# Koen Vandewal

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 165 papers | 13,310 citations | 58 h-index | 113 g-index |
| 177 ext. papers | 14,942 ext. citations | 12.7 avg, IF | 6.55 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 165 | A PDTPQx:PC61BM blend with pronounced charge-transfer absorption for organic resonant cavity photodetectors direct arylation polymerization vs. Stille polycondensation. *Dyes and Pigments*, **2022**, 200, 110130 | 4.6 | 0 |
| 164 | Increasing donor-acceptor spacing for reduced voltage loss in organic solar cells. *Nature Communications*, **2021**, 12, 6679 | 17.4 | 7 |
| 163 | Vacuum-Deposited Microcavity Perovskite Photovoltaic Devices. *ACS Photonics*, **2021**, 8, 2067-2073 | 6.3 | 2 |
| 162 | Cavity-Enhanced Near-Infrared Organic Photodetectors Based on a Conjugated Polymer Containing [1,2,5]Selenadiazolo[3,4-c]Pyridine. *Chemistry of Materials*, **2021**, 33, 5147-5155 | 9.6 | 5 |
| 161 | Wavelength-Selective Organic Photodetectors. *Advanced Functional Materials*, **2021**, 31, 2104060 | 15.6 | 15 |
| 160 | A History and Perspective of Non-Fullerene Electron Acceptors for Organic Solar Cells. *Advanced Energy Materials*, **2021**, 11, 2003570 | 21.8 | 141 |
| 159 | Reverse dark current in organic photodetectors and the major role of traps as source of noise. *Nature Communications*, **2021**, 12, 551 | 17.4 | 40 |
| 158 | Diffusion-enhanced exciton dissociation in single-material organic solar cells. *Physical Chemistry Chemical Physics*, **2021**, 23, 20848-20853 | 3.6 | 6 |
| 157 | The role of spin in the degradation of organic photovoltaics. *Nature Communications*, **2021**, 12, 471 | 17.4 | 5 |
| 156 | Enhancing sub-bandgap external quantum efficiency by photomultiplication for narrowband organic near-infrared photodetectors. *Nature Communications*, **2021**, 12, 4259 | 17.4 | 11 |
| 155 | Narrow electroluminescence linewidths for reduced nonradiative recombination in organic solar cells and near-infrared light-emitting diodes. *Joule*, **2021**, 5, 2365-2379 | 27.8 | 12 |
| 154 | Miniaturized VIS-NIR Spectrometers Based on Narrowband and Tunable Transmission Cavity Organic Photodetectors with Ultrahigh Specific Detectivity above 10 Jones. *Advanced Materials*, **2021**, 33, e2102967 | 24 | 16 |
| 153 | Selectively absorbing small-molecule solar cells for self-powered electrochromic windows. *Nano Energy*, **2021**, 89, 106404 | 17.1 | 8 |
| 152 | Excitons Dominate the Emission from PM6:Y6 Solar Cells, but This Does Not Help the Open-Circuit Voltage of the Device. *ACS Energy Letters*, **2021**, 6, 557-564 | 20.1 | 24 |
| 151 | Stacked Dual-Wavelength Near-Infrared Organic Photodetectors. *Advanced Optical Materials*, **2021**, 9, 2001784 | 8.1 | 13 |
| 150 | Field Effect versus Driving Force: Charge Generation in Small-Molecule Organic Solar Cells. *Advanced Energy Materials*, **2020**, 10, 2002124 | 21.8 | 6 |
| 149 | Temperature dependence of the spectral line-width of charge-transfer state emission in organic solar cells; static vs. dynamic disorder. *Materials Horizons*, **2020**, 7, 1888-1900 | 14.4 | 19 |

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| 148 | The effect of halogenation on PBDTT-TQxT based non-fullerene polymer solar cells – Chlorination vs fluorination. *Dyes and Pigments*, **2020**, 181, 108577 | 4.6 | 7 |
| 147 | Molecular vibrations reduce the maximum achievable photovoltage in organic solar cells. *Nature Communications*, **2020**, 11, 1488 | 17.4 | 26 |
| 146 | Efficient and readily tuneable near-infrared photodetection up to 1500 nm enabled by thiadiazoloquinoxaline-based push–pull type conjugated polymers. *Journal of Materials Chemistry C* , **2020**, 8, 10098-10103 | 7.1 | 23 |
| 145 | Sub-picosecond charge-transfer at near-zero driving force in polymer:non-fullerene acceptor blends and bilayers. *Nature Communications*, **2020**, 11, 833 | 17.4 | 80 |
| 144 | The Cost of Converting Excitons into Free Charge Carriers in Organic Solar Cells. *Journal of Physical Chemistry Letters*, **2020**, 11, 129-135 | 6.4 | 27 |
| 143 | Comparative study on the effects of alkylsilyl and alkylthio side chains on the performance of fullerene and non-fullerene polymer solar cells. *Organic Electronics*, **2020**, 77, 105572 | 3.5 | 2 |
| 142 | Intrinsic Detectivity Limits of Organic Near-Infrared Photodetectors. *Advanced Materials*, **2020**, 32, e2003818 | 24 | 35 |
| 141 | Continuous Droplet Flow Synthesis of a Near-Infrared Responsive Push–Pull Copolymer toward Large Scale Implementation of Organic Photodetectors. *ACS Applied Polymer Materials*, **2020**, 2, 4373-4378 | 4.3 | 2 |
| 140 | Orientation dependent molecular electrostatics drives efficient charge generation in homojunction organic solar cells. *Nature Communications*, **2020**, 11, 4617 | 17.4 | 24 |
| 139 | Molecular parameters responsible for thermally activated transport in doped organic semiconductors. *Nature Materials*, **2019**, 18, 242-248 | 27 | 73 |
| 138 | Diffusion-Limited Crystallization: A Rationale for the Thermal Stability of Non-Fullerene Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 21766-21774 | 9.5 | 56 |
| 137 | Impact of molecular quadrupole moments on the energy levels at organic heterojunctions. *Nature Communications*, **2019**, 10, 2466 | 17.4 | 56 |
| 136 | Effect of H- and J-Aggregation on the Photophysical and Voltage Loss of Boron Dipyrromethene Small Molecules in Vacuum-Deposited Organic Solar Cells. *Journal of Physical Chemistry Letters*, **2019**, 10, 2684-2691 | 6.4 | 21 |
| 135 | Organic Cavity Photodetectors Based on Nanometer-Thick Active Layers for Tunable Monochromatic Spectral Response. *ACS Photonics*, **2019**, 6, 1393-1399 | 6.3 | 21 |
| 134 | Redefining near-unity luminescence in quantum dots with photothermal threshold quantum yield. *Science*, **2019**, 363, 1199-1202 | 33.3 | 120 |
| 133 | Degradation pathways in standard and inverted DBP-C based organic solar cells. *Scientific Reports*, **2019**, 9, 4024 | 4.9 | 13 |
| 132 | Negligible Energy Loss During Charge Generation in Small-Molecule/Fullerene Bulk-Heterojunction Solar Cells Leads to Open-Circuit Voltage over 1.10 V. *ACS Applied Energy Materials*, **2019**, 2, 2717-2722 | 6.1 | 20 |
| 131 | Emissive and charge-generating donor-acceptor interfaces for organic optoelectronics with low voltage losses. *Nature Materials*, **2019**, 18, 459-464 | 27 | 89 |

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| 130 | All-polymer solar cells based on photostable bis(perylene diimide) acceptor polymers. *Solar Energy Materials and Solar Cells*, **2019**, 196, 178-184 | 6.4 | 7 |
| 129 | Strong light-matter coupling for reduced photon energy losses in organic photovoltaics. *Nature Communications*, **2019**, 10, 3706 | 17.4 | 43 |
| 128 | Lead-Halide Perovskites Meet Donor–Acceptor Charge-Transfer Complexes. *Chemistry of Materials*, **2019**, 31, 6880-6888 | 9.6 | 26 |
| 127 | Analysis of bulk heterojunction organic solar cell blends by solid-state NMR relaxometry and sensitive external quantum efficiency – Impact of polymer side chain variation on nanoscale morphology. *Organic Electronics*, **2019**, 74, 309-314 | 3.5 | 4 |
| 126 | Ladder-type high gap conjugated polymers based on indacenodithieno[3,2-b]thiophene and bithiazole for organic photovoltaics. *Organic Electronics*, **2019**, 74, 211-217 | 3.5 | 3 |
| 125 | Manipulating the Charge Transfer Absorption for Narrowband Light Detection in the Near-Infrared. *Chemistry of Materials*, **2019**, 31, 9325-9330 | 9.6 | 25 |
| 124 | Organic and Hybrid Photodetectors. *World Scientific Series in Nanoscience and Nanotechnology*, **2019**, 213-241 | 0.1 | |
| 123 | Diketopyrrolopyrrole-based terpolymers with tunable broad band absorption for fullerene and fullerene-free polymer solar cells. *Journal of Materials Chemistry C*, **2019**, 7, 3375-3384 | 7.1 | 11 |
| 122 | Heteroquinoid Merocyanine Dyes with High Thermal Stability as Absorber Materials in Vacuum-Processed Organic Solar Cells. *European Journal of Organic Chemistry*, **2019**, 2019, 845-851 | 3.2 | 7 |
| 121 | Energy-Gap Law for Photocurrent Generation in Fullerene-Based Organic Solar Cells: The Case of Low-Donor-Content Blends. *Journal of the American Chemical Society*, **2019**, 141, 2329-2341 | 16.4 | 36 |
| 120 | Impact of Triplet Excited States on the Open-Circuit Voltage of Organic Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1800451 | 21.8 | 33 |
| 119 | Accurate reconstruction of the jV-characteristic of organic solar cells from measurements of the external quantum efficiency. *Journal of Applied Physics*, **2018**, 123, 134501 | 2.5 | |
| 118 | How to determine optical gaps and voltage losses in organic photovoltaic materials. *Sustainable Energy and Fuels*, **2018**, 2, 538-544 | 5.8 | 129 |
| 117 | Elementary steps in electrical doping of organic semiconductors. *Nature Communications*, **2018**, 9, 1182 | 17.4 | 133 |
| 116 | Small Molecule Solar Cells. *Green Chemistry and Sustainable Technology*, **2018**, 1-43 | 1.1 | 4 |
| 115 | Optical Gaps of Organic Solar Cells as a Reference for Comparing Voltage Losses. *Advanced Energy Materials*, **2018**, 8, 1801352 | 21.8 | 211 |
| 114 | Full Electrothermal OLED Model Including Nonlinear Self-heating Effects. *Physical Review Applied*, **2018**, 10, | 4.3 | 17 |
| 113 | Benzothiadiazole–triphenylamine as an efficient exciton blocking layer in small molecule based organic solar cells. *Sustainable Energy and Fuels*, **2018**, 2, 2296-2302 | 5.8 | 7 |

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| 112 | Electrothermal Feedback and Absorption-Induced Open-Circuit-Voltage Turnover in Solar Cells. *Physical Review Applied*, **2018**, 9, | 4.3 | 12 |
| 111 | Near-infrared organic photodetectors based on bay-annulated indigo showing broadband absorption and high detectivities up to 1.1 Ẽn. *Journal of Materials Chemistry C*, **2018**, 6, 11645-11650 | 7.1 | 31 |
| 110 | High voltage vacuum-deposited CH3NH3PbI3ĈH3NH3PbI3 tandem solar cells. *Energy and Environmental Science*, **2018**, 11, 3292-3297 | 35.4 | 74 |
| 109 | Alkyl Branching Position in Diketopyrrolopyrrole Polymers: Interplay between Fibrillar Morphology and Crystallinity and Their Effect on Photogeneration and Recombination in Bulk-Heterojunction Solar Cells. *Chemistry of Materials*, **2018**, 30, 6801-6809 | 9.6 | 9 |
| 108 | Hole Transport in Low-Donor-Content Organic Solar Cells. *Journal of Physical Chemistry Letters*, **2018**, 9, 5496-5501 | 6.4 | 28 |
| 107 | Boron dipyrromethene (BODIPY) with meso-perfluorinated alkyl substituents as near infrared donors in organic solar cells. *Journal of Materials Chemistry A*, **2018**, 6, 18583-18591 | 13 | 21 |
| 106 | Influence of DopantĦost Energy Level Offset on Thermoelectric Properties of Doped Organic Semiconductors. *Journal of Physical Chemistry C*, **2018**, 122, 11730-11735 | 3.8 | 24 |
| 105 | Optical In-Coupling in Organic Solar Cells. *Small Methods*, **2018**, 2, 1800123 | 12.8 | 12 |
| 104 | Absorption Tails of Donor:C Blends Provide Insight into Thermally Activated Charge-Transfer Processes and Polaron Relaxation. *Journal of the American Chemical Society*, **2017**, 139, 1699-1704 | 16.4 | 55 |
| 103 | Exciton Diffusion Length and Charge Extraction Yield in Organic Bilayer Solar Cells. *Advanced Materials*, **2017**, 29, 1604424 | 24 | 25 |
| 102 | Revelation of Interfacial Energetics in Organic Multiheterojunctions. *Advanced Science*, **2017**, 4, 1600331 | 13.6 | 25 |
| 101 | H-aggregated small molecular nanowires as near infrared absorbers for organic solar cells. *Organic Electronics*, **2017**, 45, 198-202 | 3.5 | 9 |
| 100 | Intrinsic non-radiative voltage losses in fullerene-based organic solar cells. *Nature Energy*, **2017**, 2, | 62.3 | 362 |
| 99 | Aza-BODIPY dyes with heterocyclic substituents and their derivatives bearing a cyanide co-ligand: NIR donor materials for vacuum-processed solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 10696-10703 | 13 | 28 |
| 98 | Organic narrowband near-infrared photodetectors based on intermolecular charge-transfer absorption. *Nature Communications*, **2017**, 8, 15421 | 17.4 | 146 |
| 97 | Small Molecule Near-Infrared Boron Dipyrromethene Donors for Organic Tandem Solar Cells. *Journal of the American Chemical Society*, **2017**, 139, 13636-13639 | 16.4 | 56 |
| 96 | Reducing Voltage Losses in Cascade Organic Solar Cells while Maintaining High External Quantum Efficiencies. *Advanced Energy Materials*, **2017**, 7, 1700855 | 21.8 | 104 |
| 95 | Polymer:Fullerene Bimolecular Crystals for Near-Infrared Spectroscopic Photodetectors. *Advanced Materials*, **2017**, 29, 1702184 | 24 | 105 |

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| 94 | Charge Transport in Pure and Mixed Phases in Organic Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1700888 | 21.8 | 45 |
| 93 | Doping-induced carrier profiles in organic semiconductors determined from capacitive extraction-current transients. *Scientific Reports*, **2017**, 7, 5397 | 4.9 | 11 |
| 92 | Controlling Tamm Plasmons for Organic Narrowband Near-Infrared Photodetectors. *ACS Photonics*, **2017**, 4, 2228-2234 | 6.3 | 33 |
| 91 | Fast Organic Near-Infrared Photodetectors Based on Charge-Transfer Absorption. *Journal of Physical Chemistry Letters*, **2017**, 8, 5621-5625 | 6.4 | 33 |
| 90 | Aza-BODIPY Derivatives Containing BF(CN) and B(CN) Moieties. *ChemPlusChem*, **2017**, 82, 190-194 | 2.8 | 4 |
| 89 | Plasmon-Induced Sub-Bandgap Photodetection with Organic Schottky Diodes. *Advanced Functional Materials*, **2016**, 26, 5741-5747 | 15.6 | 23 |
| 88 | Optical display film as flexible and light trapping substrate for organic photovoltaics. *Optics Express* , **2016**, 24, A974-80 | 3.3 | 21 |
| 87 | The Roles of Structural Order and Intermolecular Interactions in Determining Ionization Energies and Charge-Transfer State Energies in Organic Semiconductors. *Advanced Energy Materials*, **2016**, 6, 1601211 | 21.8 | 37 |
| 86 | Organic Photovoltaics: Low Band Gap Polymer Solar Cells With Minimal Voltage Losses (Adv. Energy Mater. 18/2016). *Advanced Energy Materials*, **2016**, 6, | 21.8 | 1 |
| 85 | Low Band Gap Polymer Solar Cells With Minimal Voltage Losses. *Advanced Energy Materials*, **2016**, 6, 1600148 | 21.8 | 80 |
| 84 | Fluorine-containing low-energy-gap organic dyes with low voltage losses for organic solar cells. *Synthetic Metals*, **2016**, 222, 232-239 | 3.6 | 3 |
| 83 | Development of polymer–fullerene solar cells. *National Science Review*, **2016**, 3, 222-239 | 10.8 | 63 |
| 82 | Efficient flexible organic photovoltaics using silver nanowires and polymer based transparent electrodes. *Organic Electronics*, **2016**, 36, 68-72 | 3.5 | 35 |
| 81 | Interfacial Charge Transfer States in Condensed Phase Systems. *Annual Review of Physical Chemistry*, **2016**, 67, 113-33 | 15.7 | 129 |
| 80 | Characterizing the Polymer:Fullerene Intermolecular Interactions. *Chemistry of Materials*, **2016**, 28, 1446-1452 | 9.4 | 17 |
| 79 | Influence of Meso and Nanoscale Structure on the Properties of Highly Efficient Small Molecule Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1501280 | 21.8 | 21 |
| 78 | Degradation of Sexithiophene Cascade Organic Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1502432 | 21.8 | 13 |
| 77 | PEDOT:PSS with embedded TiO2 nanoparticles as light trapping electrode for organic photovoltaics. *Applied Physics Letters*, **2016**, 108, 253302 | 3.4 | 27 |

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| 76 | Flexible, light trapping substrates for organic photovoltaics. *Applied Physics Letters*, **2016**, 109, 093301 | 3.4 | 24 |
| 75 | Elucidating Batch-to-Batch Variation Caused by Homocoupled Side Products in Solution-Processable Organic Solar Cells. *Chemistry of Materials*, **2016**, 28, 9088-9098 | 9.6 | 17 |
| 74 | Near infrared laser annealing of CdTe and in-situ measurement of the evolution of structural and optical properties. *Journal of Applied Physics*, **2016**, 119, 165305 | 2.5 | 2 |
| 73 | Light trapping for flexible organic photovoltaics **2016**, | | 1 |
| 72 | Charge Transfer Absorption and Emission at ZnO/Organic Interfaces. *Journal of Physical Chemistry Letters*, **2015**, 6, 500-4 | 6.4 | 32 |
| 71 | Effect of molecular weight on morphology and photovoltaic properties in P3HT:PCBM solar cells. *Organic Electronics*, **2015**, 21, 160-170 | 3.5 | 35 |
| 70 | Direct Correlation of Charge Transfer Absorption with Molecular Donor:Acceptor Interfacial Area via Photothermal Deflection Spectroscopy. *Journal of the American Chemical Society*, **2015**, 137, 5256-9 | 16.4 | 36 |
| 69 | A charge carrier transport model for donor-acceptor blend layers. *Journal of Applied Physics*, **2015**, 117, 045501 | 2.5 | 11 |
| 68 | Optical measurement of doping efficiency in poly(3-hexylthiophene) solutions and thin films. *Physical Review B*, **2015**, 91, | 3.3 | 96 |
| 67 | Symmetry-breaking charge transfer in a zinc chlorodipyrrin acceptor for high open circuit voltage organic photovoltaics. *Journal of the American Chemical Society*, **2015**, 137, 5397-405 | 16.4 | 59 |
| 66 | Beyond Langevin Recombination: How Equilibrium Between Free Carriers and Charge Transfer States Determines the Open-Circuit Voltage of Organic Solar Cells. *Advanced Energy Materials*, **2015**, 5, 1500123 | 21.8 | 306 |
| 65 | Experimental and theoretical study of phase separation in ZnPc:C60 blends. *Organic Electronics*, **2015**, 27, 183-191 | 3.5 | 4 |
| 64 | Density of states determination in organic donor-acceptor blend layers enabled by molecular doping. *Journal of Applied Physics*, **2015**, 117, 245501 | 2.5 | 14 |
| 63 | Co-evaporant induced crystallization of zinc phthalocyanine:C60 blends for solar cells. *Organic Electronics*, **2015**, 27, 133-136 | 3.5 | 6 |
| 62 | Microstructural and Electronic Origins of Open-Circuit Voltage Tuning in Organic Solar Cells Based on Ternary Blends. *Advanced Energy Materials*, **2015**, 5, 1501335 | 21.8 | 58 |
| 61 | Disorder-Induced Open-Circuit Voltage Losses in Organic Solar Cells During Photoinduced Burn-In. *Advanced Energy Materials*, **2015**, 5, 1500111 | 21.8 | 127 |
| 60 | Influence of side groups on the performance of infrared absorbing aza-BODIPY organic solar cells. *Physica Status Solidi (A) Applications and Materials Science*, **2015**, 212, 2747-2753 | 1.6 | 32 |
| 59 | Increased open-circuit voltage of organic solar cells by reduced donor-acceptor interface area. *Advanced Materials*, **2014**, 26, 3839-43 | 24 | 152 |

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| 58 | High performance all-polymer solar cell via polymer side-chain engineering. *Advanced Materials*, **2014**, 26, 3767-72 | 24 | 300 |
| 57 | On the efficiency of charge transfer state splitting in polymer:fullerene solar cells. *Advanced Materials*, **2014**, 26, 2533-9 | 24 | 94 |
| 56 | Organic Solar Cells: On the Efficiency of Charge Transfer State Splitting in Polymer:Fullerene Solar Cells (Adv. Mater. 16/2014). *Advanced Materials*, **2014**, 26, 2607-2607 | 24 | |
| 55 | Correlated Donor/Acceptor Crystal Orientation Controls Photocurrent Generation in All-Polymer Solar Cells. *Advanced Functional Materials*, **2014**, 24, 4068-4081 | 15.6 | 129 |
| 54 | Comparing the Device Physics and Morphology of Polymer Solar Cells Employing Fullerenes and Non-Fullerene Acceptors. *Advanced Energy Materials*, **2014**, 4, 1301426 | 21.8 | 80 |
| 53 | Structure□roperty relationships of oligothiophene□soindigo polymers for efficient bulk-heterojunction solar cells. *Energy and Environmental Science*, **2014**, 7, 361-369 | 35.4 | 100 |
| 52 | Efficient charge generation by relaxed charge-transfer states at organic interfaces. *Nature Materials*, **2014**, 13, 63-8 | 27 | 584 |
| 51 | Effective solution- and vacuum-processed n-doping by dimers of benzimidazoline radicals. *Advanced Materials*, **2014**, 26, 4268-72 | 24 | 114 |
| 50 | Controlling Interdiffusion, Interfacial Composition, and Adhesion in Polymer Solar Cells. *Advanced Materials Interfaces*, **2014**, 1, 1400135 | 4.6 | 24 |
| 49 | Role of Molecular Weight Distribution on Charge Transport in Semiconducting Polymers. *Macromolecules*, **2014**, 47, 7151-7157 | 5.5 | 82 |
| 48 | Reducing burn-in voltage loss in polymer solar cells by increasing the polymer crystallinity. *Energy and Environmental Science*, **2014**, 7, 2974-2980 | 35.4 | 142 |
| 47 | The Crucial Influence of Fullerene Phases on Photogeneration in Organic Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1400922 | 21.8 | 48 |
| 46 | Importance of the donor:fullerene intermolecular arrangement for high-efficiency organic photovoltaics. *Journal of the American Chemical Society*, **2014**, 136, 9608-18 | 16.4 | 283 |
| 45 | Built-in voltage of organic bulk heterojuction p-i-n solar cells measured by electroabsorption spectroscopy. *AIP Advances*, **2014**, 4, 047134 | 1.5 | 9 |
| 44 | Polarization Imaging of Emissive Charge Transfer States in Polymer/Fullerene Blends. *Chemistry of Materials*, **2014**, 26, 6695-6704 | 9.6 | 12 |
| 43 | Toward bulk heterojunction polymer solar cells with thermally stable active layer morphology. *Journal of Photonics for Energy*, **2014**, 4, 040997 | 1.2 | 41 |
| 42 | Sub-bandgap laser annealing of room temperature deposited polycrystalline CdTe **2014**, | | 3 |
| 41 | A general relationship between disorder, aggregation and charge transport in conjugated polymers. *Nature Materials*, **2013**, 12, 1038-44 | 27 | 1435 |

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| 40 | Structural Factors That Affect the Performance of Organic Bulk Heterojunction Solar Cells. *Macromolecules*, **2013**, 46, 6379-6387 | 5.5 | 134 |
| 39 | Re-evaluating the role of sterics and electronic coupling in determining the open-circuit voltage of organic solar cells. *Advanced Materials*, **2013**, 25, 6076-82 | 24 | 85 |
| 38 | High mobility N-type transistors based on solution-sheared doped 6,13-bis(triisopropylsilylethynyl)pentacene thin films. *Advanced Materials*, **2013**, 25, 4663-7 | 24 | 86 |
| 37 | Confined organization of fullerene units along high polymer chains. *Journal of Materials Chemistry C* , **2013**, 1, 5747 | 7.1 | 15 |
| 36 | Conformational Disorder Enhances Solubility and Photovoltaic Performance of a ThiopheneQuinoxaline Copolymer. *Advanced Energy Materials*, **2013**, 3, 806-814 | 21.8 | 85 |
| 35 | Influence of fullerene photodimerization on the PCBM crystallization in polymer: Fullerene bulk heterojunctions under thermal stress. *Journal of Polymer Science, Part B: Polymer Physics*, **2013**, 51, 1209-1214 | 2.6 | 64 |
| 34 | Recombination in Polymer:Fullerene Solar Cells with Open-Circuit Voltages Approaching and Exceeding 1.0 V. *Advanced Energy Materials*, **2013**, 3, 220-230 | 21.8 | 199 |
| 33 | Solar Cells: Re-evaluating the Role of Sterics and Electronic Coupling in Determining the Open-Circuit Voltage of Organic Solar Cells (Adv. Mater. 42/2013). *Advanced Materials*, **2013**, 25, 5990-5990 | 24 | 1 |
| 32 | Correlation of open-circuit voltage and energy levels in zinc-phthalocyanine: C60 bulk heterojunction solar cells with varied mixing ratio. *Physical Review B*, **2013**, 88, | 3.3 | 61 |
| 31 | Influence of octanedithiol on the nanomorphology of PCPDTBT:PCBM blends studied by solid-state NMR. *Solar Energy Materials and Solar Cells*, **2012**, 96, 210-217 | 6.4 | 20 |
| 30 | Interlayer for modified cathode in highly efficient inverted ITO-free organic solar cells. *Advanced Materials*, **2012**, 24, 554-8 | 24 | 88 |
| 29 | Mixed C60/C70 based fullerene acceptors in polymer bulk-heterojunction solar cells. *Organic Electronics*, **2012**, 13, 2856-2864 | 3.5 | 16 |
| 28 | Polarization anisotropy of charge transfer absorption and emission of aligned polymer:fullerene blend films. *Physical Review B*, **2012**, 86, | 3.3 | 27 |
| 27 | Excitation of Charge Transfer States and Low-Driving Force Triplet Exciton Dissociation at Planar Donor/Acceptor Interfaces. *Journal of Physical Chemistry Letters*, **2012**, 3, 2064-2068 | 6.4 | 26 |
| 26 | Quantification of Quantum Efficiency and Energy Losses in Low Bandgap Polymer:Fullerene Solar Cells with High Open-Circuit Voltage. *Advanced Functional Materials*, **2012**, 22, 3480-3490 | 15.6 | 164 |
| 25 | Semi-Transparent Tandem Organic Solar Cells with 90% Internal Quantum Efficiency. *Advanced Energy Materials*, **2012**, 2, 1467-1476 | 21.8 | 93 |
| 24 | Influence of Fullerene Ordering on the Energy of the Charge-Transfer State and Open-Circuit Voltage in Polymer:Fullerene Solar Cells. *Journal of Physical Chemistry C*, **2011**, 115, 10873-10880 | 3.8 | 88 |
| 23 | An easily accessible isoindigo-based polymer for high-performance polymer solar cells. *Journal of the American Chemical Society*, **2011**, 133, 14244-7 | 16.4 | 349 |

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|---|---|---|---|
| 22 | Charge Transfer States in Organic Donor–Acceptor Solar Cells. *Semiconductors and Semimetals*, **2011**, 85, 261-295 | 0.6 | 17 |
| 21 | Phase behaviour of liquid-crystalline polymer/fullerene organic photovoltaic blends: thermal stability and miscibility. *Journal of Materials Chemistry*, **2011**, 21, 10676 | | 74 |
| 20 | Enhance performance of organic solar cells based on an isoindigo-based copolymer by balancing absorption and miscibility of electron acceptor. *Applied Physics Letters*, **2011**, 99, 143302 | 3.4 | 44 |
| 19 | Modeling the temperature induced degradation kinetics of the short circuit current in organic bulk heterojunction solar cells. *Applied Physics Letters*, **2010**, 96, 163301 | 3.4 | 82 |
| 18 | Charge transfer state versus hot exciton dissociation in polymer-fullerene blended solar cells. *Journal of the American Chemical Society*, **2010**, 132, 11878-80 | 16.4 | 301 |
| 17 | Relating the open-circuit voltage to interface molecular properties of donor:acceptor bulk heterojunction solar cells. *Physical Review B*, **2010**, 81, | 3.3 | 636 |
| 16 | On the Dissociation Efficiency of Charge Transfer Excitons and Frenkel Excitons in Organic Solar Cells: A Luminescence Quenching Study. *Journal of Physical Chemistry C*, **2010**, 114, 21824-21832 | 3.8 | 108 |
| 15 | Charge-Transfer States and Upper Limit of the Open-Circuit Voltage in Polymer:Fullerene Organic Solar Cells. *IEEE Journal of Selected Topics in Quantum Electronics*, **2010**, 16, 1676-1684 | 3.8 | 60 |
| 14 | Bipolar charge transport in fullerene molecules in a bilayer and blend of polyfluorene copolymer and fullerene. *Advanced Materials*, **2010**, 22, 1008-11 | 24 | 14 |
| 13 | Varying polymer crystallinity in nanofiber poly(3-alkylthiophene): PCBM solar cells: Influence on charge-transfer state energy and open-circuit voltage. *Applied Physics Letters*, **2009**, 95, 123303 | 3.4 | 87 |
| 12 | Effect of Alkyl Side-Chain Length on Photovoltaic Properties of Poly(3-alkylthiophene)/PCBM Bulk Heterojunctions. *Advanced Functional Materials*, **2009**, 19, 3300-3306 | 15.6 | 103 |
| 11 | On the origin of the open-circuit voltage of polymer-fullerene solar cells. *Nature Materials*, **2009**, 8, 904-9 | 27 | 1006 |
| 10 | Electroluminescence from charge transfer states in polymer solar cells. *Journal of the American Chemical Society*, **2009**, 131, 11819-24 | 16.4 | 318 |
| 9 | Ground-state charge-transfer complex formation in hybrid poly(3-hexyl thiophene):titanium dioxide solar cells. *Applied Physics Letters*, **2008**, 93, 223302 | 3.4 | 33 |
| 8 | The Relation Between Open-Circuit Voltage and the Onset of Photocurrent Generation by Charge-Transfer Absorption in Polymer : Fullerene Bulk Heterojunction Solar Cells. *Advanced Functional Materials*, **2008**, 18, 2064-2070 | 15.6 | 468 |
| 7 | Water based preparation method for "green" solid-state polythiophene solar cells. *Thin Solid Films*, **2008**, 516, 7245-7250 | 2.2 | 17 |
| 6 | Fourier-Transform Photocurrent Spectroscopy for a fast and highly sensitive spectral characterization of organic and hybrid solar cells. *Thin Solid Films*, **2008**, 516, 7135-7138 | 2.2 | 53 |
| 5 | Formation of a Ground-State Charge-Transfer Complex in Polyfluorene//[6,6]-Phenyl-C61 Butyric Acid Methyl Ester (PCBM) Blend Films and Its Role in the Function of Polymer/PCBM Solar Cells. *Advanced Functional Materials*, **2007**, 17, 451-457 | 15.6 | 234 |

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| 4 | Optical absorption by defect states in organic solar cells. *Journal of Non-Crystalline Solids*, **2006**, 352, 1656-1659 | 3.9 | 17 |
| 3 | Highly sensitive spectroscopic characterization of inorganic and organic heterojunctions for solar cells. *EPJ Applied Physics*, **2006**, 36, 281-283 | 1.1 | 7 |
| 2 | Nanoscale electrical characterization of organic photovoltaic blends by conductive atomic force microscopy. *Applied Physics Letters*, **2006**, 89, 032107 | 3.4 | 80 |
| 1 | Tuning Electronic and Morphological Properties for High-Performance Wavelength-Selective Organic Near-Infrared Cavity Photodetectors. *Advanced Functional Materials*,2108146 | 15.6 | 4 |