser, L. Akselrod, W.W. Rühle, and S. Roth: "Nonlinear optical and transport processes in fullerenes", *Molecular Crystals and Liquid Crystals* **256** (1994) 259.
- [228] **1994** Byrne, H.J., A.T. Werner, D. O'Brien, and S. Roth: "Nonlinear transient photoconductive response of fullerene crystals", In: *Progress in Fullerene Research*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), World Scientific Publishing, Singapore (1994) 426.
- [229] **1994** Werner, A.T., H.J. Byrne, D. O'Brien, and S. Roth: "An investigation of time resolved electroluminescence in fullerene crystals", In: *Progress in Fullerene Research*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), World Scientific Publishing, Singapore (1994) 435.
- [230] **1994** Akselrod, L., H.J. Byrne, and S. Roth: "An analysis of annealed C₆₀ films", In: *Progress in Fullerene Research*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), World Scientific Publishing, Singapore (1994) 70.
- [231] **1994** Maser, W.K., H.J. Byrne, M. Kaiser, W.W. Rühle, L. Akselrod, A.T. Werner, J. Anders, X.-Q. Zhou, G. Mahler, T. Kuhn, A. Mittelbach, and S. Roth: "Light-induced insulator to metal transition in fullerenes", In: *Progress in Fullerene Research*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), World Scientific Publishing, Singapore (1994) 421.
- [232] **1994** Akselrod, L., H.J. Byrne, and S. Roth: "Annealed C₆₀ films: investigation by X-ray diffraction and spectroscopy", In: *Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials*, K.M. Kadish, R.S. Ruoff (Eds.), The Electrochemical Society, Pennington, NJ (1994).
- [233] **1994** Anderson, T. and S. Roth: "Conducting polymers – electrical transport and current applications", *Brazilian Journal of Physics* **24** (1994) 746.
- [234] **1994** Schmelzer, M., M. Burghard, C.M. Fischer, P. Bäuerle, H. Schier, S. Roth, and W. Göpel: "Organized metal/organic film/metal heterostructures: a way towards molecular electronic devices?", *Synthetic Metals* **67** (1994) 281.
- [235] **1994** Burghard, M., C.M. Fischer, M. Schmelzer, S. Roth, P. Haisch, and M. Hanack: "Well organized phthalocyanine Langmuir-Blodgett films incorporated into symmetrical (metal/thin organic film/metal)-sandwich structures", *Synthetic Metals* **67** (1994) 193.

- [236] **1994** Byrne, H.J., A.T. Werner, W.K. Maser, M. Kaiser, L. Akselrod, W.W. Rühle, and S. Roth: "Nonlinear optical and transport properties in fullerene crystals and their relationship to crystal structure", In: *Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials*, K.M. Kadish, R.S. Ruoff (Eds.), The Electrochemical Society, Pennington, NJ (1994).
- [237] **1993** Davey, A.P., H.J. Byrne, H. Page, W. Blau, and D.J. Cardin: "Nonlinear optical studies of group 10 transition metal-Thienyl systems", *Synthetic Metals* **58** (1993) 161.
- [238] **1995** Fischer, C.M., M. Burghard, and S. Roth: "Molecular rectification in organic quantum wells", *Synthetic Metals* **71** (1995) 1975.
- [239] **1995** Schmelzer, M., M. Burghard, C.M. Fischer, S. Roth, and W. Göpel: "With organized metal/organic film/metal heterostructures towards molecular electronic devices", *Synthetic Metals* **71** (1995) 2087.
- [240] **1996** Akselrod, L., H.J. Byrne, M. Kaiser, and S. Roth: "Structural alteration and chemical stability of heat treated C₆₀ films", *Synthetic Metals* **70** (1996) 1427.
- [241] **1995** Werner, A.T., H.J. Byrne, and S. Roth: "Structural aspects of electroluminescence in fullerene crystals", *Synthetic Metals* **70** (1995) 1409.
- [242] **1994** Werner, A.T., H.J. Byrne, D. O'Brien, and S. Roth "Electroluminescence in Fullerene Crystals", In: *Fullerenes and Photonics*, Z.H. Kafafi (Ed.), Proceedings of SPIE – The International Society for Optical Engineering **2284** (1994) 183.
- [243] **1994** Byrne, H.J., A.T. Werner, W.K. Maser, M. Kaiser, L. Akselrod, W.W. Rühle, and S. Roth: "Nonlinear Optical and Transport Properties of Fullerene Crystals", In: *Fullerenes and Photonics*, Z.H. Kafafi (Ed.), Proceedings of SPIE – The International Society for Optical Engineering **2284** (1994) 160.
- [244] **1995** Akselrod, L., H.J. Byrne, S. Donovan, and S. Roth: "A raman analysis of C₆₀ at low temperatures: a study of molecular and crystal-field effects", *Chemical Physics* **192** (1995) 307.
- [245] **1995** Akselrod, L., H.J. Byrne, T.E. Sutto, S. Roth: "Structure and Properties of Thermally Annealed Fullerene Films", *Chemical Physics Letters* **233** (1995) 436.
- [246] **1994** Fischer, C.M., M. Burghard, S. Roth, and K. von Klitzing: "Organic quantum wells: molecular rectification and single electron tunneling", *Europhysics Letters* **28** (1994) 129.
- [247] **1995** Rabenau, T., S. Roth, R.K. Kremer: "The influence of oxygen impurities on the electrical properties of the fullerene C₆₀", *Acta Physica Polonica A* **87** (1995) 881.
- [248] **1995** Anderson, T., L. Akselrod, C.M. Fischer, S. Roth: "Rectification in fullerene (C₆₀)-phthalocyanine thin film sandwich structures", *Acta Physica Polonica A* **87** (1995) 877.
- [249] **1994** Burghard, M., M. Schmelzer, S. Roth, P. Haisch, and M. Hanack: "Langmuir-Blodgett-Film formation of a series of peripherally octasubstituted metallophthalocyanines", *Langmuir* **10** (1994) 4265.

- [250] **1995** Park, H., E.B. Park, Y.W. Park, N.W. Song, S.K. Kim, J. Anders, and S. Roth: "Photoinduced absorption of the oxygen free C₆₀ film", *Synthetic Metals* **70** (1995) 1401.
- [251] **1995** Roth, S., W. Graupner, and P. McNeillis: "Survey of industrial applications of conducting polymers", *Acta Physica Polonica A* **87** (1995) 699.
- [252] **1994** Werner, A.T., H.J. Byrne, D. O'Brien, S. Roth: "A Time Resolved Study of Electroluminescence in Fullerene Crystals", In: *Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials*, K.M. Kadish, R.S. Ruoff (Eds.), The Electrochemical Society, Pennington, NJ (1994).
- [253] **1995** Byrne, H.J., L. Akselrod, A.T. Werner, W.K. Maser, M. Kaiser, W.W. Rühle, and S. Roth: "Nonlinear Optical and Transport Properties of Fullerene Crystals", In: *Science and Technology of Fullerene Materials*, P. Bernier, D.S. Bethune, L.Y. Chiang, T.W. Ebbesen, R.M. Metzger, J.W. Mintmire (Eds.), MRS Symposium Proceedings Series **359** (1995) 451.
- [254] **1995** Werner, A.T., G. Grem, H.J. Byrne, G. Leising, and S. Roth: "Electroluminescence in conjugated polymers and fullerenes", *Materials Science Forum* **191** (1995) 195.
- [255] **1995** Fischer, C.M., M. Burghard, and S. Roth: "Micro- and nanoelectronic aspects in conjugated systems", *Materials Science Forum* **191** (1995) 149.
- [256] **1995** Byrne, H.J., W.K. Maser, W.W. Rühle, and S. Roth: "Temperature dependent excited state relaxation processes in C₇₀ thin films", In: *Physics and Chemistry of Fullerenes and Derivatives*, H. Kuzmany, J. Fink, M. Mehring, S. Roth, World Scientific Publishing, Singapore (1995) 274.
- [257] **1995** Eickelkamp, T., S. Roth: "Photoconductivity detected ESR on undoped C₆₀ films", In: *Physics and Chemistry of Fullerenes and Derivatives*, H. Kuzmany, J. Fink, M. Mehring, S. Roth, World Scientific Publishing, Singapore (1995) 258.
- [258] **1995** Werner, A.T., H.J. Byrne, and S. Roth: "Electroluminescence and charge transport in C₆₀", In: *Physics and Chemistry of Fullerenes and Derivatives*, H. Kuzmany, J. Fink, M. Mehring, S. Roth, World Scientific Publishing, Singapore (1995) 266.
- [259] **1995** Byrne, H.J.: "Optical properties of fullerenes", In: *Physics and Chemistry of Fullerenes and Derivatives*, H. Kuzmany, J. Fink, M. Mehring, S. Roth, World Scientific Publishing, Singapore (1995) 183.
- [260] **1996** Abou-Elazab, T.F., M.D. Migahed, H. Park, Y.W. Park, P. MacNeillis, T. Rabenau, and S. Roth: "Magnetoresistance of Polypyrrole and Polyacetylene", *Synthetic Metals* **76** (1996) 281.
- [261] **1996** Fischer, C.M., M. Burghard, S. Roth, and K. von Klitzing: "Novel tunneling experiments on organic heterostructures", *Surface Science* **361/362** (1996) 905.
- [262] **1996** Fischer, C.M., M. Burghard, and S. Roth: "Dark- and photoconductivity of asymmetric gold/(Langmuir-Blodgett-film)/gold tunnel junctions", *Synthetic Metals* **76** (1996) 237.

- [263] **1996** Burghard, M., C.M. Fischer, S. Roth, U. Schlick, and M. Hanack: "Charge transport in ultrathin Langmuir-Blodgett film devices: HOMO-mediated tunneling?" *Synthetic Metals* **76** (1996) 241.
- [264] **1995** Roth, S. and H.J. Mair: „Elektrisch leitende Kunststoffe“, *Gummi, Fasern, Kunststoffe* **48** (1995) 634.
- [265] **1995** Fischer, C.M., M. Burghard, S. Roth, and K. von Klitzing: "Microstructured gold/Langmuir-Blodgett film/gold tunneling junctions", *Applied Physics Letters* **66** (1995) 3331.
- [266] **1995** Mair, H.J. and S. Roth: „Elektrisch leitende Kunststoffe“, *Plastverarbeiter* **46** (1995) 56.
- [267] **1997** Byrne, H.J., A.T. Werner, and S. Roth: "Electroluminescence and Photoluminescence in Fullerene", In: *Organic Electroluminescent Materials and Devices*, S. Miyata, H.S. Nalwa (Eds.), Gordon & Breach Science Publishers, Amsterdam (1997) 263.
- [268] **1995** Burghard, M., C.M. Fischer, M. Schmelzer, S. Roth, M. Hanack, and W. Göpel: "Perylene derivative Langmuir-Blodgett films for use as ultrathin charge transport barriers", *Chemistry of Materials* **7** (1995) 2104.
- [269] **1996** Werner, A.T., H.J. Byrne, and S. Roth: "Luminescence properties of fullerene", *Fullerene Science and Technology* **4** (1996) 757.
- [270] Roth, S., M. Burghard, C.M. Fischer: "Resonant tunneling and molecular rectification in Langmuir-Blodgett films", in *"Molecular Electronics"*, ed. By J. Jortner and M.A. Ratner, Oxford: Blackwell Science, **255**
- [271] **1997** Curran, S., A. Stark-Hauser, and S. Roth: "Polyacetylene", In: *Handbook of Organic Conductive Molecules and Polymers – Conductive Polymers: Synthesis and Electrical Properties*, H.S. Nalwa (Ed.), John Wiley **2** (1997) 1, Chichester, England.
- [272] **1996** Roth, S., S. Blumentritt, M. Burghard, C.M. Fischer, C. Müller-Schwanneke, and G. Philipp: "Langmuir-Blodgett micro-sandwiches", In: *Materials and Measurements in Molecular Electronics*, K. Kajimura, S. Kuroda (Eds.), Springer Proceedings in Physics **81** (1996) 99, Springer-Verlag, Tokyo.
- [273] **1996** Chen, X.H., X.J. Zhou, and S. Roth: "Raman scattering in Calcium-doped C₆₀", *Physical Review B* **54** (1996) 3971.
- [274] **1996** Curran, S. and S. Roth: "The complex nature of fullerenes", In: *Fullerenes and Fullerene Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), World Scientific Publishing, Singapore (1996) 3.
- [275] **1996** Curran, S., D.N. Weldon, A.P. Davey, T. Eickelkamp, W. Blau, and S. Roth: "Doping and photoconductive behaviour induced by C₆₀ in an insulating polymer matrix", In: *Fullerenes and Fullerene Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), World Scientific Publishing, Singapore (1996) 468.
- [276] **1996** Eickelkamp, T., S. Curran, S. Roth: "Electron spin resonance dependent photoconductivity of undoped polycrystalline C₆₀ and C₇₀ films", In: *Fullerenes and Fullerene Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), World Scientific Publishing, Singapore (1996) 564.

- [277] 1996 Chen, X.H. and S. Roth: "Effects of mechanical grinding on C_{60} and Ca_5C_{60} superconductor", *Fullerene Science and Technology* **4** (1996) 613.
- [278] 1997 Roth, S., S. Blumentritt, M. Burghard, C.M. Fischer, G. Philipp, and C. Müller-Schwanneke: "Charge transport in LB microsandwiches", *Synthetic Metals* **86** (1997) 2415.
- [279] 1997 Roth, S., S. Blumentritt, M. Burghard, C.M. Fischer, C. Müller-Schwanneke, J. Muster, and G. Philipp: "Molecular rectification", In: *Atomic and Molecular Wires*, C. Joachim, S. Roth (Eds.), Kluwer Academic Publisher, Dordrecht (1997) 109.
- [280] 1997 Roth, S., S. Blumentritt, M. Burghard, S. Curran, C.M. Fischer, G. Düsberg, C. Müller-Schwanneke, and J. Muster: "pi-conjugated materials for molecular electronics", In: *Polymers and Organic Solids*, L. Shi (Ed.), Science Press, Beijing (1997) 263.
- [281] 1996 Kamata, T., S. Curran, S. Roth, T. Fukaya, H. Matsuda, and F. Mizukami: "Third-order nonlinear optical properties of evaporated thin films of platinum-alkyldionedioxime complexes: effects of metal-metal distance", *Synthetic Metals* **83** (1996) 267.
- [282] 1998 Eickelkamp, T., M. Mehring, and S. Roth: "Electrically detected magnetic resonance in photoexcited fullerenes", *Molecular Physics* **95** (1998) 967.
- [283] 1996 Giannini, C., L. Tapfer, M. Sauvage-Simkin, Y. Garreau, N. Jedrecy, M.B. Veron, R. Pinchaux, M. Burghard, and S. Roth: "Molecular packing in new Langmuir-Blodgett systems investigated by X-ray specular reflectivity and grazing incidence X-ray diffraction", *Thin Solid Films* **288** (1996) 272.
- [284] 1997 Park, H., Y.S. Choi, Y.W. Park, C.K. Park, J.-I. Jin, G. Kaiser, and S. Roth: "Steady state photoconductivity of Poly(2-styryl-1,4-phenylene vinylene) (PSPV)", *Synthetic Metals* **84** (1997) 965.
- [285] 1997 Kranzelbinder G., H.J. Byrne, S. Hallstein, S. Roth, and G. Leising: "Picosecond-spectroscopy and hyperlinear photoluminescence in poly(para-phenylene)-type ladderpolymer", *Synthetic Metals* **84** (1997) 629.
- [286] 1996 Curran, S., S. Roth, A.P. Davey, A. Drury, and W. Blau: "Photoconduction and photovoltaic effects from a conjugated polymer poly-tert-butyl-isothionaphthalene", *Synthetic Metals* **83** (1996) 239.
- [287] nicht belegt
- [288] 1998 Curran, S., D. L. Carroll, P. M. Ajayan, Ph. Redlich, S. Roth, M. Rühle, and W. Blau: "Picking needles from nano-haystacks", *Advanced Materials* **10** (1998) 311.
- [289] 1998 Carroll, D.L., Ph. Redlich, X. I, J.-C. Charlier, S. Curran, P.M. Ajayan, S. Roth, and M. Rühle: "Effects of Nanodomain Formation on the Electronic Structure of Doped Carbon Nanotubes", *Physical Review Letters* **81** (1998) 2332-2335.
- [290] 1997 Curran, S., S. Roth, P. Kinlen, S. Raman, D.L. Carroll, Ph. Redlich, M. Rühle, and P.M. Ajayan: "STM Manipulation of Individual Nanotubes", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), *World Scientific* (1997) 423-426.

- [291] **1997** Carroll, D.L., P. Kinlen, S. Raman, Ph. Redlich, M. Rühle, X. I, J.-C. Charlier, S. Curran, S. Roth, and P.M. Ajayan: "Boron-doped nanotubes. Density of states from tunneling spectroscopy", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), *World Scientific* (1997) 477.
- [292] **1998** Carroll, D.L. P. Redlich, P. M. Ajayan, S. Curran, S. Roth, and M. Rühle: "Spatial variations in the electronic structure of pure and B-doped nanotubes", *Carbon* **36** (1998) 753.
- [293] **1998** Jantoljak, H., U. Kuhlmann, C. Thomsen, S. Curran, S. Roth, W. Maser, C. Journet, and P. Bernier: "Micro-Raman spectra of single- and multiwalled carbon nanotubes *Molecular Crystals and Liquid Crystals Science and Technology*", *Molecular Materials* **10** (1998) 145.
- [294] **1997** Liu, K., C. Johnston, J.H. Chu, S. Roth, Bo Zhang, and M. Wan: "Measurement of Doping Concentration in Boron-Doped Diamond Film from Capacitance Spectroscopy", *Journal of Applied Physics* **82** (1997) 286-290.
- [295] **1998** Burghard, M., G. Philipp, C. Müller-Schwanneke, S. Roth: "Formation of gold particles at a functional LB film/gold interface leading to Coloumb blockade phenomena", *Synthetic Metals* **94** (1998) 141.
- [296] **1998** Burghard, M., G. Philipp, S. Roth, K. von Klitzing, and G. Schmid: "Chemical Functionalisation and Arrangement of Ultrasmall Gold Clusters in Langmuir-Blodgett Films", *Optical Materials* **9** (1998) 401-405.
- [297] **1998** Roth, S., S. Blumentritt, M. Burghard, E. Cammi, D. Carrol, S. Curran, G. Duesberg, K. Liu, J. Muster, G. Philipp, and T. Rabenau: "Molecular Rectifiers and Transistors Based on p-conjugated Materials", *Synthetic Metals* **94** (1998) 105-111.
- [298] **1998** Duesberg, G.S., M. Burghard, J. Muster, G. Philipp, and S. Roth: "Separation of Carbon Nanotubes by Size Exclusion Chromatography", *Chem. Communications* (1998) 435-436.
- [299] **1998** Kaiser, A.B., G. Duesberg, and S. Roth: "Heterogeneous Model for Conduction in Carbon Nanotubes", *Phys. Rev. B* **57** (1998) 1418-1421.
- [300] **1997** Kranzelbinder, G., H. J. Byrne, S. Hallstein, S. Roth, G. Leising, and U. Scherf: "Picosecond spectroscopy and hyperlinear photoluminescence in poly(para-phenylene)-type ladder polymers", *Physical Review B* **56** (1997) 1632.
- [301] **1998** Itoh, E., H. Kokubo, M. Iwamoto, M. Burghard, S. Roth, and M. Hanack: "Electrostatic Phenomena in pi-conjugated LB films on metal electrodes", *Japanese Journal of Applied Physics* **37** (1998) 577.
- [302] **1998** Giannini, C., L. Tapfer, M. Burghard, S. Roth: "Structural stability of exicon)silico)molybdate and tungstophosphate Langmuir-Blodgett multilayers", *Materials Science and Engineering C* **5** (1998) 179.
- [303] **1998** Blumentritt, S., M. Burghard, S. Roth, and H. Nejo: "Self-Assembly and Scanning Tunneling Microscopy Investigation of Cyanine Fibers on Conducting Substrates", *Surface Science* **397** (1998) L280-L284.
- [304] **1997** Roth, S.: "Solitons in Polyacetylene", Proceedings of Graduiertenkolleg Wuppertal *Lecture Notes in Physics* (1997) 1-18.

- [305] **1997** Graupner, W., S. Roth, and P. McNeillis: "Applications of conjugated polymers", Proceedings of Graduiertenkolleg Wuppertal *Lecture Notes in Physics* (1997).
- [306] **1997** Jantoljak, H., C. Thomsen, S. Curran, S. Roth, W. Maser, C. Journet, P. Bernier: "Raman spectroscopy on carbon ", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), *World Scientific* (1997) 459.
- [307] **1998** Burghard, M., G. Duesberg, G. Philipp, J. Muster, and S. Roth: "Controlled Adsorption of Carbon Nanotubes on Chemically Modified Electrode Arrays", *Advanced Materials* **10** (1998) 584-588.
- [308] **1998** Burghard, M., G. Philipp, S. Roth, and K. von Klitzing: "Bridging of Lateral Nanoelectrodes with a Metal Particle Chain", *Applied Physics A* **67** (1998) 591-593.
- [309] **1998** Roth, S., S. Blumentritt, M. Burghard, O. Jaschinski, K. Liu, J. Muster, G. Philipp, F. Zha, P. Redlich, D. L. Carrol, P. M. Ajayan, S. Curran and G. Duesberg: "Density of States and Tunneling Spectroscopy on Molecular Nanostructures", *Thin Solid Films* **331** (1998) 45-50.
- [310] **1998** Roth, S., M. Burghard, and G. Leising : "Molecular Materials for Electronic and Optical Applications", *Current Opinion in Solid State and Materials Science* **3** (1998) 209-215.
- [311] **1998** Burghard, M., G. Philipp, S. Roth, K. von Klitzing, R. Pugin, and G. Schmid: "Multilayered Langmuir-Blodgett Films of Thiol-Substituted Gold Clusters", *Advanced Materials* **10** (1998) 842-845.
- [312] nicht belegt
- [313] **1998** Muster, J., M. Burghard, S. Roth, G.S. Duesberg, E. Hernandez, and A. Rubio: "SFM Characterization of Individual Carbon Nanotubes on Electrode Arrays", *Journal of Vacuum Science and Technology B* **16** (1998) 2796-2801.
- [314] **2000** Liu, K., S. Roth, G.S. Duesberg, G.T. Kim, D. Popa, K. Mukhopadhyay, R. Doome, and J.B. Nagy: "Antilocalization in Multiwalled Carbon Nanotubes", *Physical Review B* **61** (2000) 2375-2379.
- [315] **1998** Duesberg, G.S., J. Muster, V. Krstic, M. Burghard, and S. Roth: "Chromatographic Size Separation of Single-Wall Carbon Nanotubes", *Applied Physics A* **67** (1998) 117-119.
- [316] **1998** Blumentritt, S., M. Burghard, and S. Roth: "Self-Assembly of Ropes of Cyanine Dye Molecules", In: *Progress in Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 1998. AIP Conference Proceedings **442** (1998) 460-463.
- [317] **1998** Krstic, V., G. S. Duesberg, J. Muster, M. Burghard, and S. Roth: "Langmuir-Blodgett Films of Matrix-Diluted Single-Walled Carbon Nanotubes", *Chemistry of Materials* **10** (1998) 2338-2340.
- [318] **1998** Duesberg, G.S., J. Muster, V. Krstic, M. Burghard, and S. Roth: "Chromatographic Purification and Size Separation of Carbon Nanotubes", In: *Progress in Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 1998. AIP Conference Proceedings **442** (1998) 39-43.

- [319] **1998** Burghard, M., J. Muster, G.S. Duesberg, G. Philipp, V. Krstic, and S. Roth: "Assembling Techniques for Micellar Dispersed Carbon Single-Walled Nanotubes", In: *Progress in Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 1998. AIP Conference Proceedings **442** (1998) 44-49.
- [320] **1998** Philipp, G., M. Burghard, and S. Roth: "Transmission Electron Microscopy and Electrical Transport Investigations Performed on the Same Single-Walled Carbon Nanotube", In: *Progress in Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 1998. AIP Conference Proceedings **442** (1998) 74-78.
- [321] **1999** Philipp, G., C. Müller-Schwanneke, M. Burghard, S. Roth, and K. v. Klitzing: "Gold cluster formation at the interface of a gold/Langmuir-Blodgett film/gold microsandwich resulting in Coulomb charging phenomena", *Journal of Applied Physics* **85** (1999) 3374.
- [322] **1998** Liu, K., S. Roth, G.S. Duesberg, G.-T. Kim, and M. Schmid: "Electrical Transport in Carbon Nanotubes", In: *Progress in Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 1998. AIP Conference Proceedings **442** (1998) 61-64.
- [323] **1998** Kim, G.T., E.S. Choi, D.C. Kim, D.S. Suh, Y.W. Park, K. Liu, G. Duesberg, and S. Roth: "Magnetoresistance of an Entangled Single-Wall Carbon-Nanotube Network", *Physical Review B* **58** (1998) 16064-16069.
- [324] **1998** Roth, S.: „Ladungstrennung in polymeren Halbleitern“, *Chemie in unserer Zeit* **3** (1998).
- [325] **1999** Kaiser, A.B., Y.W. Park, G.T. Kim, E.S. Choi, G. Duesberg, and S. Roth: "Electronic Transport in Carbon Nanotube Ropes and Mats", *Synthetic Metals* **103** (1999) 2547-2550.
- [326] **1999** Kim, G.T., J.G. Park, Y.W. Park, K. Liu, G. Duesberg, and S. Roth: "2-D Localization in Single Wall Carbon Nanotube Network Synthesized by Arc-Plasma Method", *Synthetic Metals* **103** (1999) 2551-2554.
- [327] **1999** Liu, K., S. Roth, G. Duesberg, M. Wagenhals, C. Journet, and P. Bernier: "Transport Properties of Single-Walled Carbon Nanotubes", *Synthetic Metals* **103** (1999) 2513-2514.
- [328] **1999** Duesberg, G.S., W. Blau, H.J. Byrne, J. Muster, M. Burghard, and S. Roth: "Chromatography of Carbon Nanotubes", *Synthetic Metals* **103** (1999) 2484-2485 (1999).
- [329] **1999** Burghard, M., V. Krstic, G.S. Duesberg, G. Philipp, J. Muster, S. Roth, C. Journet, and P. Bernier: "Carbon SWNTs as Wires and Structural Templates between Nanoelectrodes", *Synthetic Metals* **103** (1999) 2540-2542 (1999).
- [330] **1998** Roth, S. and K. Liu : „Fullerene“, In: „Lexikon der Physik – Band?“, Spektrum Akademischer Verlag, Heidelberg (1998) 426-428.
- [331] **1999** Burghard, M., C. Müller-Schwanneke, G. Philipp, and S. Roth: "Coulomb Blockade Phenomena in Ultrathin Langmuir-Blodgett Sandwich Junctions", *Journal of Physics: Condensed Matter* **11** (1999) 2993-3002.

- [332] **1999** Kim, G.T., J.G. Park, Y.W. Park, C. Müller-Schwanneke, M. Wagenhals, and S. Roth: "Nonswitching van der Pauw Technique Using Two Different Modulating Frequencies", *Review of Scientific Instruments* **70** (1999) 2177-2178.
- [333] **1999** Kim, G.T., M. Burghard, D.S. Suh, K. Liu, J.G. Park, S. Roth, and Y.W. Park: "Conductivity and Magnetoresistance of Polyacetylene Fiber Network", *Synthetic Metals* **105** (1999) 207-210.
- [334] **2001** Kim, G.T., S.H. Jhang, J.G. Park, Y.W. Park, and S. Roth: "Non-ohmic current-voltage characteristics in single-wall carbon nanotube network", *Synthetic Metals* **117** (2001) 123-126.
- [335] **1999** Baughman, R.H., C. Cui, A.A. Zakhidov, Z. Iqbal, J.N. Barisci, G.M. Spinks, G.G. Wallace, A. Mazzoldi, D. De Rossi, A.G. Rinzler, O. Jaschinski, S. Roth, and M. Kertesz: "Carbon Nanotube Actuators", *Science* **284** (1999) 1340-1344.
- [336] **1999** Yu. , A. Kasumov, R. Deblock, M. Kociak, B. Reulet, H. Bouchiat, I.I. Khodos, Yu.B. Gorbatov, V.T. Volkov, C. Journet, and M. Burghard: "Supercurrents through single-walled carbon nanotubes", *Science* **284** (1999) 1508.
- [337] **1999** Muster, J., G.S. Duesberg, S. Roth, and M. Burghard: "Application of Scanning Force Microscopy in Nanotube Science", *Applied Physics A* **69** (1999) 261-267.
- [338] **1999** Muster, J., V. Krstic, M. Burghard, and S. Roth: "Vanadium Pentoxide Nanowires", In: *Science and Technology of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 1999. AIP Conference Proceedings **486** (1999) 221-225.
- [339] **1999** Duesberg, G.S., J. Muster, H.J. Byrne, S. Roth, and M. Burghard: "Towards Processing of Carbon Nanotubes for Technical Applications", *Applied Physics A* **69** (1999) 269-274.
- [340] **2000** Krstic, V., J. Muster, G.S. Duesberg, G. Philipp, M. Burghard, and S. Roth: "Electrical Transport in Single-Walled Carbon Nanotube Bundles Embedded in Langmuir-Blodgett Monolayers", *Synthetic Metals* **110** (2000) 245-249.
- [341] **1999** Thomsen, C., S. Reich, H. Jantoljak, I. Loa, K. Syassen, M. Burghard, G.S. Duesberg, and S. Roth: "Raman spectroscopy on single- and multi-walled nanotubes under high pressure", *Applied Physics A* **69** (1999) 309.
- [342] **1999** Liu, K., M. Burghard, S. Roth, and P. Bernier: "Charge Transport in Carbon Nanotube Transistors", In: *Science and Technology of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 1999. AIP Conference Proceedings **486** (1999) 407-410.
- [343] **1999** Duesberg, G.S., W.J. Blau, H.J. Byrne, J. Muster, M. Burghard, and S. Roth: "Experimental Observation of Individual Single-Wall Nanotube Species by Raman Microscopy", *Chemical Physics Letters* **310** (1999) 8-14.
- [344] **2000** Kim, G.T., J. Muster, V. Krstic, J.G. Park, Y.W. Park, S. Roth, and M. Burghard: "Field-Effect Transistor Made of Individual V₂O₅ Nanofibers", *Applied Physics Letters* **76** (2000) 1875-1877.

- [345] **2000** Muster, J., G.T. Kim, V. Krstic, J.G. Park, Y.W. Park, S. Roth, and M. Burghard: "Electrical Transport Through Individual Vanadium Pentoxide Nanowires", *Advanced Materials* **12** (2000) 420-424.
- [346] **1999** Roth, S., C. Journet, A. Quintel, and M. Schmid : „Nanoröhrchen“, In: *Lexikon der Physik – Band?*, Spektrum Akademischer Verlag, Heidelberg (1999).
- [347] **1999** Duesberg, G.S., J. Muster, M. Burghard, H.J. Byrne, and S. Roth: "Surface Enhanced Raman Spectroscopy of Single Wall Carbon Nanotubes", In *Science and Technology of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring and S. Roth *AIP*, New York, 338-341 (1999).
- [348] **1999** Liu, K., M. Burghard, S. Roth, and P. Bernier: "Conductance Spikes in Single-Walled Carbon Nanotube Field-Effect Transistor", *Applied Physics Letters* **75** (1999) 2494-2496.
- [349] **2000** Zha, F.-X., R. Czerw, D.L. Carroll, Ph. Kohler-Redlich, B.-Q. Wei, A. Loiseau, and S. Roth: "Scanning Tunneling Microscopy of Chromium-Filled Carbon Nanotubes: Tip Effects and Related Topographic Features", *Physical Review B* **61** (2000) 4884-4889 .
- [350] **2000** Coleman, J.N., A.B. Dalton, S. Curran, A. Rubio, A.P. Davey, A. Drury, B. McCarthy, B. Lahr, P.M. Ajayan, S. Roth, R.C. Barkie, and W.J. Blau: "Phase separation of Carbon Nanotubes and Turbostatic Graphite using a Functional Organic Polymer", *Advanced Matererials* **12** (2000) 213.
- [351] **2000** Holzinger, M., A. Hirsch, P. Bernier, G.S. Duesberg, and M. Burghard: "A new purification method for single-wall carbon nanotubes (SWNTs)", *Applied Physics A* **70** (2000) 599.
- [352] nicht belegt
- [353] **2000** Choi, K.H., J.P. Bourgoïn, S. Auvray, D. Esteve, G.S. Duesberg, S. Roth, and M. Burghard: "Controlled deposition of carbon nanotubes on a patterned substrate", *Surface Science* **462** (2000) 195-202.
- [354] **2000** Mews, A., F. Koberling, T. Basche, G. Philipp, G.S. Duesberg, S. Roth, and M. Burghard: "Raman imaging of Single Carbon Nanotubes", *Advanced Materials* **12** (2000) 1210.
- [355] **2000** Kamata, T., T. Kodzasa, H. Ushijima, K. Yamamoto, T. Ohta, and S. Roth: "Fabrication of a Superstructured One-dimensional Alloy in a Thin Film Using Bis(dimethylglyoximate)metal(II)", *Chemistry of Materials* **12** (2000) 940-945.
- [356] **2000** Duesberg, G.S., I. Loa, M. Burghard, K. Syassen, and S. Roth: "Polarised Raman Spectroscopy on isolated single-wall carbon nanotubes", *Physical Review Letters* **85** (2000) 5436-5439.
- [357] **2001** Kristic, V., G.T. Kim, J.G. Park, D.S. Suh, Y.W. Park, S. Roth, and M. Burghard: "Role of the metal in contacting Single-Walled Carbon Nanotubes", In: *Electronic Properties of Novel Materials – Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2000. *AIP Conference Proceedings* **544** (2000) 367-370.

- [358] **2001** Holzinger, M., A. Hirsch, P. Bernier, G.S. Duesberg, and M. Burghard: "Novel Purification Procedure and Derivatization Method of Single-Walled Carbon Nanotubes", In: *Structural and Electronic Properties of Molecular Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2001. AIP Conference Proceedings **591** (2001) 246-249.
- [359] **2001** Philipp, G., M. Burghard, and S. Roth: "CdSe Nanoparticle Arrays Contacted on Electron Transparent Substrates", In: *Electronic Properties of Novel Materials – Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2000. AIP Conference Proceedings **544** (2000) 437-440.
- [360] **2000** Itoh, E., M. Iwamoto, M. Burghard, and S. Roth: "Ultraviolet Photoelectron Spectroscopy and Surface Potential of p-conjugated Langmuir-Blodgett Films on Gold Metal Electrode", *Japanese Journal of Applied Physics* **39** (2000) 5146-5150.
- [361] **2000** Gu, G., P.P. Ong, C. Chen, and S. Roth: "Synthesis and characterization of $Y_2O_3:Eu^{3+}$ thin films on silicon substrate by pulsed laser ablation", *Journal of Physics D: Applied Physics* **33** (2000) 1263-1266.
- [362] **2000** Krstic, V., S. Roth, and M. Burghard: "Phase breaking in three-terminal contacted single-walled carbon nanotube bundles", *Physical Review B* **62** (2000) R16353-16355.
- [363] **2000** Reich, S., C. Thomsen, G.S. Duesberg, and S. Roth: "Intensities of the Raman active modes in single and multiwall nanotubes", *Physical Review B* **63** (2000) R41401-41404.
- [364] **2001** Zha, F.-X., D.L. Carroll, R. Czerw, A. Loiseau, H. Pascard, W. Clauss, and S. Roth: "Electronic effects in scanning tunneling microscopy of dendritic, Cr-filled carbon nanotubes", *Physical Review B* **63** (2001) 165432.
- [365] **2000** Roth, S.: „Nobelpreise 2000 – Chemie: leitende Kunststoffe“, *Chemie in unserer Zeit* **6** (2000) 394-395.
- [366] **2001** Hirscher, M., M. Becher, M. Haluska, U. Dettlaff-Weglikowska, A. Quintel, G.S. Duesberg, Y.-M. Choi, P. Downes, M. Hulman, S. Roth, I. Stepanek, and P. Bernier: "Hydrogen Storage in sonicated carbon materials", *Applied Physics A* **72** (2001) 129-132.
- [367] **2001** Gu, G., G. Philipp, X. Wu, M. Burghard, A.M. Bittner, and S. Roth: "Growth of Single-Walled carbon nanotubes from Microcontact-printed Catalytic Patterns on Thin Si_3N_4 Membranes", *Advanced Functional Materials* **11** (2001) 295-298.
- [368] **2001** Gu, G., M. Burghard, G. Philipp, G.S. Duesberg, P.-W. Chiu, G.T. Kim, A. Minett, W. Han, and S. Roth: "Fabrication of Multiwalled Carbon Nanotubes on Patterned Electrodes", In: *Structural and Electronic Properties of Molecular Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2001. AIP Conference Proceedings **591** (2001) 265-238.
- [369] **2001** Gu, G., M. Burghard, G.T. Kim, G.S. Duesberg, P.-W. Chiu, V. Krstic, S. Roth, and W. Han: "Growth and Electrical Transport of Germanium Nanowires", *Journal of Applied Physics* **90** (2001) 5747.

- [370] **2001** McIntosh, G.C., G.T. Kim, J.G. Park, V. Krstic, S. Roth, and Y.W. Park: "Observation of peak splitting in the Coulomb blockade regime of a carbon nanotube rope", *Current Applied Physics* **1** (2001) 321-325.
- [371] **2001** Roth, S., M. Burghard, V. Krstic, K. Liu, J. Muster, G. Philipp, G.T. Kim, J.G. Park, and Y.W. Park: "Quantum Transport in molecular nanowire transistors", *Current Applied Physics* **1** (2001) 56-60.
- [372] **2001** Fraysse, J., A.I. Minett, O. Jaschinski, C. Journet, and S. Roth : « Les nanotubes de carbone comme transducteurs electro-mecaniques », Le Vide No. 300-2/4-2001, *Nanotubes* (2001) 229-234.
- [373] **2001** Fraysse, J., A.I. Minett, G. Gu, S. Roth, A.G. Rinzler, and R.H. Baughman: "Towards the Demonstration of Actuator Properties of a Single Carbon Nanotube", *Current Applied Physics* **1** (2001) 407-411.
- [374] **2002** COMELCAN Fraysse, J., A.I. Minett, O. Jaschinski, G.S. Duesberg, and S. Roth: "Carbon nanotubes acting like actuators", *Carbon* **40** (2002) 1735.
- [375] **2002** no Dalton, A.B., W.J. Blau, H.J. Byrne, J.N. Coleman, G. Duesberg, M. in het Panhuis, A. Maiti, B. McCarthy, and S. Roth: "Non-Destructive Purification and Processing of Carbon nanotubes", *Recent Advances in Applied Physics* **6** (2002) 327.
- [376] **2001** Kim, G.-T., U. Waizmann, and S. Roth: "Simple efficient coordinate markers for investigating synthetic nanofibers", *Applied Physics Letters* **79** (2001) 3497.
- [377] **2002** Minett, A., K. Atkinson, and S. Roth: "Carbon Nanotubes", Handbook of Porous Solids ed. By Schüth, Sing and Weitkamp, WILEY-VCH **3** (2002) 1923-1960.
- [378] **2001** Roth, S.: „Leuchtdioden aus Nanostäbchen“, *Physikal Journal* **57** (2001) 17.
- [379] **2002** no Krstic, V., S. Roth, M. Burghard, K. Kern, and G.L.J.A. Rikken: "Magneto-chiral anisotropy in charge transport through single-walled carbon nanotubes", *Journal of Chemical Physics* **117** (2002) 11315-11319.
- [380] **2002** no Krstic, V. and G.L.J.A. Rikken: "Magneto-chiral anisotropy of the free electron on a helix", *Chemical Physics Letters* **364** (2002) 51-56.
- [381] [nicht belegt](#)
- [382] **1998** Liu, K., B. Zhang, M. Wan, J. H. Chu, C. Johnston, and S. Roth: "Measurement of electron affinity in boron-doped diamond from capacitance spectroscopy", *Applied Physics Letters* **70** (1998) 2891-2893.
- [383] **2002** BMB+F & VDI Hirscher, M., M. Becher, M. Haluska, A. Quintel, V. Skákalová, Y.M. Choi, U. Dettlaff-Weglikowska, S. Roth, I. Stepanek, P. Bernier, A. Leonhardt, and J. Fink: "Hydrogen storage in carbon nanostructures", *Journal of Alloys and Compounds* **330-332** (2002) 654.
- [384] **2001** Chiu, P.-W., G.Gu, G.-T. Kim, G. Philipp, S. Roth, S.F. Fang, and S. Yang: "Temperature Induced Change from p to n Conduction in Metallofullerene Nanotube Peapods", *Applied Physics Letters* **79** (2001) 3845.

- [385] **2002** AvH; National Program for Tera-level Nanodevices of the Ministry of Science and Technology (MOST, Korea); Defense Advanced Projects Agency No. N00173-99-2000 Kim, G.T., G. Gu, U. Waizmann, and S. Roth: "Simple method to prepare individual suspended nano-fibers", *Applied Physics Letters* **80** (2002) 1815.
- [386] **2001** Atkinson, K., S. Roth, M. Hirscher, and ?.Grünwald: "Carbon Nanostructures – an efficient medium for Hydrogen Storage?", *Fuel Cells Bulletin* **4** (2001) 9-12.
- [387] **2001** Hirscher, M., M. Becher, M. Haluska, U. Dettlaff, A. Quintel, V. Skakalova, P. Downes, M. Hulman, S. Roth, I. Stepanek, P. Bernier, J. Fink, and M. Kappes: "Hydrogen Storage in Carbon Nanostructures – a Critical Review", *Materials Week* (2001).
- [388] **2001** Minett, A.I., J. Fraysse, G. Gu, and S. Roth: "Practical Considerations for Demonstration of a Single-Walled Carbon Nanotube Actuator", In: *Structural and Electronic Properties of Molecular Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2001. AIP Conference Proceedings **591** (2001) 585-589.
- [389] **2001** Schmid, M., S. Krämer, M. Mehring, S. Roth, M. Haluska, and P. Bernier: "Hydrogen Storage in Fragmented Carbon Nanotubes: ¹H NMR", In: *Structural and Electronic Properties of Molecular Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2001. AIP Conference Proceedings **591** (2001) 598-602.
- [390] **2001** Haluska, M., M. Hulman, M. Hirscher, A. Becher, S. Roth, I. Stepanek, and P. Bernier: "Hydrogen Storage in Mechanically Treated Single Wall Carbon Nanotubes", In: *Structural and Electronic Properties of Molecular Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2001. AIP Conference Proceedings **591** (2001) 603-608.
- [391] **2001** Krstic, V., S. Roth, M. Burghard, and K. Kern: "Carbon Nanotubes in the Coulomb-Blockade Regime connected to Superconducting Leads", In: *Structural and Electronic Properties of Molecular Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2001. AIP Conference Proceedings **591** (2001) 405-408.
- [392] **2001** Dettlaff, U. and S. Roth: "Simple and efficient purification of single-walled carbon nanotubes", In: *Structural and Electronic Properties of Molecular Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2001. AIP Conference Proceedings **591** (2001) 171-174.
- [393] **2001** Park, J.G., G.T. Kim, V. Krstic, B. Kim, S.H. Lee, S. Roth, M. Burghard, and Y.W. Park: "Nanotransport in polyacetylene single fiber: Toward the intrinsic properties", *Synthetic Metals* **119** (2001) 53-56.
- [394] **2001** Park, J.G., G.T. Kim, V. Krstic, S.H. Lee, B. Kim, S. Roth, M. Burghard, and Y.W. Park: "Gating effect in the I-V characteristics of iodine doped polyacetylene nanofibers", *Synthetic Metals* **119** (2001) 469-470.
- [395] **2001** Park, J.G., G.T. Kim, J.H. Park, H.Y. Yu, G. McIntosh, V. Krstic, S.J. Jhang, B. Kim, S.H. Lee, M. Burghard, S. Roth, and Y.W. Park: "Quantum Transport in low-dimensional organic nanostructures", *Thin Solid Films* **393** (2001) 161-167.

- [396] **2001** Chiu, P.-W., G.T. Kim, G. Gu, G. Phillip, and S. Roth: "Electrical Transport through Carbon Nanotube Junction", In: *Structural and Electronic Properties of Molecular Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2001.
AIP Conference Proceedings **591** (2001) 368-371.
- [397] **2003** Defense Advanced Projects Agency No. N00173-99-2000; MDA 972-02-C-0005; AvH81 Gu, G., M. Schmid, P.W. Chiu, A. Minett, J. Fraysse, G.T. Kim, and S. Roth: "V₂O₅ nanofibre sheet actuators", *Nature Materials* **2** (2003) 316-320.
- [398] **2001** Duesberg, G.S., I. Loa, H.J. Byrne, K. Syassen, W. Blau, and S. Roth: "Raman Characterisation of Individual Single Wall Nanotubes", In: *Structural and Electronic Properties of Molecular Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2001.
AIP Conference Proceedings **591** (2001) 308-314.
- [399] **1998** Knechtel, W.H., G.S. Duesberg, W.J. Blau: "Spring-like Behaviour of Carbon Nanotubes Observed by Transmission Electron Microscopy", In: *Progress in Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 1998.
AIP Conference Proceedings **???** (1998) 97-100
- [400] **1998** Knechtel, W.H., G.S. Duesberg, W.J. Blau, E. Rubio, and A. Hernandez: "Reversible bending of carbon nanotubes using a transmission electron microscope", *Applied Physics Letters* **73** (1998) 1961-1963.
- [401] **2001** Ferrer-Anglada, N., J.A. Gorri, J. Muster, K. Liu, M. Burghard, and S. Roth: "Electrical Transport and AFM microscopy on V₂O_{5-x}-polyaniline nanorods", *Materials Science & Engineering C* **15** (2001) 237-239.
- [402] **2002** no Kim, G.T., J. Muster, M. Burghard, and S. Roth. Soft reverse current-voltage characteristics in V₂O₅ nanofiber junctions", In: *Making Functional Materials with Nanotubes*, P. Nikolaev, P. Bernier, P. Ajayan, Y. Iwasa (Eds.), Materials Research Society, Warrendale, PA, 2002.
American Institute of Physics, New York, USA, 2003.
Materials Research Society Symposium Proceedings **706** (2002) V.13.4.
- [403] **2002** no Chen, X., U. Dettlaff, M. Haluska, M. Hulman, M. Hirscher, M. Becher, and S. Roth: "Pressure Isotherms of Hydrogen Adsorption in Carbon Nanostructures", In: *Making Functional Materials with Nanotubes*, P. Nikolaev, P. Bernier, P. Ajayan, Y. Iwasa (Eds.), Materials Research Society, Warrendale, PA, 2002.
American Institute of Physics, New York, USA, 2002.
Materials Research Society Symposium Proceedings **706** (2002) Z.9.1.
- [404] **2002** Defense Advanced Research Projects No. N00173-99-2000; COMELCAN Minett, A., J. Fraysse, G. Gang, G.T. Kim, and S. Roth: "Nanotube actuators for nanomechanics", *Current Applied Physics* **2** (2002) 61.
- [405] Gu, G., P.W. Chiu, G.T. Kim, G. Philipp, and S. Roth: "N-type Semiconducting Single-walled Carbon Nanotubes Resulting from Metallofullerene Doping", *Physical Review B*.
- [406] **2002** Roth, S., K. Atkinson, and H.J. Mair: „Leitende Kunststoffe in Philadelphia, Seoul und Esslingen“, Gummi, Abestos, Kunststoffe **55** (2002) 2, Das Gupta Verlag.

- [407] **2002** no Roth, S., V. Krstic, and G.L. Rikken: "Quantum transport in carbon nanotubes", *Current Applied Physics* **2** (2002) 155.
- [408] **2001** no Atkinson, K., J. Fraysse, G. Gu, G.-T. Kim, A. Minett, and S. Roth: "Suspension bridges from individual carbon nanotubes". In: *MPI Annual Report*, Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany (2001) 27.
- [409] **exicon exicon "nanotubes"**
- [410] **exicon exicon "fullerenes"**
- [411] **nicht belegt**
- [412] **2000** Roth S., A. Minett, R. Baughman, and O. Jaschinski: "Actuators from Carbon Nanotubes", Conference Proceedings of the 7th International Conference on New Actuators; Bremen, Germany, June 19-21, 2000.
- [413] **2002** no Roth, S., K. Atkinson, and H.J. Mair: „Leitende Kunststoffe in Philadelphia, Seoul und Esslingen“, *Gummi, Asbestos, Kunststoffe* **55** (2002) 2.
- [414] **2002** DAAD; SATUNET Chiu, P.W., G.S. Duesberg, U. Dettlaff-Weglikowska, and S. Roth: "Interconnection of carbon nanotubes by chemical functionalization", *Applied Physics Letters* **80** (2002) 3811.
- [415] **2003** no Atkinson, K. and S. Roth: "Carbon Nanotubes – Quantum Wires to Artificial Muscles". In: *Braunschweigische Wissenschaftliche Gesellschaft, Jahrbuch 2002*, J. Cramer Verlag, Braunschweig, Germany 2003, p. 125.
- [416] **2002** BMBF; VDI Skákalová, V., A. Quintel, Y.M. Choi, S. Roth, M. Becher, and M. Hirscher: "Chemical processes during solid state reaction of carbon with alkali salts prepared for gravimetric hydrogen storage measurements", *Chemical Physics Letters* **365** (2002) 333.
- [417] **2002** HEA; EU-TMR project COMELCAN Kilbride, B.E., J.N. Coleman, J. Fraysse, P. Fournet, M. Cadek, A. Drury, S. Hutzler, S. Roth, and W.J. Blau: "Experimental observation of scaling laws for alternating current and direct current conductivity in polymer-carbon nanotube composite thin films", *Journal of Applied Physics* **92** (2002) 4024.
- [418] **2002** ARMY Research Office No. 2000-ARG-0041; AvH; No. GG, WQH Gu, G., B. Zheng, W.Q. Han, S. Roth, and J. Liu: "Tungsten oxide nano-wires on tungsten substrates", *Nano Letters* **2** (2002) 849.
- [419] **nicht belegt**
- [420] **nicht belegt**
- [421] **nicht belegt**
- [422] **2002** DARPA No. MDA 972-02-C-005 Roth, S. and R.H. Baughman: "Actuators of individual carbon nanotubes", *Current Applied Physics* **2** (2002) 311.
- [423] **2002** no Haluska, M., M. Hirscher, M. Becher, U. Dettlaff-Weglikowska, X. Chen, and S. Roth: "Hydrogen Storage in Carbon SWNTs: Atomic or Molecular", In: *Structural and Electronic Properties of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2002. AIP Conference Proceedings **633** (2002) 601.

- [424] **2002** no Czerw, R., P.-W. Chiu, Y.-M. Choi, D.-S. Lee, D.L. Carroll, S. Roth, and Y.-W. Park: "Substitutional Doping of Carbon Nanotubes", In: *Structural and Electronic Properties of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2002.
AIP Conference Proceedings **633** (2002) 86.
- [425] **2002** no Kristic, V., J. Weis, and S. Roth: "Electronical Transport through Single Walled Carbon Nanotubes in Perpendicular Oriented Magnetic Fields", In: *Structural and Electronic Properties of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2002.
AIP Conference Proceedings **633** (2002) 255.
- [426] **2002** no Hulman, M., H. Kuzmany, G.-T. Kim, and S. Roth: "A Raman Study on Free Standing Carbon Nanotubes", In: *Structural and Electronic Properties of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2002.
AIP Conference Proceedings **633** (2002) 310.
- [427] **2002** no Chiu, P.-W., G.S. Duesberg, U. Dettlaff-Weglikowska, and S. Roth: "Towards Carbon Nanotubes In-Plane Transistors", In: *Structural and Electronic Properties of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2002.
AIP Conference Proceedings **633** (2002) 517.
- [428] **2002** no Benoit, J.M., G. Gu, G.T. Kim, A. Minett, R. Baughman, and S. Roth: "Actuators of Individual Carbon nanotubes", In: *Structural and Electronic Properties of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2002.
AIP Conference Proceedings **633** (2002) 588.
- [429] **2002** no Schmid, M., C. Goze-Bac, S. Krämer, M. Mehring, S. Roth, and P. Bernier: "NMR investigations of hydrogen in carbon nanotubes", In: *Structural and Electronic Properties of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2002.
AIP Conference Proceedings **633** (2002) 593.
- [430] **2002** no Chen, X., U. Dettlaff-Weglikowska, M. Haluska, M. Hirscher, M. Becher, and S. Roth: "Hydrogen Storage in Nanostructured Carbon Materials at Room Temperature", In: *Structural and Electronic Properties of Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2002.
AIP Conference Proceedings **633** (2002) 597.
- [431] **2002** SATUNET;
COMELCAN Dettlaff-Weglikowska, U., J.M. Benoit, P.W. Chiu, R. Graupner, S. Lebedkin, and S. Roth: "Chemical functionalization of single walled carbon nanotubes", *Current Applied Physics* **2** (2002) 497.
- [432] [nicht belegt](#)
- [433] **1998** NAMITECH Muster, J., M. Burghard, S. Roth, G.S. Duesberg, E. Hernández and A. Rubio: „Scanning force microscopy characterization of individual carbon nanotubes on electrode arrays“, *Journal of Vacuum Science and Technology B* **16** (5) (1998), 2796-2801

- [434] **2003** INTAS No. N00-237;
STCU No. N1934 Karachevtsev, V.A., A.Yu. Glamazda, U. Dettlaff-Weglikowska, V.S. Kurnosov, E.D. Obratsova, A.V. Peschanskii, V.V. Eremenko, and S. Roth: "Raman spectroscopy of HiPCO single-walled carbon nanotubes at 300 and 5 K", *Carbon* **41** (2003) 1567-1574.
- [435] **2003** DGES;
RTN network Nos. HPRN-CT-
2000-00128 (COMELCAN);
RTD FET program SATUNET Kristic, V., S. Blumentritt, J. Muster, S. Roth, and A. Rubio: "Role of disorder on transport in boron-doped multiwalled carbon nanotubes", *Physical Review B* **67** (2003) 041401.
- [436] **2003** no Roth, S.: „Transistoren aus Kohlenstoffröhrchen“, *Physik Journal* **2** (2003) 10.
- [437] **2003** SATUNET;
DAAD;
Research Grant Council of
Hong Kong No. G-HK013/01 Chiu, P.W., S.F. Yang, G. Gu, and S. Roth: "Temperature dependence of conductance character in nanotube peapod", *Applied Physics A* **76** (2003) 463.
- [438] **2003** COMELCAN Schmid, M., S. Krämer, C. Goze, M. Mehring, S. Roth, and P. Bernier: "NMR investigations of hydrogen in carbon nanotubes", *Synthetic Metals* **135-136** (2003) 727.
- [439] nicht belegt
- [440] **2003** no Chiu, P.W., J.M. Benoit, R. Graupner, U. Dettlaff-Weglikowska, and S. Roth: "Formation and Transistor Behavior of Carbon Nanotube T-Junction", In: *Nanotube-Based Devices*, P. Bernier, D. Carroll, G.T. Kim, S. Roth (Eds.), Materials Research Society, Warrendale, PA, 2003. American Institute of Physics, New York, USA, 2003. Materials Research Society Symposium Proceedings **772** (2002) 179 (M8.1).
- [441] **2004** CARDECOM;
VEGA 1/0055/03 Skákalová, V., U. Dettlaff-Weglikowska, and S. Roth: "Gamma-irradiated and functionalized single wall nanotubes", *Diamond and Related Materials* **13** (2004) 296.
- [442] **2003** no Dettlaff-Weglikowska, U., V. Skákalová, R. Graupner, L. Ley, and S. Roth: "Modification of Electrical and Mechanical Properties of Single Wall Carbon Nanotubes by Reaction with SOCl₂", In: *Nanotube-Based Devices*, P. Bernier, D. Carroll, G.T. Kim, S. Roth (Eds.), Materials Research Society, Warrendale, PA, 2003. American Institute of Physics, New York, USA, 2003. Materials Research Society Symposium Proceedings **772** (2002) 179 (M3.1).
- [443] **2003** CARDECOM Dettlaff-Weglikowska, U., V. Skákalová, R. Graupner, L. Ley, and S. Roth: "Interconnection of Chemically Functionalized Single-Wall Carbon Nanotubes via Molecular Linkers", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003. AIP Conference Proceedings **685** (2003) 277.
- [444] **2003** MECD Ref. No. PR2002-0050 Ferrer-Anglada, N., M. Kaempgen, V. Skákalová, U. Dettlaff-Weglikowska, and S. Roth: "Raman Spectroscopy of Carbon Nanotube-Polyaniline and Functionalized CNT/SOCl₂ Films", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003. AIP Conference Proceedings **685** (2003) 273.

- [445] **2003** no Skákalová, V., M. Hulman, P. Fedorko, P. Lukác, and S. Roth: "Effect of Gamma-Irradiation on Single Wall Carbon Nanotube Paper", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003. AIP Conference Proceedings **685** (2003) 588.
- [446] **2003** no Reich, S., P. Ordejón, R. Wirth, J. Maultzsch, B. Wunder, H.J. Müller, C. Lathe, F. Schilling, U. Dettlaff-Weglikowska, S. Roth, and C. Thomsen: "Transforming single-walled carbon nanotubes into diamond", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003. AIP Conference Proceedings **685** (2003) 164.
- [447] **2003** INTAS No. N00-237; NATO No. PST.CLG.978 Stepanian, S.G., V.A. Karachetvsev, A.Yu Glamazda, U. Dettlaff-Weglikowska, and L. Adamowicz: "Combined Raman Scattering and Ab-initio Investigation of the Interaction Between Pyrene and Carbon SWNT", *Molecular Physics* **101** (2003) 2609.
- [448] **2003** Yu H.Y., D.S. Lee, S.H. Jhang, S.H. Lee, U. Dettlaff-Weglikowska, S.S. Kim, S.W. Lee, J.G. Park, S. Roth and Y.W. Park: "The electro-mechanically coupled quantum oscillations of C₆₀ inside a carbon nanotube" (2003)
- [449] **2003** DFG CL99/6-2 Croitoru, M.D., A. Höchst, G. Bertsche, S. Krauß, S. Roth, and D.P. Kern: "Single-step nanopatterning with a non-contact scanning force microscope by electrically induced local chemical vapour deposition", *Microelectronic Engineering* **67-68** (2003) 696.
- [450] **2004** Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung e.V. Vohrer, U., I. Kolaric, M.H. Haque, S. Roth, and U. Dettlaff-Weglikowska: "Carbon nanotube sheets for the use as artificial muscles", *Carbon* **42** (2004) 1159.
- [451] **2003** NSF No. DMR 0070661; AFOSR F49620-99-1-0173 Czerw, R., S. Webster, D.L. Carroll, S.M.C. Vieira, P.R. Birkett, C.A. Rego, and S. Roth: "Tunneling microscopy and spectroscopy of multiwalled boron nitride nanotubes", *Applied Physics Letters* **83** (2003) 1617.
- [452] **2003** BMBF; VDI Hirscher, M., M. Becher, M. Haluska, F. von Zeppelin, X. Chen, U. Dettlaff-Weglikowska, and S. Roth: "Are carbon nanostructures an efficient hydrogen storage medium?", *Journal of Alloys and Compounds* **356-357** (2003) 433-437.
- [453] nicht belegt
- [454] **2003** no Karachetvsev, V.A., A.Yu. Glamazda, U. Dettlaff-Weglikowska, V.S. Leontiev, A.V. Peschanskii, A.M. Plokhotnichenko, S.G. Stepanian, and S. Roth: "Noncovalent Functionalization of Single-Walled Carbon Nanotubes for biological Application: Raman and NIR Absorption Spectroscopy", In: *Proceedings of NATO Workshop "Frontiers in Spectroscopy of Emergent Materials"* **165** (2003) 139, Sudak (Crimea), Ukraine.
- [455] **2004** INKONAMI (FKZ: 13N 8402) Duesberg, G.S., R. Graupner, P. Downes, A. Minett, L. Ley, S. Roth, and N. Nicoloso: "Hydrothermal functionalisation of single-walled carbon nanotubes", *Synthetic Metals* **142** (2004) 263.
- [456] **2004** MYCT No. MAT2002-04264-C04-01 ; PR2002-0050 Ferrer-Anglada, N., M. Kaempgen, V. Skákalová, U. Dettlaff-Weglikowska, and S. Roth: "Synthesis and characterization of carbon nanotube-conducting polymer thin films", *Diamond and Related Materials* **13** (2004) 256.

- [457] **2003** no Becher, M., M. Haluska, M. Hirscher, A. Quintel, V. Skákalová, U. Dettlaff-Weglikowska, X. Chen, M. Hulman, Y. Choi, S. Roth, V. Meregalli, M. Parrinello, R. Ströbel, L. Jörissen, M.M. Kappes, J. Finke, A. Züttel, I. Stepanek, and P. Bernier. Hydrogen storage in carbon nanotubes », *Comptes Rendus Physique* **4** (2003) 1055.
- [458] **2003** KISTEP 98-I-01-04-A-026; MOST (Korea) & AFOSR F49620-99-1-0173; DFG; CONTACTY-Mexico W-8001 Choi, Y.-M., D.-S. Lee, R. Czerw, P.-W. Chiu, N. Grobert, M. Terrones, M. Reyes-Reyes, H. Terrones: "J.-C. Charlier, P.M. Ajayan, S. Roth, D.L. Carroll, and P.-W. Park: "Nonlinear Behavior in the Thermopower of Doped Carbon Nanotubes Due to Strong, Localized States", *Nano Letters* **3** (2003) 839.
- [459] nicht belegt
- [460] **2004** INTAS No. 00-237, 01-254; RFBR No. 03-03-32286^a Bulusheva, L.G., A. Okotrub, U. Dettlaff-Weglikowska, S. Roth, and M.I. Heggie: "Electronic structure and arrangement of purified HiPco carbon nanotubes", *Carbon* **42** (2004) 1095.
- [461] **2004** BMBF; COMELCAN Haluska, M., M. Hirscher, M. Becher, U. Dettlaff-Weglikowska, X. Chen, and S. Roth: "Interaction of hydrogen isotopes with carbon nanostructures", *Materials Science and Engineering B* **108** (2004) 130.
- [462] **2004** SATUNET No. IST-2000-26361 Zha, F.X., G. Bertsche, M. Croitoru, C. Kentsch, S. Roth, and D.P. Kern: "Observation of single-wall carbon nanotube rings by scanning tunnelling microscopy and spectroscopy", *Carbon* **42** (2004) 893.
- [463] **2002** no Panella, B., L. Kossykh, U. Dettlaff-Weglikowska, M. Hirscher, G. Zerbi, and S. Roth: "Volumetric Measurement of Hydrogen Storage in HCl-treated Polyaniline and Polypyrrole", *Fuel Chemistry Division Preprints* **47** (2002) 1.
- [464] **2004** EC-TMR network FUNCARS; ET-IHP network "fullerene-like materials" Glerup, M., J. Steinmetz, D. Samaille, O. Stephan, S. Enouz, A. Loiseau, S. Roth, and P. Bernier: "Synthesis of N-doped SWNT using the arc-discharge procedure", *Chemical Physics Letters* **387** (2004) 193.
- [465] nicht belegt
- [466] **2004** CARDECOM; DAAD Chiu, P.W., M. Kaempgen, and S. Roth: "Band-structure modulation in carbon nanotube T junctions", *Physical Review Letters* **92** (2004) 246802.
- [467] **2003** no Krstic, V., S. Roth, M. Burghard, J. Weis, and K. Kern: "Suppression of superconductor quasiparticle tunneling into single-walled carbon nanotubes", *Physical Review B* **68** (2003) 205402.
- [468] **2004** INKONAMI Meyer, J.C., D. Obergfell, S. Roth, S.H. Yang, and S.F. Yang: "Transmission electron microscopy and transistor characteristics of the same carbon nanotube", *Applied Physics Letters* **85** (2004) 2911.
- [469] **2004** no Bulusheva, L.G., A.V. Okotrub, T.A. Duda, E.D. Obraztsova, A.L. Chuvilin, E.M. Pazhetnov, A.I. Boronin, and U. Dettlaff-Weglikowska: "Electronic Structure of the Fluorinated HiPco Nanotubes", In: *Nanoengineered Nanofibrous Materials*, S. Guceri, Y.G. Gogotsi, V. Kuznetsov (Eds.), Kluwer Academic Publishers, Dordrecht, The Netherlands 2004. NATO Science Series II: Mathematics, Physics and Chemistry **169** (2004) 145-151.

- [470] **2002** KISTEP 98-I-01-04-A-026; MOST (Korea) AFOSR F49620-99-1-0176; DFG Czerw, R., P.W. Chiu, Y.M. Choi, D.S. Lee, D.L. Carroll, S. Roth, and Y.W. Park: "Substitutional boron-doping of carbon nanotubes", *Current Applied Physics* **2** (2002) 473.
- [471] nicht belegt
- [472] **2002** MIC (Korea), GCM-BK21 of MOE (Korea) McIntosh, G.C., G.T. Kim, J.G. Park, V. Krstic, M. Burghard, S.H. Jhang, S.W. Lee, S. Roth, and Y.W. Park: "Orientation dependence of magneto-resistance behaviour in a carbon nanotube rope", *Thin Solid Films* **417** (2002) 67.
- [473] **2002** no Rikken, G.L., E. Raupach, V. Krstic, and S. Roth: "Magnetochiral anisotropy", *Molecular Physics* **100** (2002) 1155.
- [474] nicht belegt
- [475] **2003** INTAS No. 00-237, 01-254; RFBR Nos. 03-03-32286^a, 03-03-32336^a Bulusheva, L.G., A.V. Okotrub, A.V. Gusel'nikov, U. Dettlaff-Weglikowska, and S. Roth: "Purification Effect on the Electronic State of Carbon in HiPco Nanotubes", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003. AIP Conference Proceedings **685** (2003) 108.
- [476] **2003** no Duesberg, G.S., S. Roth, P. Downes, A. Minett, R. Graupner, L. Ley, and N. Nicoloso: "Modification of single-walled carbon nanotubes by hydrothermal treatment", *Chemistry of Materials* **15** (2003) 3314.
- [477] **2003** no Hirscher, M., M. Becher, M. Haluska, F. von Zeppelin, X.H. Chen, U. Dettlaff-Weglikowska, and S. Roth: "Erratum to "Are carbon nanostructures an efficient hydrogen storage medium? [Journal of Alloys and Compounds **356-357**, (2003) 433-437]", *Journal of Alloys and Compounds* **361** (2003) 323.
- [478] **2003** QIPD-DF (EU project) Kaempgen, M., U. Dettlaff, and S. Roth: "Characterization of Carbon Nanotubes by optical spectra", *Synthetic Metals* **135-136** (2003) 755-756.
- [479] **2003** no Kaempgen, M. and S. Roth: "Transparent CNT Composites", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003. AIP Conference Proceedings **685** (2003) 554.
- [480] nicht belegt
- [481] nicht belegt
- [482] **2003** INTAS No. N00-237 Karachevtsev, V.A., A.Yu. Glamazda, U. Dettlaff-Weglikowska, V.S. Leontiev, A.M. Plokhhotnichenko, and S. Roth: "Spectroscopy Study of SWNT in Aqueous Solution With Different Surfactants", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003. AIP Conference Proceedings **685** (2003) 202.
- [483] **2003** no Krstic, V., S. Roth, M. Burghard, K. Kern, and G.L.J.A. Rikken: "The Electrical Magnetochiral Effect", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003. AIP Conference Proceedings **685** (2003) 169.
- [484] **2003** no Krstic, V., J. Weis, and S. Roth: "Magnetotransport through single-walled carbon nanotubes", *Synthetic Metals* **135** (2003) 799.

- [485] **2003** DAPRA No. MDA972-02-C-005, COMELCAN Meyer, J., J.-M. Benoit, V. Krstic, and S. Roth: "Progress in actuators from individual nanotubes", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003.
AIP Conference Proceedings **685** (2003) 564.
- [486] **2003** INTAS-237, RFBR01-02-17358 ; RAS program Obraztsova, E.D., S.N. Bokova, V.L. Kuznetsov, A.N. Usoltseva, V.I. Zaikovskii, U. Dettlaff-Weglikowska, S. Roth, and H. Kuzmany : « Raman and HRTEM Monitoring of Thermal Modification of HipCO Nanotubes », In : *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003.
AIP Conference Proceedings **685** (2003) 215.
- [487] **2003** MOST & NRL (National Research Laboratory) Park, J.G., B. Kim, S.H. Lee, A.B. Kaiser, S. Roth, and Y.W. Park: "Tunneling conduction in polyacetylene nanofiber", *Synthetic Metals* **135** (2003) 299.
- [488] **2003** COMELCAN No. HPRN-CT-2000-00128; FUNCARS No. HPRN-CT-1999-00011 Schmid, M., C. Goze-Bac, M. Mehring, S. Roth, and P. Bernier: "¹³C NMR investigations of the metallic state of Li intercalated carbon nanotubes", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003.
AIP Conference Proceedings **685** (2003) 131.
- [489] [Nicht belegt](#)
- [490] **2003** INTAS-237, RFBR01-02-17358, 03-02-06266 Terekhov, S.V., E.D. Obraztsova, U. Dettlaff-Weglikowska, and S. Roth: "Calibration of Raman-Based Method for Estimation of Carbon Nanotube Purity", In: *Molecular Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2003.
AIP Conference Proceedings **685** (2003) 116.
- [491] [Nicht belegt](#)
- [492] **2004** no Bokova, S.N., E.D. Obraztsova, A.V. Osadchy, H. Kuzmany, U. Dettlaff-Weglikowska, and S. Roth: „Selective Oxidation of HipCo Dingle-Wall Carbon Nanotubes“, In: *Nanoengineered Nanofibrous Materials*, S. Guceri, Y.G. Gogotsi, V. Kuznetsov (Eds.), Kluwer Academic Publishers, Dordrecht, The Netherlands 2004.
NATO Science Series II: Mathematics, Physics and Chemistry **169** (2004) 129.
- [493] **2004** INTAS-01-254, RFBR03-03-32286a Bulusheva, L.G., A.V. Okotrub, T.A. Duda, E.D. Obraztsova, A.L. Chuvilin, E.M. Pazhetnov, A.I. Boronin, U. Dettlaff-Weglikowska: „Electronic Structure of the Fluorinated HipCo Nanotubes“, In: *Nanoengineered Nanofibrous Materials*, S. Guceri et al. (Eds.), Kluwer Academic Publishers, Netherlands, 2004, 145-151
- [494] **2004** no Woo, Y.S., M. Liebau, G.S. Duesberg and S. Roth: „Contact Resistance between Individual Single Walled Carbon Nanotubes and Metal Electrodes“, In: *Electronic Properties of Synthetic Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2004.
AIP Conference Proceedings **723** (2004) 516.
- [495] **2004** no Karachevtsev, V.A., A.Y. Glamazda, U. Dettlaff-Weglikowska, V.S. Leontiev, and P.V. Mateichenko: "Carbon single-wall nanotubes in surrounding of SDS, DNA: aqueous solution and films", *Nanosystems, Nanomaterials and Nanotechnologies* **2** (2004) 1063.

- [496] **2004** MCYT No. MAT2002-04264-C04-01; MECD Ref. PR2002-0050 Ferrer-Anglada, N., V. Gomis, Z. El-Hachemi, M. Kaempgen, and S. Roth: "Conducting Transparent Thin Films Based on Carbon Nanotubes – Conducting Polymers", In: *Electronic Properties of Synthetic Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2004. AIP Conference Proceedings **723** (2004) 591.
- [497] **2004** CARDECOM Hornborstel, B., M. Dubosc, P. Pötschke, and S. Roth: "Investigations on Polycarbonate-Nanotube Composites", In: *Electronic Properties of Synthetic Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2004. AIP Conference Proceedings **723** (2004) 473.
- [498] **2004** INKONAMI Meyer, J.C., D. Obergfell, M. Paillet, G.S. Duesberg, and S. Roth: "Freestanding Nanostructures for TEM-Combined Investigations of Nanotubes", In: *Electronic Properties of Synthetic Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2004. AIP Conference Proceedings **723** (2004) 540.
- [499] **2004** INKONAMI Obergfell, D., J.C. Meyer, P.-W. Chiu, Shi. Yang, Sha. Yang, and S. Roth: "Electrical Transport in Dy Metallofullerene Peapods", In: *Electronic Properties of Synthetic Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2004. AIP Conference Proceedings **723** (2004) 556.
- [500] **2004** NOI French CNRS Program. Paillet, M., V. Jourdain, P. Poncharal, J.L. Sauvajol, A. Zahab, J.C. Meyer, S. Roth, N. Cordente, C. Amiens, and B. Chaudret: "Versatile synthesis of individual single-walled carbon nanotubes from nickel nanoparticles for the study of their physical properties", *The Journal of Physical Chemistry B* **108** (2004) 17112.
- [501] **2004** no Pötschke, P., A.R. Bhattacharyya, I. Alig, S.M. Dudkin, A. Leonhardt, C. Täschner, M. Ritschel, S. Roth, B. Hornbostel, and J. Cech: "Dispersion of Carbon Nanotubes into Thermoplastic Polymers Using Melt Mixing", In: *Electronic Properties of Synthetic Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2004. AIP Conference Proceedings **723** (2004) 478.
- [502] **2004** Roth, S. and D. Carroll: "One-Dimensional Metals". WILEY-VCH Verlag GmbH & Co. KgaA, Weinheim, Germany 2004.
- [503] nicht belegt
- [504] **2004** FUNCARS No. HPRN-CT-1999-00011 Schmid, M., C. Goze-Bac, M. Mehring, S. Roth, and P. Bernier: "NMR on Cesium Intercalated Carbon Nanotubes", In: *Electronic Properties of Synthetic Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2004. AIP Conference Proceedings **723** (2004) 181.
- [505] **2004** CARDECOM; VEGA 1/0055/03 Skákalová, V., U. Dettlaff-Weglikowska, and S. Roth: "Transport Properties of Functionalized Single Wall Nanotubes Buckypaper", In: *Electronic Properties of Synthetic Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2004. AIP Conference Proceedings **723** (2004) 189.

- [506] **2004** no Woo, Y., M. Liebau, G.S. Duesberg, and S. Roth: "Contact Resistance between Individual Single Walled Carbon Nanotubes and Metal Electrodes", In: *Electronic Properties of Synthetic Nanostructures*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2004. AIP Conference Proceedings **723** (2004) 516.
- [507] **2004** Nano Systems; Institute-National Core Research Center Program of theKOSEF (Korea); BK21 (Seoul National University); Sweden Strategic Research Fund (CAMEL consortium); STINT. Yu, H.Y., D.S. Lee, S.S. Kim, B. Kim, S.W. Lee, J.G. Park, S.H. Lee, G.C. McIntosh, Y.W. Park, M.S. Kabir, E.E.B. Campbell, and S. Roth: "Current enhancement with alternating gate voltage in the Coulomb-blockade regime of a single-wall carbon nanotube", *Applied Physics A* **79** (2004) 1613.
- [508] **2005** NSF Nos. DMR-0404029+0415130; NSF IGERT; MCTP-DGE-0114442 Artukovic, E., M. Kaempgen, D.S. Hecht, S. Roth, and G. Grüner: "Transparent and Flexible Carbon Nanotube Transistors", *Nano Letters* **5** (2005) 757-760.
- [509] **2005** no Paillet, M., Ph. Poncharal, A.Zahab, and J.-L. Sauvajol: "Vanishing of the Breit-Wigner-Fano Component in Individual Single-Wall Carbon Nanotubes", *Physical Review Letters* **94** (2005) 237401.
- [510] **2005** no Skákalová, V., A.B. Kaiser, U. Dettlaff-Weglikowska, K. Hrnčariková, and S. Roth: "Effect of chemical treatment on electrical conductivity, infrared absorption and Raman spectra of single wall carbon nanotubes", *Journal of Physical Chemistry B* **109** (2005) 7174-7181.
- [511] **2005** Pötschke P., A.R.Bhatthacharyya, A. Janke, S.Pegel, A. Leonhardt, Ch. Täschner, M.Ritschel, S.Roth, B.Hornbostel, and J.Cech: "Melt Mixing as Method to Disperse Carbon Nanotubes into Thermoplastic Polymers", *Fullerenes, Nanotubes, and Carbon Nanostructures*, Supplement **13** (2005) 211-224.
- [512] **2005** Panella, B., L. Kossykh, U. Dettlaff-Weglikowska, M. Hirscher, G. Zerbi, and S. Roth: "Volumetric measurement of hydrogen storage in HCl-treated polyaniline and polypyrrole", *Synthetic Metals* **151** (2005) 208-210.
- [513] **2005** Panella, B., M. Hirscher, and S. Roth: "Hydrogen adsorption in different carbon nanostructures", *Carbon* **43** (2005) 2209-2214.
- [514] **2005** CANAPE Hulman M., V. Skákalová, S. Roth, and H. Kuzmany: "Raman spectroscopy of single-wall carbon nanotubes and graphite irradiated by γ - rays", *Journal of Applied Physics* **98** (2005) 024311.
- [515] **2005** Dettlaff-Weglikowska, U., V. Skakalova, R. Graupner, S.H. Jhang, B.H. Kim, H.J. Lee, L. Ley, Y.W. Park., S. Berber, D. Tomanek, and S. Roth: "Effect of SOCl₂ Treatment on Electrical and Mechanical Properties of Single-Wall Carbon Nanotube Networks", *Journal of American Chemical Society* **127** (2005) 5125- 5131.
- [516] **2005** no Kaempgen, M. and S. Roth: "Ultra microelectrodes from MWCNT bundles", *Synthetic Metals* **152** (2005) 353-356.
- [517] **2005** no Kaempgen, M., G.S. Duesberg, and S. Roth: "Transparent carbon nanotube coatings", *Applied Surface Science* **252** (2005) 425-429.
- [518] **2005** SPANG; VEGA Skákalová, V., U. Dettlaff-Weglikowska, and S. Roth: "Electrical and mechanical properties of nanocomposites of single wall carbon nanotubes with PMMA", *Synthetic Metals* **152** (2005) 349-352.

- [519] **2005** CARDECOM;
CANAPE;
INKONAMI Meyer, Jannik C., M. Paillet, and S. Roth: "Single Molecule Torsional Pendulum", *Science* **309** (2005) 1539-1541.
- [520] **2005** Roth, S.: „Sind Kohlenstoff – Nanoröhrchen nur eine Modewelle?“, *Physik in unserer Zeit* **4** (2005).
- [521] **2005** no Kaempgen, M.: „Transparent und leitfähige Beschichtungen mit Kohlenstoff-Nanoröhrchen“, In: *Jahrbuch der Oberflächentechnik 2005*, Bd. **61**, Egon Leuze Verlag, S. 88-93.
- [522] **2005** CARDECOM;
CANAPE Hofmann, S., M. Cantoro, M. Kaempgen, D.-J. Kang, V.B. Golovko, H.W. Li, Z. Yang, J. Geng, W.T.S. Huck, B.F.G. Johnson, S. Roth, and J. Robertson: "Catalyst patterning methods for surface-bound chemical vapor deposition of carbon nanotubes", *Applied Physics A* **81** (2005) 1559-1567. DOI: 10.1007/s00339-005-3338-6.
- [523] **2005** CANAPE Meyer, J.C., M. Paillet, J.L. Sauvajol, D. Obergfell, A. Neumann, G.S. Duesberg, and S. Roth: "Novel freestanding nanotube devices for combining TEM and electron diffraction with Raman and Transport", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 512-515.
- [524] **2005** INKONAMI;
Landesstiftung Baden-
Württemberg Obergfell, D., J.C. Meyer A. Khlobystov, Shi. Yang, Sha. Yang, and S. Roth: "Transport and TEM on the same individual carbon nanotubes and peapods", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 548-553.
- [525] **2005** SPANG Pötschke, P., B. Hornbostel, S. Roth, S. Dudkin, and I. Alig: "Purification an percolation – unexpected phenomena in nanotube polymer composites", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 596-601.
- [526] **2005** SPANG Scalia, G., M. Haluska, U. Dettlaff-Weglikowska, F. Giesselmann, and S. Roth: "Polarized Raman spectroscopy study of SWCNT orientational order in an aligning liquid crystalline matrix", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 114-117.
- [527] **2005** CANAPE Schmid, M., C. Goze-Bac, M. Mehring, and S. Roth: "⁷Li NMR on Li intercalated carbon nanotubes", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 202-206.
- [528] **2005** SPANG;
CANAPE Skákalová, V., A. Kaiser, M. Kaempgen, and S. Roth: "Electron transport – from buckypaper to thin single wall nanotube networks", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 562-565.

- [529] **2005** SPANG Dettlaff-Weglikowska U., J. Wang, J. Liang, B. Hornbostel, J. Cech, and S. Roth: "Purity Evaluation of Bulk Single Wall Carbon Nanotube Materials", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 129-134.
- [530] **2005** INKONAMI Woo, Y. and S. Roth: "Effect of Contact Improvement on the FET Characteristics of an Individual Single Walled Carbon Nanotube", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 566-569.
- [531] **2005** SPANG;
CARDECOM;
CANAPE Haluska M., V. Skákalová, D. Carroll, and S. Roth: "The Influence of Sulfur Promoter on the Production of SWCNTs by the Arc-Discharge Process", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 87-91.
- [532] **2005** INTAS Karachevtsev, V.A., A.Yu. Glamazda, V.S. Leontiev, P.V. Mateichenko, and U. Dettlaff-Weglikowska: "SWNTs with DNA in aqueous solution and film", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 257-262.
- [533] **2005** no Lee, J.Y., S. Roth, and Y.W. Park: "Organic thin film transistor with CNT film electrodes", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 508-511.
- [534] **2005** INKONAMI? Siegle, V., D. Oberfell, F.J. Ahlers, and S. Roth: "Coupling of Surface Acoustic Waves to Single Walled Carbon Nanotubes", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 558-561.
- [535] **2005** ? Ansaldo, A., D. Ricci, F. Gatti, E. Di Zitti, and S. Cincotti: "Investigating Schottky Barriers Effects in Carbon Nanotube FETs", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005.
AIP Conference Proceedings **786** (2005) 570-573.
- [536] **2006** CANAPE Kaempgen, M. and S. Roth: "Transparent and Flexible Carbon Nanotube/ Polyaniline pH Sensor", *Journal of Electroanalytical Chemistry* **586** (2006) 72-76.
- [537] **2005** CARDECOM, INKONAMI,
CANAPE Meyer, J.C., M. Paillet, J.L. Sauvajol, G.S. Duesberg, and S. Roth: "Raman Modes of Index-Identified Freestanding Single-Walled Carbon Nanotubes", *Physical Review Letters* **95** (2005) 217401.
- [538] **2006** SPANG;
NANOTECH Hornbostel B., M. Haluska, J. Cech, U. Dettlaff, and S. Roth: "Arc Discharge and Laser Ablation Synthesis of single-walled Carbon Nanotubes", V.N. Popov, P. Lambin (Eds.), *Carbon Nanotubes (NATO Science Series II: Mathematics, Physics and Chemistry. Proceedings of the NATO Advanced Study Institute on Carbon Nanotubes: from Basic Research to Nanotechnology, held in Sozopol, Bulgaria, (May 2005) 21-31)*, **222** (2006) 252. ISBN: 1-4020-4572-7

- [539] **2005** CANAPE Paillet, M., V. Jourdain, P. Poncharal, J.L. Sauvajol, A. Zahab, J.C. Meyer, S. Roth, N. Cordente, C. Amiens, and B. Chaudret: "Growth and physical properties of individual single-walled carbon nanotubes", *Diamond and Related Materials* **14** (2005) 1426-1431.
- [540] **2005** Roth, S., J. Wang, P. Bernier, and E. Palmer in: "Understanding Carbon Nanotubes", from Science to Applications. Ed. A.Loiseau. Lecture Notes in Physics **677**, 660 pages. Springer Verlag, Berlin, Germany, 2005. ISBN: 3-540-26922-3
- [541] nicht belegt
- [542] **2005** Russian Foundation for Basic Research (03/3286) Bulusheva, L.G., P.N. Gevko, A.V. Okotrub, N.F. Yudanov, I.V. Yushina, E. Flahaut, U. Dettlaff-Weglikowska, and S. Roth: "Inertness of Near-Armchair Carbon Nanotubes towards Fluorination", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005. AIP Conference Proceedings **786** (2005) 228-231.
- [543] **2005** KOSEF, JYL, KRF, NANO Systems Institute Holzinger, M., J. Steinmetz, S. Roth, M. Glerup, and R. Graupner: "Purification and Functionalisation of Nitrogen-Doped Single-Walled Carbon Nanotubes", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005. AIP Conference Proceedings **786** (2005) 211-214.
- [544] **2006** INKONAMI; CANAPE Meyer, J.C., M. Paillet, G.S. Duesberg, and S. Roth: "Electron diffraction analysis of single-walled carbon nanotubes", *Ultramicroscopy* **106** (2006) 176-190.
- [545] **2005** no Cantelli, R., A. Paolone, S. Roth, and U. Dettlaff: "Hydrogen dynamics in HiPco carbon nanotubes", *Journal of Alloys and Compounds* **404** (2005) 630-633.
- [546] **2005** Landesstiftung Baden-Württemberg Croitoru, M.D., G. Bertsche, D.R. Kern, C. Burkhardt, S. Bauerdick, S. Sahakalkan, and S. Roth: "Visualization and in situ contacting of carbon nanotubes in a scanning electron microscope", *Journal of Vacuum Science & Technology B* **23** (2005) 2789-2792.
- [547] **2005** KISTEPM6-0301-00-0005; MOST; Caramel Consortium; STINT; YWP Jhang, S.H., S.W. Lee, D.S. Lee, Y.W. Park, G.H. Jeong, T. Hirata, R. Hatakeyama, U. Dettlaff, S. Roth, M.S. Kabir, and E.E.B. Campbell: "Random telegraph noise in carbon nanotube peapod transistors", *Fullerenes, Nanotubes, and Carbon Nanostructures, Supplement* **13** (2005) 195-198.
- [548] **2005** CANAPE Kaempgen, M. and S. Roth: "Ultra Microelectrodes from MWCNT Bundles", In: *Electronic Properties of Novel Materials*, H. Kuzmany, J. Fink, M. Mehring, S. Roth (Eds.), American Institute of Physics, New York, USA, 2005. AIP Conference Proceedings **786** (2005) 591-595.
- [549] **2005** KISTEPM6-0301-00-0005; MOST Lee, J.Y., A.N. Aleshin, D.W. Kim, H.J. Lee, Y.S. Kim, G. Wegner, V. Enkelmann, S. Roth, and Y. W. Park: "Field-effect mobility anisotropy in PDA-PTS single crystals", *Synthetic Metals* **152** (2005) 169-172.
- [550] **2005** NSI-NCRC, KOSEF Yu, H.Y., D.S. Lee, S.H. Lee, S.S. Kim, S.W. Lee, Y.W. Park, U. Dettlaff-Weglikowska, and S. Roth: "Single-electron transistor mediated by C₆₀ insertion inside a carbon nanotube", *Applied Physics Letters* **87** (2005) 163118.

- [551] **2006** ETH; TH-18103-1; SNSF 120021-108059/1 Stampfer, C., T. Helbling, D. Obergfell, B. Schöberle, M.K. Tripp, A. Jungen, S. Roth, V.M. Bright, and C. Hierold: "Fabrication of Single-Walled Carbon-Nanotube-Based Pressure Sensors", *Nano Letters* **6** (2006) 233-237.
- [552] **2006** no "Understanding Carbon Nanotubes: From Basics to Applications"; Series: Lecture Notes in Physics **677** (2006); A. Loiseau, P. Launois, P. Petit, S. Roche, J.-P. Salvetat (Eds.), Springer Verlag, Berlin. ISBN:3-540-26922-3
- [553] **2006** no Paillet, M., T. Michel, J.C. Meyer, V.N. Popov, L. Henrard, S. Roth and J.-L. Sauvajol: "Raman Active Phonons of Identified Semiconducting Single-Walled Carbon Nanotubes", *Physical Review Letters* **96** (2006) 257401.
- [554] **2006** NANO, KOSEF, KRF Lee, J.Y., S. Roth and Y.W. Park: "Anisotropic field effect mobility in single crystal pentance", *Applied Physics Letters* **88** (2006) 252106.
- [555] **2006** KISTEP, MOST, STINT Jhang, S.H., S.W. Lee, D.S. Lee, H.Y. Yu, U. Dettlaff, E.E.B. Campbell, S. Roth and Y.W. Park: "Random telegraph noise in carbon nanotubes and peapods", *Current Applied Physics* **6** (2006) 987-991
- [556] **2006** ETH FIRST; TH-18/03-1, SNSF (20021-108059/1) Stampfer, C., A. Jungen, R. Linderman, D. Obergfell, S. Roth and C. Hierold: "Nano-Electromechanical Displacement Sensing Based on Single-Walled Carbon Nanotubes", *Nano Letters* **6** (2006), No.7, 1449-1453
- [557] **2006** SPANG, INKONAMI, CANAPE Skakalova, V., A.B. Kaiser, Y.-S. Woo and S. Roth: "Electronic transport in carbon nanotubes: From individual nanotubes to thin and thick networks", *Physical Review B* **74** (2006) 085403
- [558] **2006** CANAPE (NMP4-CT-2004-500096) Schmid, M., C.Goze-Bac, S. Krämer, S. Roth, M. Mehring, C. Mathis and P. Petit: "Metallic Properties of Li-intercalated carbon nanotubes investigated by NMR", *Physical Review B* **74** (2006) 073416
- [559] **2006** no Sekhanef, W., M. Kotecha, U. Dettlaff-Weglikowska, W.S. Veeman: "High resolution NMR of water absorbed in single-wall carbon nanotubes", *Chemical Physics Letters* **428** (2006) 143-147
- [560] **2006** CANAPE (NMP-500096), SPANG (NMP4-CT-2003-505483), NANOSPARK (NMP-1-2003-508159) Dettlaff-Weglikowska, U., M. Kaempgen, B. Hornborstel, V. Skakalova, J. Wang, J. Liang and S. Roth: „Conducting and transparent SWNT/polymer composites“, *Physica Status Solidi B* (2006) 1-5
- [561] **2006** MCYT (MAT2002-04264-C04-01), SPANG (NMP4-CT-2003-505483) Ferrer-Anglada, N., M. Kaempgen and S. Roth: "Transparent and flexible carbon nanotube/polypyrrole and carbon nanotube/polyaniline pH sensors", *Physica Status Solidi B* (2006) 1-5
- [562] **2006** NSF MRI Grant #021307, NSF Grant #0244290 Karachevtsev, V.A., A.Yu. Glamazda, U. Dettlaff-Weglikowska, V.S. Leontiev, P.V. Mateichenko, S. Roth, A.M. Rao: „Spectroscopic and SEM studies of SWNTs: Polymer solutions and films“, *Carbon* **44** (2006) 1292-1297
- [563] **2006** SOLCANTA, SPANG, CANAPE Lagerwall, J.P.F., G. Scalia, M.Haluska, U. Dettlaff-Weglikowska, F. Giesselmann, and S. Roth: "Simultaneous alignment and dispersion of carbon nanotubes with lyotropic liquid crystals", *Physica Status Solidi B* (2006) 3046–3049

- [564] **2006** Kirchberg Kuzmany H., P. Dinse, S. Roth, and C. Thomsen: "Electronic Properties of Novel Nanostructures", *Physica Status Solidi B* **243** **13** (2006) 2963-3566, ISSN: 0370-1972
- [565] **2006** CARIGE, DAAD, SPANG (NMP4-CT-2003-505483) Ansaldo A., M. Haluška, J. Čech, D. Ricci, F. Gatti, E. Di Zitti, S. Cincotti, and S. Roth: "CVD synthesis of single wall carbon nanotubes devoted to ULSI electronic applications", *Physica Status Solidi B* **243** **13** (2006) 3077-3081
- [566] **2006** EPSRC No. GR/S97613 Ferrari, A.C., J.C. Meyer, V. Scardaci, C. Casighari, M. Lazzeri, F. Mauri, S. Piscanec, D. Jiang, K.S. Novoselov, S. Roth and A.K. Geim: "Raman Spectrum of Graphene and Graphene Layers", *Physical Review Letters* **97** (2006) 187401-1
- [567] **2006** SPANG, NANOSPARK, CANAPE Skákalová, V., Y.-S. Woo, Z. Osváth, L.P. Biró and S. Roth: "Electron transport in Ar⁺-irradiated single wall carbon nanotubes", *Physica Status Solidi B* **243** **13** (2006) 3346-3350
- [568] **2007** APVT-51-029902, VEGA 2/5088/25, SPANG Kovac, P., I. Husek, V. Skakalova, J. Meyer, E. Dubrocka, M. Hirscher and S. Roth: "Transport current improvements of *in situ* MgB₂ tapes by the addition of carbon nanotubes, silicon carbide or graphite", *Superconducting Science and Technology* **20** (2007) 105-111
- [569] **2007** CANAPE (NMP4-CT-2004-500096), OPET-CTI, BAFU, BAG Wick, P. P. Manser, L.K. Limbach, U. Dettlaff-Weglikowska, F. Krumeich, S. Roth, W.J. Stark and A. Bruinik: "The degree and kind of agglomeration affect carbon nanotube cytotoxicity", *Toxicology Letters* **168** (2007) 121-131
- [570] **2007** Swiss National Science Foundation (200021-108059/1), ETH Zurich (TH-18/03-1), CANAPE Jungen, Alain, S. Hofmann, J.C. Meyer, C. Stampfer, S. Roth, J. Robertson and C. Hierold: „Synthesis of individual single-walled carbon nanotube bridges controlled by support micromachining“, *Journal of Micromechanics and Microengineering* **17** (2007) 603-608
- [571] **2007** SPANG (NMP-CT-2603-505483) Dettlaff-Weglikowska, U., V. Skakalova, J. Meyer, J. Cech, B.G. Mueller and S. Roth: "Effect of fluorination on electrical properties of single walled carbon nanotubes and C₆₀ peapods in networks", *Current Applied Physics* **7** (2007) 42-46
- [572] **2006** Russian Foundation for Basic Research, project no. 03-03-32286 Gevko, P.N., A.V. Okotrub, L.G. Bulusheva, I.V. Yushina and U. Dettlaff-Weglikowska: "Effect of Annealing on the Optical Absorption Spectra of Single-Walled Carbon Nanotubes", *Physics of Solid State*, **48** **5** (2006) 1007-1011
- [573] **2006** SPANG (NMP4-CT-505483-1) Cech, Jiri, S.A. Curran, D. Zhang, J.L. Dewald, A. Avadhanula, M. Kandadai and S. Roth: "Functionalization of multi-walled carbon nanotubes: Direct proof of sidewall thiolation", *Phys. Stat. Sol. (b)* **243** **13** 3221-3225 (2006)
- [574] **2006** Air Force Office of Scientific Research (106427) Curran, S.A., J. Cech, D. Zhang, J.L. Dewald, A. Avadhanula, M. Kandadai and S. Roth: "Thiolation of carbon nanotubes and sidewall functionalization", *J. Mater. Res.* **21** **4** 1012-1018 (2006)
- [575] **2006** SPANG, NANOSPARK, CANAPE Haluska, M., M. Hulman, B. Hornbostel, J. Cech, V. Skakalova and S. Roth: "Synthesis of SWNTs for C₈₂ peapods by arc-discharge process using nonmagnetic catalysts", *Phys. Stat. Sol. (b)* **243** **13** 3042-3045 (2006)
- [576] **2006** CANAPE, SPANG, NANOSPARK Hornbostel, B., P. Pötschke, J. Kotz and S. Roth: "Single-walled carbon nanotubes/polycarbonate composites: basic electrical and mechanical properties", *Phys. Stat. Sol. (b)* **243** **13** 3445-3451 (2006)

- [577] **nicht belegt**
- [578] **2006** no Liu, J., D.L. Carroll, J. Cech and S. Roth: "Single-walled carbon nanotubes synthesized by pyrolysis of pyridine over catalysts", *J. Mater. Res.* **21** 2835-2840 (2006)
- [579] **2006** BMBF, INKONAMI, CANAPE Meyer, J.C., J. Cech, B. Hornbostel and S. Roth: "Progress in single-walled carbon nanotube based nanoelectromechanical systems", *Phys. Stat. Sol. (b)* **243** 13 3500-3504 (2006)
- [580] **2006** BMBF, INKONAMI Obergfell, D., J.C. Meyer, M. Haluska, A.N. Khlobystov, S. Yang, L. Fan, D. Liu and S. Roth: "Transport and TEM on dysprosium metallofullerene peapods", *Phys. Stat. Sol. (b)* **243** 13 3430-3434 (2006)
- [581] **2006** SOLCANTA, MEIF-CT-2005-025934, SPANG (NMP4-CT-2003_505483) Scalia, G., J.P.F. Lagerwall, M. Haluska, U. Dettlaff-Weglikowska, F. Giesselmann and S. Roth: "Effect of phenyl rings in liquid crystal molecules on SWNTs studies by Raman spectroscopy", *Phys. Stat. Sol. (b)* **243** 13 3238-3241 (2006)
- [582] **2006** no Woo, Y.S., Z. Osvath, G. Vertesy, L.P. Biro and S. Roth: "Effect of Ar+ irradiation on the behaviour of carbon nanotube transistor", *Phys. Stat. Sol. (b)* **243** 13 3390-3393 (2006)
- [583] **2006** Volkswagen Foundation, ASFOR Grant No. FA9550-04-1-0161 Zha, F.-X., S. Roth and D.L. Carroll: "Periodic, pearl chain-like nanostructure observed by scanning tunneling microscopy", *Carbon* **44** 1695-1698 (2006)
- [584] **2006** ARC AFSOR 106427, NSF-ADVANCE (NSF0123690) Zhang, D., M.A. Kandadai, J. Cech, S. Roth and S.A. Curran: "Poly (L-lactide) (PLLA)/ Multiwalled Carbon Nanotube /MWCNT) Composite: Characterization and Biocompatibility Evaluation", *J. Phys. Chem. B* **110** 12910-12915 (2006)
- [585] **2007** HPRN-CT-2000-00157 Krstic, Vojislav, G.L.J.A. Rikken, M. Kaempgen, S. Roth and J.A. Beukes: "Effects of geometry of nano-structured materials on their thermal expansion: tellurium nanocylinders as a model system", *Int. J. Materials and Structural Integrity* **1**, 1,2,3, 201-211 (2007)
- [586] **2007** SPANG, SANES, OTKA (T043685), NKTH and MOFENACS Skakalova, V., J. Maultzsch, Z. Osvath, L.P. Biro and S. Roth: "Intermediate frequency modes in Raman spectra of Ar+-irradiated single-wall carbon nanotubes", *Phys. Stat. Sol. (RRL)* **1**, 4, 138-140 (2007)
- [587] **2007** CANAPE, EPSRC Meyer, J.C., A.K. Geim, M.I. Katsnelson, K.S. Novoselov, T.J. Booth and S. Roth: "The structure of suspended graphene sheets", *Nature* **446** 60-63 (2007) doi: 10.1038
- [588] **2007** Lagerwall, J., G. Scalia, M. Haluska, U. Dettlaff-Weglikowska, S. Roth and F. Giesselmann: "Nanotube Alignment using Lyotropic Liquid Crystals", *Advanced Materials* **19** 359-364 (2007) doi: 10.1002/adma.200600889.
- [589] **2007** SANES, CANAPE Jung de Andrade, M., M. Dias Lima, V. Skakalova, C.P. Bergmann, S. Roth: "Electrical properties of transparent carbon nanotube networks prepared through different techniques", *Phys. Stat. Sol. (RRL)* **1**, 5, 178-180 (2007) doi: 10.1002/pssr.200701115
- [590] **2007** Jung de Andrade M., M. Dias Lima, L. Stein, C. Pérez Bergmann, and S. Roth: "Single-walled carbon nanotube silica composites obtained by an inorganic sol-gel route", *Phys. Stat. Sol. (b)*, 1- 5 (2007) doi : 10.1002/pssb.200776114

- [591] **2007** CARIGE, CANAPE (NMP-500096) Ansaldo, A., V. Skakalova, E.D. Zitti, D. Ricci, and S. Roth: "Catalytic chemical vapour deposition growth of single wall carbon nanotube films on different substrates for transparent electronic devices", *Phys. Stat. Sol. (b)* **244**, No. 11, 3935-3938 (2007) doi: 10.1002/pssb.200776190
- [592] **2007** Roth, S., B. Hornbostel, and V. Skakalova: "Carbon-based Nanocomposites. How to combine the Properties of Nanotubes and Matrices?", *NanoS* **03.07**, Wiley-VCH Verlag GmbH & Co. KgaA, Weinheim (2007)
- [593] **2008** SANES, CANAPE, APVV-0628-06 Skakalova, V., A.B. Kaiser, and S. Roth: "Raman mode shifts correlated with conductivity and Young's modulus changes in modified carbon nanotube networks", *Phys. Stat. Sol. (RRL)* **2**, 62-64 (2008) doi: 10.1002/pssr.200701274
- [594] **2008** SANES, APVV-0628-06 Skakalova, V., A.B. Kaiser, Z. Osvath, G. Vertesy, L.P. Biro, and S. Roth: "Ion irradiation effects on conduction in single-wall carbon nanotube networks", *Appl. Phys. A* **90** (2008) 597-602, doi: 10.1007/s00339-007-4383-0
- [A4] **2006** ? Chiu, P.-W., S. Roth: "Carbon Nanotransistors"
- [A6] **2007** SPANG, NANOSPARK, CANAPE Kaiser, A.B., V. Skakalova and S. Roth: "Thin transparent carbon networks: effects of ion irradiation", *Phys. Stat. Sol. (b)* *accepted*
- [A7] **2007** Kaiser, A.B., V. Skakalova and S. Roth: "Modelling conduction in carbon nanotube networks with different thickness, chemical treatment and irradiation", *submitted to Physica E*