

II. PUBLICATIONS

Veröffentlichungen

1. **Charge transport and recombination in bulk heterojunction solar cells studied by the photoinduced charge extraction by lineary increasing voltage technique**
A. Mozer, N.S. Sariciftci, L. Lutsen, D. Vanderzande, R. Österbacka, M Westerling, G. Juska
Applied Physics Letters 86 (2005), 112104
2. **Charge carrier mobility in regioregular poly(3-hexylthiophene) probed by transient conductivity techniques: A comparative study**
A. Mozer, N.S. Sariciftci, A. Pivrikas, R. Österbacka, G. Juska, L. Brassat, H. Bässler
Physical Review B 71 (2005), 035214
3. **Electromechanical strain in conjugated polymer diodes under forward and reverse bias**
G. Dennler, N.S. Sariciftci, R. Schwödiauer, S. Bauer, H. Reiss
Applied Physics Letters 86 (2005), 193507
4. **Kelvin probe force microscopy study on conjugated polymer/fullerene bulk heterojunction organic solar cells**
H. Hoppe, T. Glatzel, M. Niggemann, A. Hinsch, Ch. Lux-Steiner, N.S. Sariciftci
Nano Letters 5, No 2 (2005), 269-274
5. **Bimolecular recombination coefficient as a sensitive testing parameter for low-mobility solar-cell materials**
A. Pivrikas, G. Juska, A. J. Mozer, M. Scharber, K. Arlauskas, N.S. Sariciftci, H. Stubb, R. Oesterbacka
Physical Review Letters 95 (2005), 176806
6. **Synthesis and properties of end-capped sexithiophenes incorporating the ethylene dithiophene unit**
C.R. Mason, P.J. Skabara, D. Cupertino, J. Schofield, F. Meghdadi, B. Ebner and N.S. Sariciftci
Journal of Materials Chemistry 15, (2005) 1446-1453
7. **Correlation between morphology and ambipolar transport in organic field-effect transistors**
Th.B. Singh, S. Günes, N. Marjanovic, R. Menon and N.S. Sariciftci
Journal of Applied Physics 97 (2005), 114508-1

8. **Flexible conjugated polymer-based plastic solar cells: From basic to applications**
G. Dennler, N.S. Sariciftci
Proceedings of the IEEE, 96, No 8 (2005), 1429

9. **Fabrication and characterisation of solution-processed methanofullerene-based organic field-effect transistors**
Th.B. Singh, N. Marjanovic, P. Stadler, M. Auinger, G.J. Matt, S. Guenes, N.S. Sariciftci,
R. Schwoediauer and S. Bauer
Journal of Applied Physics 97, (2005), 083714-1

10. **High-mobility n-channel organic field-effect transistor based on epitaxially grown C₆₀ films**
Th.B. Singh, N. Marjanovic, G.J. Matt, S. Guenes, N.S. Sariciftci, A. Montaigne Ramil, A. Andreev,
H. Sitter, R. Schwoediauer and S. Bauer
Organic Electronics 6 (2005) 105-110

11. **Time-dependent mobility and recombination of the photoinduced charge carriers in conjugated polymer/fullerene bulk heterojunction solar cells**
A. Mozer, G. Dennler, N. S. Sariciftci, M. Westerling, A. Pivrikas, R. Oesterbacka, G. Juska
Physical Review B 72 (2005), 035217-1

12. **High-Performance ambipolar pentance organic field-effect transistors on poly(vinylalcohol) organic gate dielectric**
Th. Singh, F. Meghdadi, S. Guenes, N. Marjanovic, G. Horowitz, P. Lanf, S. Bauer, N.S. Sariciftci
Advanced Materials 17 (2005), 2315

13. **Enhanced mobility of organic field-effect transistors with epitaxially grown C₆₀ film by in-situ heat treatment of the organic dielectric**
Th. Singh, N. Marjanovic, G. Matt, S. Guenes, N.S. Sariciftci, A. Montaigne Ramil, A. Andreev, H.
Sitter, R. Schwoediauer, S. Bauer
Mater. Res. Soc. Symp. Proc. 871E (2005), 14.9.1

14. **Unusual electromechanical effects in organic semiconductor Schottky contacts: Between piezoelectronic and electrostriction**
G. Dennler, C. Lungenschmied, N.S. Sariciftci, R. Schwoediauer, S. Bauer, H. Reiss
Applied Physics Letters 87 (2005), 163501

15. **Resonant Raman scattering dispersion in poly(dithieno[3,4-b',4-d]:2Ag spectroscopy**
E. Ehrenfreund, A. Cravino, H. Neugebauer, N.S. Sariciftci, S. Luzzati, M. Catellani
Synthetic Metals 150 (2005), 251-253
16. **Novel regiospecific MDMO-PPV polymers with improved charge transport properties for bulk heterojunction solar cells**
A.J. Mozer, P. Denk, M.C. Scharber, H. Neugebauer, N.S. Sariciftci, P. Wagner, L. Lutsen, D. Vanderzande, A. Kadashchuk, R. Staneva, R. Resel
Synthetic Metals 153 (2005), 81-84
17. **Smart actuators based on electromechanically active conjugated polymer diodes**
G. Dennler, R. Schwoediauer, C. Lungenschmied, S. Bauer, N. S. Sariciftci, H. Reiss
Proceedings of SPIE 5759 (2005), 352
18. **Thiophene-containing poly(arylene-ethynylene)-alt-poly(arylenevinylene)s: Synthesis, Characterisation and optical properties**
D. Egbe, Le Huong Nguyen, B. Carbonnier, D. Muehlbacher, N.S. Sariciftci
Polymer 46 (2005), 9585-9595
19. **Side chain influence on electrochemical and photovoltaic properties of yne-containing poly(phenylene vinylene)s**
D. Egbe, L. H. Nguyen, H. Hoppe, D. Mühlbacher, N.S. Sariciftci
Macromolecular Rapid Communications 26 (2005), 1389-1394
20. **Vibrational spectroscopic study of a push-pull substituted fluorinated poly(p-phenylenevinylene)copolymer**
T. Yohannes, H. Neugebauer, G. Farinola, C. Winder, F. Babudri, A. Cardone, F. Naso, N.S. Sariciftci,
Synthetic Metals 152 (2005), 149-152
21. **Complexation of pyrrolidinofullerenes and zinc-phthalocyanine in a bilayer organic solar cell structure**
R. Koeppe, N.S. Sariciftci, P. Troshin, R. Lyubovskaya
Applied Physics Letters 87 (2005), 244102
22. **Characterization of N, N'-bis-2-(1-hydroxy-4-methylpentyl)-3, 4, 9, 10-perylene bis(dicarboximide) sensitized nanocrystalline TiO₂ solar cells with polythiophene hole conductors**
C. Zafer, C. Karapire, N.S. Sariciftci, S. Icli
Solar Energy Materials & Solar Cells 88 (2005), 11-21

23. **Low-threshold blue lasing in epitaxially grown para-sexiphenyl nanofibers**
F. Quochi, A. Andreev, F. Cordella, R. Orru, A. Mura, G. Bongiovanni, H. Hoppe, H. Sitter, N.S. Sariciftci
Journal of Luminescence 112, Issue 1-4 (2005), 321-324, presented on EXCON '04
24. **Blue emitting self-assembled nano-crystals of para-sexiphenyl grown by hot wall epitaxy**
A. Andreev, F. Quochi, H. Sitter, H. Hoppe, N. S. Sariciftci, A. Mura, G. Bongiovanni
Microelectronics Journal 36 Issue 3-6 (2005), 237-240 presented on Low Dimensional Structures and Devices Conference
25. **Morphology and growth kinetics of organic thin films deposited by hot wall epitaxy on KCl substrates**
A. Andreev, T. Haber, D.-M. Smilgies, R. Resel, H. Sitter, N.S. Sariciftci, L. Valek
Journal of Crystal Growth 275 (2005), 2037-2042
26. **Photoinduced Electron Transfer in Solid C 60 Donor/Acceptor Complexes Studied by Light-Induced Electron-Spin Resonance**
D. Konarev, R. Lyubovskaya, G. Zerza, M. Scharber, N.S. Sariciftci,
Molecular Crystals & Liquid Crystals 427 Issue 1 (2005), 315-333
27. **Plastic Solar Cells Based on Novel PPE-PPV-Copolymers**
H. Hoppe, N.S. Sariciftci, D. Egbe, D. Mühlbacher, M. Koppe
Molecular Crystals & Liquid Crystals 426, Issue 1 (2005), 255-263
28. **Extended Photocurrent Spectrum of a Low Band Gap Polymer in a Bulk Heterojunction Solar Cell**
L. Campos, A. Tontcheva, S. Guenes, G. Sonmez, H. Neugebauer, N.S. Sariciftci, F. Wudl
Chemistry of Materials 17, No 16 (2005), 4031
29. **Ultrafast dynamics of charge carrier photogeneration and geminate recombination in conjugated polymer: fullerene solar cells**
J. Müller, J. Lupton, J. Feldmann, U. Lemmer, M. Scharber, N.S. Sariciftci, C. Brabec, U. Scherf,
Physical Review B 72 (2005), 195208
30. **Stabilization of the nanomorphology of polymer-fullerene "bulk heterojunction" blends using a novel polymerizable fullerene derivative**
M. Drees, H. Hoppe, C. Winder, H. Neugebauer, N.S. Sariciftci, W. Schwinger, F. Schäffler, C. Topf, M. Scharber, Z. Zhu, R. Gaudiana
Journal of Materials Chemistry 15 (2005), 5158-5163

31. **Highly nonlinear transport phenomena in fullerene based diodes**
G. Matt, T.Fromherz, H. Neugebauer, N.S. Sariciftci
Electronic Properties of Novel Nanostructures, edited by H. Kuzmany, J. Fink, M. Mehring, S. Roth,
American Institute of Physics (2005), 530-533
32. **Organic thin films grown by hot wall epitaxy on organic substrates**
H. Sitter, A. Andreev, Ch. Teichert, G. Hlawacek, T. Haber, D.-M. Smilgies, R. Resel, A. Ramil, N.S.
Sariciftci
Phys. Stat. Sol. (b)242, No. 9 (2005), 1877-1882
33. **Kelvin Probe Force Microscopy Study of Conjugated Polymer/Fullerene Organic Solar Cells**
T. Glatzel, H. Hoppe, N.S. Sariciftci, M. Lux-Steiner, M. Komiyama
Japanese Journal of Applied Physics 44 No 7B (2005), 5370-5373
34. **Efficient organic solar cells based on a double p-i-n architecture using doped wide-gap transport layers**
J. Drechsel, B. Männig, F. Kozlowski, M. Pfeiffer, K. Leo, H. Hoppe
Applied Physics Letters 86 (2005), 244102
35. **Nano-Crystalline Fullerene Phases in Polymer/Fullerene Bulk-Heterojunction Solar Cells: A Transmission Electron Microscopy Study**
H. Hoppe, M. Drees, W. Schwinger, F. Schäffler, N.S. Sariciftci
Synthetic Metals 152 (2005), 117-120
36. **Conjugated polymer based organic solar cells: From basics to state-of-the-art**
G. Dennler and N. S. Sariciftci
Chinese Journal of Light Scattering 17 (2005), 212
37. **Flexible, conjugated polymer based solar cells: Basics, encapsulation and integration**
G. Dennler, C. Lungenschmied, H. Neugebauer, N. S. Sariciftci, and A. Labouret
Journal of Materials Research 20 (2005), 3224
38. **Morphology of polymer/fullerene bulk heterojunction solar cells**
H. Hoppe, N.S. Sariciftci
Journal of Materials Chemistry 16 (2006), 45

39. **Spectroelectrochemistry of (Poly(ethylenedithiathiophene)-the Sulfur Analogue of Poly(ethylenedioxythiophene)**
A. Cravino, H. Neugebauer, A. Petr, P. Skabara, H. Spencer, J. McDouall, L. Dunsch, N.S. Sariciftci
Journal of Physical Chemistry B (2006)
40. **Spontaneous rearrangement of para-sexiphenyl crystallites into nano-fibers**
C. Teichert, G. Hlawacek, A. Andreev, H. Sitter, P. Frank, A. Winkler, N.S. Sariciftci
Applied Physics A, Invited rapid communication 82 (2006), 665-669

Books:

1. **Organic Photovoltaics (Optical Science and Engineering)**
Edited by S.-S. Sun and N.S. Sariciftci, (Taylor & Francis), 2005 ISBN 082475963X

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1. **A soluble PEDOT-derivative for Polymeric Solar Cells: Photophysics and Devices**
C. Winder, M. Loi, A. Cravino, M. Scharber, C. Brabec, H. Neugebauer, N.S. Sariciftci, I. Perepichka, J. Roncali
2. **Self-organization in organic semiconductor thin films grown by Hot Wall Epitaxy**
Ch. Teichert, G. Hlawacek, H. Sitter, A. Andreev, G. Matt, N.S. Sariciftci
Proceedings of 35th IUVESTA Workshop, Trofaiach, Austria
3. **Electric field induced enhancement of the photoinduced absorption in conjugated polymer / fullerene bulk heterojunction solar cells**
C. Winder, C. Lungenschmied, N.S. Sariciftci, C. Arndt, U. Zhokhovets, G. Gobsch
4. **A simple microcell for cyclic voltammetry: Applications in fullerene electrochemical investigations**
M. Eiermann, R. Hicks, B. Knight, H. Neugebauer, F. Wudl
5. **Photoluminescence studies on the supramolecular interactions between a pyrrolidinofullerene and zinc-phthalocyanine used in organic solar cells**
R. Koeppel, P. Troshin, A. Fuchsbaauer, R. Lyubovskaya, N.S. Sariciftci
Fullerenes, Nanotubes and Carbon Nanostructures, in press

6. **A Novel Concept for Hybrid Solar Cells using HgTe Nanocrystals and Nanoporous TiO₂ Electrodes**
S. Guenes, H. Neugebauer, N.S. Sariciftci, J. Roither, M. Kovalenko, G. Pillwein, W. Heiss
Advanced Functional Materials, accepted
7. **Light harvesting using a-donor-bridge-acceptor-bridge-type block copolymer: materials design, synthesis, characterization and properties based on alkoxy and sulfone derivatized polyphenylenevinylenes**
C. Zhang, S. Choi, J. Haliburton, T. Cleveland, R. Li, S. Sun, A. Ledbetter, C. Bonner, M. Drees, N.S. Sariciftci
8. **Conjugated Polymer Based Photovoltaic Devices**
A. Mozer, N.S. Sariciftci
Handbook of Conducting Polymers
9. **Photoresponse of Organic Field-Effect Transistors based on Conjugated Polymer/Fullerene Blends**
N. Marjanovic, B. Singh, G. Dennler, S. Guenes, H. Neugebauer, N.S. Sariciftci, R. Schwödiauer, S. Bauer
Organic Electronics, accepted
10. **Efficiency limiting morphological factors of MDMO-PPV: PCBM plastic solar cells**
H. Hoppe, T. Glatzel, M. Niggemann, W. Schwinger, F. Schaeffler, A. Hinsch, M. Lux-Steiner, N.S. Sariciftci
Thin Solid Films, accepted
11. **Facile Fabrication of All-Polymer based Field-Effect Transistors by Soft Embossing with Scalpel and Painting**
B. Singh, N. Marjanovic, H. Hoppe, H. Neugebauer, N.S. Sariciftci, R. Menon
12. **Photophysical, Electrochemical and Photovoltaic Properties of Thiophene-Containing Arylene-Ethynylene/Arylene-Vinylene Polymers**
D. Egbe, L.-H. Nguyen, D. Mühlbacher, H. Hoppe, K. Schmidtke, N.S. Sariciftci
Thin Solid Films, in press
13. **Precursor Route Poly(Thienylene Vinylene) for Organic Solar Cells: Photophysics and Photovoltaic Performance**
L. H. Nguyen, S. Günes, H. Neugebauer, N. S. Sariciftci, F. Banishoeib, A. Henckens, L. Lutsen, D. Vanderzande

14. **Organic Solar Cells**
G. Dennler, N. S. Sariciftci, and C. J. Brabec
Hadzioannou, Malliaras (Eds.): Semiconducting Polymers, Second Edition, Wiley-VCH, in press
15. **A new encapsulation solution for organic solar cells**
G. Dennler, C. Lugenschmied, H. Neugebauer, N. S. Sariciftci, G. Czeremuszkin, M. Latrèche, and M. R. Wertheimer
Thin Solid Films, in press
16. **Unexpected electromechanical actuation in conjugated polymer based diodes**
G. Dennler, R. Schwödiauer, S. Bauer, N. S. Sariciftci, and H. Reiss
Highlight paper, Journal of Material Chemistry, **16**, (2006), in press
17. **Charge carrier mobility and lifetime versus composition in conjugated polymer:fullerene bulk heterojunction solar cells**
G. Dennler, A. J. Mozer, G. Juska, A. Pivrikas, R. Österbacka, A. Fuchsbauer, and N. S. Sariciftci
18. **A self-rechargeable and flexible polymer solar battery**
G. Dennler, S. Bereznev, D. Fichou, K. Holl, D. Ilic, R. Koeppe, M. Krebs, A. Labouret, C. Lungenschmied, A. Marchenko, D. Meissner, E. Mellikov, J. Méot, A. Meyer, T. Meyer, H. Neugebauer, A. Öpik, N. S. Sariciftci, S. Taillemite, and T. Wöhrle
19. **Highly conductive CNTs used as electrode for flexible, conjugated based bulk-heterojunction solar cells**
M. W. Rowell, M. D. McGehee, L. Hu, G. Gruner, H.-J. Prall, G. Dennler, and N. S. Sariciftci
20. **Organic tandem solar cells: from evaporation to solution processing**
H.-J. Prall, R. Koeppe, R. Autengruber, G. Dennler, and N. S. Sariciftci

Patente:

1. **Schaltungsanordnung zur elektronischen Energieversorgung eines Verbrauchers**
AT pending