

II. PUBLICATIONS

Veröffentlichungen

- Morphology of polymer/fullerene bulkheterojunction solar cells**
H. Hoppe, N.S. Sariciftci
Journal of Materials Chemistry 16 (2006), 45-61
- 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
- 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
- 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
- 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
- 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
- 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
Comptes Rendus Chimie 9 (2006), 568-577
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. Koeppel, 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. Koeppel, P. Troshin, A. Fuchsbaauer, 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
Journal of Applied Physics 100, (2006), 024514-1
26. **Organic inverter circuits employing ambipolar pendentacene 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. Koeppel, 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
Organic Optoelectronics and Photonics II, ed. Heremans, Muccini, Meulenkaamp
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
Organic Optoelectronics and Photonics II, ed. by P. L. Heremans, M. Muccini, E.A. Meulenkaamp
Proc. of SPIE, Vol. 6192 (2006), 61921W-1
34. **Flexible encapsulation for organic solar cells**
C. Lungenschmied, G. Dennler, G. Czeremuszkin, 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. Schwödianer, 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. Meulenkaamp
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. Koeppe, 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
Solar Energy Materials & Solar Cells 90 (2006), 3531

In print/submitted

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. Peregichka, 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. 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 T. Wöhrle
6. **Advanced photon harvesting concepts for low energy gap organic solar cells**
R. Koeppe, 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