

II. PUBLICATIONS

Veröffentlichungen

1. **Morphology of polymer/fullerene bulkheterojunction solar cells**
H. Hoppe, N.S. Sariciftci
Journal of Materials Chemistry 16 (2006), 45-61
2. **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 110(2006), 2662-2667
3. **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
4. **Influence of film growth conditions on carrier mobility of hot wall epitaxially grown fullerene based transistors**
A. Montaigne Ramil, B. Singh, N. Haber, N. Marjanovic, S. Guenes, A. Andreev, G. Matt, R. Resel, H. Sitter, N.S. Sariciftci
Journal of Crystal Growth 288 (2006), 123-127
5. **Effect of annealing of poly(3-hexylthiophene)/fullerene bulk heterojunction composites on structural and optical properties**
U. Zhokhavets, T. Erb, H. Hoppe, G. Gobsch, N.S. Sariciftci
Thin Solid Films 496 (2006), 679-682
6. **Incorporation of fused tetrathiafulvalenes (TTFs) into polythiophene architectures: varying the electroactive dominance of the TTF species in hybrid systems**
R. Berridge, P. Skabara, C. Pozo-Gonzalo, A. Kanibolotsky, J. Lohr, J. McDouall, E. McInnes, J. Wolowska, C. Winder, N.S. Sariciftci, R. Harrington, W. Clegg
J. Phys. Chem. B 110 (2006), 3140-3152
7. **Coherent random lasing in the deep blue self-assembled organic nanofibers**
A. Andreev, F. Quochi, F. Cordella, A. Mura, G. Bongiovanni, H. Sitter, G. Hlawacek, C. Teichert, N.S. Sariciftci
Journal of Applied Physics 99 (2006), 034305
8. **Long-lived photoinduced charges in donor-acceptor anthraquinone-substituted thiophene copolymers**
S. Luzzati, M. Scharber, M. Catellani, F. Giacalone, J. Segura, N. Martin, H. Neugebauer, N.S. Sariciftci
Journal of Physical Chemistry B 110 (2006), 5351-5358

9. **A new encapsulation solution for organic solar cells**
G. Dennler, C. Lungenschmied, H. Neugebauer, N. S. Sariciftci, G. Czeremuszkin, M. Latrèche, M. R. Wertheimer
Thin Solid Films 511-512 (2006), 349-353
10. **Recombination of photogenerated and injected charge carriers in π -conjugated polymer/fullerene blends**
G. Sliuzys, G. Juska, K. Arlauskas, A. Pivrikas, R. Österbacka, M. Scharber, A. Mozer, N.S. Sariciftci
Thin Solid Films 511-512 (2006), 224-227
11. **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 511-512 (2006), 587-592
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 511-512 (2006), 486-488
13. **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 7 (2006), 188-194
14. **Unexpected electromechanical actuation in conjugated polymer based diodes**
G. Dennler, R. Schwödiauer, S. Bauer, N. S. Sariciftci, H. Reiss
Highlight paper, Journal of Material Chemistry, 16, (2006) 1789-1793
15. **PECVD of nanocrystalline Si Layers on high- T_g polymer substrates**
L. MacQueen, J. Zikovsky, G. Dennler, M. Latreche, G. Czeremuszkin, M. Wertheimer
Plasma Processes and Polymers 3 (2006), 58-65
16. **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 16 (2006), 1095-1099
17. **Charge carrier mobility and lifetime versus composition of conjugated polymer:fullerene bulk-heterojunction solar cells**
G. Dennler, A. J. Mozer, G. Juska, A. Pivrikas, R. Österbacka, A. Fuchsbauer, and N. S. Sariciftci
Organic Electronics 7 (2006), 229-234

18. **Organic solar cells with carbon nanotube network electrodes**
M. Rowell, M. Topinka, M. McGehee, H.-J. Prall, G. Dennler, N.S. Sariciftci, Liangbing Hu, G. Gruner
Applied Physics Letters 88 (2006), 233506-1
19. **Conjugated polymer photovoltaic devices and materials**
A. Mozer, N. S. Sariciftci
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20. **Switching in C60-fullerene based field effect transistors**
G. Matt, B. Singh, N.S. Sariciftci, A. Montaigne Ramil, H. Sitter
Applied Physics Letters 88 (2006), 263516
21. **Photo-induced phenomena in organic field-effect phototransistors based on conjugated polymer/fullerene blends and organic dielectric**
N. Marjanovic, B. Singh, G. Dennler, S. Guenes, R. Koeppe, H. Neugebauer, N.S. Sariciftci, S. Bauer
Proc. of SPIE Vol. 6192 (2006), 61921D-1, Organic Optoelectronics and Photonics II
22. **Progress in plastic electronics devices**
B. Singh, N.S. Sariciftci
Annual Review of Materials Research Vol 36 (2006), 199-230
23. **New donor-acceptor materials based on random polynorbornenes bearing pendant phthalocyanine and fullerene units**
A. de la Escosura, M.V. Martinez-Diaz, T. Torres, R. H. Grubbs, D. M. Guldi, H. Neugebauer, C. Winder, M. Drees, N.S. Sariciftci
Chem. Asian. Journal 1-2 (2006), 148-154
24. **Photoluminescence studies on the supramolecular interactions between a pyrrolidinofullerene and zinc-phthalocyanine used in organic solar cells**
R. Koeppe, P. Troshin, A. Fuchsbaue, R. Lyubovskaya, N.S. Sariciftci
Fullerenes, Nanotubes and Carbon Nanostructures, Number 2-3 (2006), 441-446
25. **Bio-organic-semiconductor-field-effect-transistor based on deoxyribonucleic acid gate dielectric**
B. Singh, N.S. Sariciftci, J. Grote, F. Hopkins
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26. **Organic inverter circuits employing ambipolar pentalene field-effect transistors**
B. Singh, P. Senkarabacak, N.S. Sariciftci, A. Tanda, C. Lackner, R. Hagelauer, G. Horowitz
Applied Physics Letters 89 (2006), 033512-1
27. **Molecular scale organized poly(MDMO-p-phenylene vinylene)-heteropolyacid composites**
A. Kulak, A. Kokorin, T. Kulak, S. Poznyak, D. Meissner, V. Pergushev, N.S. Sariciftci
Synthetic Metals 156 (2006), 843-847

28. **Enhanced spectral coverage in tandem organic solar cells**
G. Dennler, H.-J. Prall, R. Koeppe, M. Egginger, R. Autengruber, N.S. Sariciftci
Applied Physics Letters 89 (2006), 073502-1
29. **Precursor route poly(thienylene vinylene) for organic solar cells: photophysics and photovoltaic performance**
Le Huong Nguyen, S. Günes, H. Neugebauer, N.S. Sariciftci, F. Banishoeib, A. Henckens, T. Cleij, L. Lutsen, D. Vanderzande
Solar Energy Materials & Solar Cells 90 (2006), 2815-2828
30. **Nanoporous CuInS₂ electrodes for hybrid solar cells**
S. Guenes, H. Neugebauer, E. Arici Bogner, N.S. Sariciftci
Photonics for Solar Energy Systems, ed. Gombert, Proc. of SPIE, 6197 (2006), 619714-1
31. **Low bandgap poly(thienylene) for organic solar cells: photonics and photovoltaic performance**
Le Huong Nguyen, S. Guenes, H. Neugebauer, N.S. Sariciftci, F. Banishoeib, A. Henckens, T. Cleij, L. Lutsen, D. Vanderzande
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Proc. of SPIE, 6192 (2006), 61921T
32. **Electrical transport properties of hot wall epitaxially grown para-sexiphenyl nano-needles**
B. Singh, G. Hernandez-Sosa, H. Neugebauer, A. Andreev, H. Sitter, N.S. Sariciftci
physica status solidi (b) 243, No. 13 (2006), 3329-3332
33. **The effect of intermediate layers on the internal electric field in organic semiconductor devices**
C. Lungenschmied, G. Dennler, E. Ehrenfreund, H. Neugebauer, N.S. Sariciftci
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Proc. of SPIE, Vol. 6192 (2006), 61921W-1
34. **Flexible encapsulation for organic solar cells**
C. Lungenschmied, G. Dennler, G. Czeremuszkina, M. Latreche, H. Neugebauer, N.S. Sariciftci
Photonics for Solar Energy Systems, ed. by A. Gombert, Proc. of SPIE, Vol. 6197 (2006), 619712-1
35. **Electrical characteristics of metal-insulator-semiconductor diodes and transistors with space charge electret insulators: towards nonvolatile organic memories**
B. Singh, N. Marjanovic, N.S. Sariciftci, R. Schwödiauer, S. Bauer
IEEE Transactions on Dielectrics and Electrical Insulation Vol 13, No 5 (2006), 1082
36. **Comparative studies on solar cell structures using zinc phthalocyanine and fullerenes**
M. Egginger, R. Koeppe, F. Meghdadi, P. Troshin, R. Lyubovskaya, D. Meissner, N.S. Sariciftci
Organic Optoelectronics and Photonics II, ed. by P. L. Heremans, M. Muccini, E.A. Meulenkamp
Proc. of SPIE, Vol. 6192 (2006), 61921Y-1

37. **Soluble derivatives of perylene and naphthalene diimide for n-channel organic field-effect transistors**
B. Singh, S. Erten, S. Guenes, C. Zafer, G. Turkmen, B. Kuban, Y. Teoman, N.S. Sariciftci, S. Icli
Organic Electronics 7 (2006), 480-489
38. **High performance n-channel organic field-effect transistors and ring oscillators based on C₆₀ fullerene films**
T. Anthopoulos, B. Singh, N. Marjanovic, N. S. Sariciftci, A. Ramil, H. Sitter, M. Cölle, D. de Leeuw
Applied Physics Letters 89 (2006), 213504
39. **From evaporation to solution processed organic tandem solar cells**
H.-J. Prall, R. Koepe, R. Autengruber, M. Egginger, G. Dennler, N.S. Sariciftci
Photonics for Solar Energy Systems, ed. by A. Gombert
Proc. of SPIE, Vol. 6197 (2006), 61970F
40. **Internal electric field in organic-semiconductor-based photovoltaic devices**
C. Lungenschmied, G. Dennler, H. Neugebauer, N.S. Sariciftci, E. Ehrenfreund
Applied Physics Letters 89 (2006), 223519-1
41. **Bio-molecules and organic dielectrics for organic field-effect transistors**
B. Singh, N.S. Sariciftci
Proceedings of Organic Electronics Conference and Exhibition, OEC-06 (2006)
42. **Side chain effects on photoinduced absorption and photovoltaic performance of low bandgap thienylene vinylene and phenylene vinylene copolymers**
L.H. Nguyen, S. Günes, H. Neugebauer, N.S. Sariciftci, K. Colladet, S. Fourier, T.J. Cleij, L. Lutsen, J. Gelan, D. Vanderzande
The European Physical Journal Applied Physics 36 (2006), 219
43. **Photoinduced charge and energy transfer involving fullerene derivatives**
R. Koepe, N.S. Sariciftci
Photochem. Photobiol. Sci 5 (2006), 1122
44. **Conjugated polymer based photovoltaic devices**
A. Mozer, N.S. Sariciftci
Handbook of Conducting Polymers, ed. T. A. Skotheim and J. Reynolds, Volume 2: Conjugated Polymers: Processing and Applications
45. **Photovoltaic activity of a PolyProDOT derivative in a bulk heterojunction solar cell**
L. Campos, A. Mozer, S. Guenes, C. Winder, H. Neugebauer, N.S. Sariciftci, B. Thompson, B. Reeves, C. Greiner, J. Reynolds
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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
Synthetic Metals
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 IUVSTA 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
Organic Electronic
4. **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
Journal of American Chemistry
5. **A self-rechargeable and flexible polymer solar battery**
G. Dennler, S. Bereznev, D. Fichou, K. Holl, D. Ilic, R. Koeppel, 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 T. Wöhrle
6. **Advanced photon harvesting concepts for low energy gap organic solar cells**
R. Koeppel, O. Bossart, G. Calzaferri, N.S. Sariciftci
subm. to Solar Energy Materials and Solar Cells
7. **Effects of annealing on nanomorphology and performance of poly(alkylthiophene)-fullerene bulk heterojunction solar cells**
L.H. Nguyen, H. Hoppe, T. Erb, S. Günes, G. Gobsch, N. S. Sariciftci
accepted by Advanced Functional Materials
8. **Combined effects of conjugation pattern and alkoxy side chains on the photovoltaic properties of thiophene-containing PPE-PPVs**
D. Egbe, L.H. Nguyen, K. Schmidtke, A. Wild, C. Sieber, S. Guenes, N. S. Sariciftci
accepted at Journal of Polymer Science Part A: Polymer Chemistry
9. **Synthesis of poly(p-thienylene vinylene) (PTV) and its derivatives, as low band gap materials for photovoltaics**

F. Banishoeib, A. Henckens, S. Fourier, T.J.Cleij, L. Lutsen, D. Vanderzande, L. H. Nguyen,
H. Neugebauer, N. S. Sariciftci
submitted to Thin Solid Films

Patente:

1. **Schaltungsanordnung zur elektrischen Energieversorgung eines Verbrauchers**
H. Neugebauer, G. Dennler, D. Meissner
Österreichische Patentanmeldung AZ 1604/2005, pending