

Harald Hoppe

List of Publications by Year in descending order

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128
papers

9,977
citations

87843

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33869

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131
docs citations

131
times ranked

10413
citing authors

#	ARTICLE	IF	CITATIONS
1	Controlling Metal Halide Perovskite Crystal Growth via Microcontact Printed Hydrophobic-Hydrophilic Templates. <i>Crystal Research and Technology</i> , 2022, 57, .	0.6	3
2	An effective method of reconnoitering current-voltage ($I-V$) characteristics of organic solar cells. <i>Journal of Applied Physics</i> , 2022, 132, .	1.1	2
3	Agrivoltaics-The Perfect Fit for the Future of Organic Photovoltaics. <i>Advanced Energy Materials</i> , 2021, 11, 2002551.	10.2	38
4	Why Organic Electronic Devices Comprising PEDOT:PSS Electrodes Should be Fabricated on Metal Free Substrates. <i>ACS Applied Electronic Materials</i> , 2021, 3, 929-943.	2.0	14
5	Spatial Conductivity Distribution in Thin PEDOT:PSS Films after Laser Microannealing. <i>ACS Applied Electronic Materials</i> , 2021, 3, 2825-2831.	2.0	6
6	Introduction of a Novel Figure of Merit for the Assessment of Transparent Conductive Electrodes in Photovoltaics: Exact and Approximate Form. <i>Advanced Energy Materials</i> , 2021, 11, 2100875.	10.2	33
7	Non-fullerene acceptor photostability and its impact on organic solar cell lifetime. <i>Cell Reports Physical Science</i> , 2021, 2, 100498.	2.8	35
8	Uphill and downhill charge generation from charge transfer to charge separated states in organic solar cells. <i>Journal of Materials Chemistry C</i> , 2021, 9, 14463-14489.	2.7	10
9	Improved Hole Extraction Selectivity of Polymer Solar Cells by Combining PEDOT:PSS with WO ₃ . <i>Energy Technology</i> , 2021, 9, 2100474.	1.8	10
10	Performance and Stability of Organic Solar Cells Bearing Nitrogen Containing Electron Extraction Layers. <i>Energy Technology</i> , 2020, 8, 2000117.	1.8	2
11	Disentanglement of Degradation Mechanisms by Analyzing Aging Dynamics of Environmentally Friendly Processed Polymer Solar Cells. <i>Energy Technology</i> , 2020, 8, 2000116.	1.8	7
12	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. <i>Nature Energy</i> , 2020, 5, 35-49.	19.8	797
13	Tco WORK FUNCTION TUNING BY NANODIAMONDS. , 2020, , .		0
14	Thermally induced degradation of PBDTTT-CT:PCBM based polymer solar cells. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 475501.	1.3	11
15	Impact of P3HT materials properties and layer architecture on OPV device stability. <i>Solar Energy Materials and Solar Cells</i> , 2019, 202, 110151.	3.0	17
16	Compact multifunctional source-meter system for characterisation of laboratory-scale solar cell devices. <i>Measurement Science and Technology</i> , 2019, 30, 035901.	1.4	2
17	Organic solar cells based on anthracene-containing PPE-PPVs and non-fullerene acceptors. <i>Chemical Papers</i> , 2018, 72, 1769-1778.	1.0	6
18	Fully Roll-to-Roll Printed P3HT/Indene-Bisadduct Modules with High Open-Circuit Voltage and Efficiency. <i>Solar Rrl</i> , 2018, 2, 1700160.	3.1	19

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19	Aluminum-doped ZnO thin films deposited on flat and nanostructured glass substrates: Quality and performance for applications in organic solar cells. <i>Solar Energy</i> , 2018, 172, 219-224.	2.9	15
20	Aluminum Electrode Insulation Dynamics via Interface Oxidation by Reactant Diffusion in Organic Layers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018, 215, 1800474.	0.8	2
21	Stability of organic solar cells with PCDTBT donor polymer: An interlaboratory study. <i>Journal of Materials Research</i> , 2018, 33, 1909-1924.	1.2	17
22	High-temperature stable single carrier hole only device based on conjugated polymers. <i>Journal of Materials Research</i> , 2018, 33, 1860-1867.	1.2	9
23	Controlling donor crystallinity and phase separation in bulk heterojunction solar cells by the introduction of orthogonal solvent additives. <i>MRS Advances</i> , 2018, 3, 1891-1900.	0.5	5
24	Revelation of Interfacial Energetics in Organic Multiheterojunctions. <i>Advanced Science</i> , 2017, 4, 1600331.	5.6	33
25	Organic Multiheterojunctions: Revelation of Interfacial Energetics in Organic Multiheterojunctions (<i>Adv. Sci.</i> 4/2017). <i>Advanced Science</i> , 2017, 4, .	5.6	0
26	Current Density and Heating Patterns in Organic Solar Cells Reproduced by Finite Element Modeling. <i>Solar Rrl</i> , 2017, 1, 1700018.	3.1	2
27	Nanoscale Morphology from Donor-acceptor Block Copolymers: Formation and Functions. <i>Advances in Polymer Science</i> , 2017, , 157-191.	0.4	6
28	Role of the post-annealing conditions on the conductivity of niobium doped titanium dioxide electrodes prepared by sol-gel and their function in organic solar cells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2017, 14, 1700011.	0.8	0
29	Comparative Indoor and Outdoor Degradation of Organic Photovoltaic Cells via Inter-laboratory Collaboration. <i>Polymers</i> , 2016, 8, 1.	2.0	285
30	Modulation of charge carrier mobility by side-chain engineering of bi(thienylenevinylene)thiophene containing PPE-PPVs. <i>RSC Advances</i> , 2016, 6, 51642-51648.	1.7	2
31	Effect of Side Chains on Molecular Conformation of Anthracene-Ethynylene-Phenylene-Vinylene Oligomers: A Comparative Density Functional Study With and Without Dispersion Interaction. <i>Journal of Physical Chemistry A</i> , 2016, 120, 3835-3841.	1.1	4
32	Irradiation-induced degradation of PTB7 investigated by valence band and S 2 <i>p</i> photoelectron spectroscopy. <i>Nanotechnology</i> , 2016, 27, 324005.	1.3	8
33	Baselines for Lifetime of Organic Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1600910.	10.2	42
34	EU COST Action MP1307 "Unravelling the degradation mechanisms of emerging solar cell technologies." , 2016, , .		0
35	Locally resolved large scale phase separation in polymer:fullerene blends. <i>Journal of Materials Chemistry A</i> , 2016, 4, 1244-1250.	5.2	6
36	Long-term stabilization of organic solar cells using UV absorbers. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 125604.	1.3	23

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37	Long-term stabilization of organic solar cells using hydroperoxide decomposers as additives. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	23
38	Current density and heating patterns in organic solar cells: modelling and imaging experiments (Conference Presentation). , 2016, , .		0
39	Emerging Thin-Film Photovoltaics: Stabilize or Perish. Advanced Energy Materials, 2015, 5, .	10.2	3
40	Quantitative evaluation of inhomogeneous device operation in thin film solar cells by luminescence imaging. Applied Physics Letters, 2015, 107, .	1.5	12
41	Procedures and Practices for Evaluating Thin-Film Solar Cell Stability. Advanced Energy Materials, 2015, 5, 1501407.	10.2	137
42	Solar Cells: From Sunlight into Electricity. International Journal of Photoenergy, 2015, 2015, 1-1.	1.4	0
43	Comparative indoor and outdoor degradation of organic photovoltaic cells via inter-laboratory collaboration. , 2015, , .		3
44	Controlling Exciton Diffusion and Fullerene Distribution in Photovoltaic Blends by Side Chain Modification. Journal of Physical Chemistry Letters, 2015, 6, 3054-3060.	2.1	26
45	Comparison of distributed vs. lumped series resistance modeling of thin-film solar cells and modules: Influence on the geometry-dependent efficiency. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1991-2000.	0.8	16
46	Influence of Interface Doping on Charge-Carrier Mobilities and Sub-Bandgap Absorption in Organic Solar Cells. Journal of Physical Chemistry C, 2015, 119, 9036-9040.	1.5	19
47	Morphology, Crystal Structure and Charge Transport in Donor-Acceptor Block Copolymer Thin Films. ACS Applied Materials & Interfaces, 2015, 7, 12309-12318.	4.0	23
48	Polymer aggregation control in polymer-fullerene bulk heterojunctions adapted from solution. Journal of Materials Chemistry A, 2015, 3, 395-403.	5.2	26
49	Correlating domain purity with charge carrier mobility in bulk heterojunction polymer solar cells. Proceedings of SPIE, 2014, , .	0.8	5
50	Water ingress into and climate dependent lifetime of organic photovoltaic cells investigated by calcium corrosion tests. Solar Energy Materials and Solar Cells, 2014, 120, 685-690.	3.0	47
51	Multiple stress degradation analysis of the active layer in organic photovoltaics. Solar Energy Materials and Solar Cells, 2014, 120, 654-668.	3.0	30
52	Influence of Thermal Annealing on PCDTBT:PCBM Composition Profiles. Advanced Energy Materials, 2014, 4, 1300981.	10.2	47
53	Control of charge generation and recombination in ternary polymer/polymer:fullerene photovoltaic blends using amorphous and semi-crystalline copolymers as donors. Physical Chemistry Chemical Physics, 2014, 16, 20329-20337.	1.3	30
54	Long-Term Stabilization of Organic Solar Cells Using Hindered Phenols as Additives. ACS Applied Materials & Interfaces, 2014, 6, 18525-18537.	4.0	46

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55	Worldwide outdoor round robin study of organic photovoltaic devices and modules. <i>Solar Energy Materials and Solar Cells</i> , 2014, 130, 281-290.	3.0	23
56	Flexible ITO-free polymer solar cells based on highly conductive PEDOT:PSS and a printed silver grid. <i>Solar Energy Materials and Solar Cells</i> , 2014, 130, 551-554.	3.0	34
57	Modification of the Active Layer/PEDOT:PSS Interface by Solvent Additives Resulting in Improvement of the Performance of Organic Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 11068-11081.	4.0	16
58	Effect of Varying Thiophene Units on Charge Transport and Photovoltaic Properties of Poly(phenylene) Tj ETQq0 0 0 rgBT /Overlock 10 215, 1473-1484.	1.1	3
59	Sub-bandgap absorption in organic solar cells: experiment and theory. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 16494.	1.3	55
60	Interlaboratory outdoor stability studies of flexible roll-to-roll coated organic photovoltaic modules: Stability over 10,000 h. <i>Solar Energy Materials and Solar Cells</i> , 2013, 116, 187-196.	3.0	107
61	Revealing the Active Layer Morphology within Complete Solar Cell Devices via Spectroscopic Ellipsometry. <i>Journal of Physical Chemistry C</i> , 2013, 117, 25205-25210.	1.5	1
62	Impact of methanol top-casting or washing on the polymer solar cell performance. <i>Proceedings of SPIE</i> , 2013, , .	0.8	1
63	Improved phase separation in polymer solar cells by solvent blending. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 868-874.	2.4	11
64	Influence of doping on charge carrier collection in normal and inverted geometry polymer:fullerene solar cells. <i>Scientific Reports</i> , 2013, 3, .	1.6	65
65	Stability of polymer solar cells: Dependence on working pressure. <i>Solar Energy Materials and Solar Cells</i> , 2013, 111, 212-215.	3.0	9
66	Direct Correlation of the Organic Solar Cell Device Performance to the In-Depth Distribution of Highly Ordered Polymer Domains in Polymer/Fullerene Films. <i>Advanced Energy Materials</i> , 2013, 3, 1463-1472.	10.2	13
67	Correlation of charge transport with structural order in highly ordered melt-crystallized poly(3-hexylthiophene) thin films. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 943-951.	2.4	89
68	Polymer solar cells with enhanced lifetime by improved electrode stability and sealing. <i>Solar Energy Materials and Solar Cells</i> , 2013, 117, 59-66.	3.0	93
69	Combined characterization techniques to understand the stability of a variety of organic photovoltaic devices: the ISOS-3 inter-laboratory collaboration. , 2012, , .		3
70	Photon recycling across a ultraviolet-blocking layer by luminescence in polymer solar cells. <i>Journal of Applied Physics</i> , 2012, 112, 034517.	1.1	26
71	Quantitative analysis of electroluminescence images from polymer solar cells. <i>Journal of Applied Physics</i> , 2012, 111, 024505.	1.1	22
72	œPolymer Solar Modules: Laser Structuring and Quality Control by Lock-In Thermographyœ. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1390, 77.	0.1	1

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73	Electroluminescence as Characterization Tool for Polymer Solar Cells and Modules. Energy Procedia, 2012, 31, 167-172.	1.8	6
74	Correlation between near infrared-visible absorption, intrinsic local and global sheet resistance of poly(3,4-ethylenedioxy-thiophene) poly(styrene sulfonate) thin films. Applied Physics Letters, 2012, 100, 153301.	1.5	24
75	Aging of polymer/fullerene films: Temporal development of composition profiles. Synthetic Metals, 2012, 161, 2540-2543.	2.1	14
76	Methods in determination of morphological degradation of polymer:fullerene solar cells. Synthetic Metals, 2012, 161, 2534-2539.	2.1	19
77	On the stability of a variety of organic photovoltaic devices by IPCE and in situ IPCE analyses – the ISOS-3 inter-laboratory collaboration. Physical Chemistry Chemical Physics, 2012, 14, 11824.	1.3	38
78	The ISOS-3 inter-laboratory collaboration focused on the stability of a variety of organic photovoltaic devices. RSC Advances, 2012, 2, 882-893.	1.7	108
79	Investigation of the degradation mechanisms of a variety of organic photovoltaic devices by combination of imaging techniques – the ISOS-3 inter-laboratory collaboration. Energy and Environmental Science, 2012, 5, 6521.	15.6	134
80	Sub-bandgap absorption in polymer-fullerene solar cells studied by temperature-dependent external quantum efficiency and absorption spectroscopy. Chemical Physics Letters, 2012, 542, 70-73.	1.2	25
81	Optical order of the polymer phase within polymer/fullerene blend films. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 1363-1373.	2.4	28
82	Polymer BHJ solar cell performance tuning by C ₆₀ fullerene derivative alkyl side-chain length. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 1562-1566.	2.4	20
83	Synthesis and characterization of organically linked ZnO nanoparticles. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 2212-2216.	0.8	0
84	Stability and degradation of organic photovoltaics fabricated, aged, and characterized by the ISOS 3 inter-laboratory collaboration. , 2012, , .		2
85	Charge carrier mobility, photovoltaic, and electroluminescent properties of anthracene-based conjugated polymers bearing randomly distributed side chains. Journal of Polymer Science Part A, 2012, 50, 3425-3436.	2.5	23
86	TOF-SIMS investigation of degradation pathways occurring in a variety of organic photovoltaic devices – the ISOS-3 inter-laboratory collaboration. Physical Chemistry Chemical Physics, 2012, 14, 11780.	1.3	32
87	Influence of Phonon Scattering on Exciton and Charge Diffusion in Polymer-Fullerene Solar Cells. Advanced Energy Materials, 2012, 2, 999-1003.	10.2	15
88	Morphology evaluation of a polymer-fullerene bulk heterojunction ensemble generated by the fullerene derivatization. Journal of Materials Chemistry, 2012, 22, 15987.	6.7	29
89	Optimal geometric design of monolithic thin-film solar modules: Architecture of polymer solar cells. Solar Energy Materials and Solar Cells, 2012, 97, 119-126.	3.0	47
90	Edge sealing for low cost stability enhancement of roll-to-roll processed flexible polymer solar cell modules. Solar Energy Materials and Solar Cells, 2012, 97, 157-163.	3.0	87

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91	Quality control of roll-to-roll processed polymer solar modules by complementary imaging methods. <i>Solar Energy Materials and Solar Cells</i> , 2012, 97, 176-180.	3.0	57
92	[70]Fullerene-Based Materials for Organic Solar Cells. <i>ChemSusChem</i> , 2011, 4, 119-124.	3.6	51
93	Correlation between polymer architecture, mesoscale structure and photovoltaic performance in side-chain-modified poly(p-arylene-ethynylene)-alt-poly(p-arylene-vinylene): PCBM bulk-heterojunction solar cells. <i>Polymer</i> , 2011, 52, 3819-3826.	1.8	31
94	Morphology controlled open circuit voltage in polymer solar cells. <i>Physica Status Solidi - Rapid Research Letters</i> , 2011, 5, 247-249.	1.2	22
95	An inter-laboratory stability study of roll-to-roll coated flexible polymer solar modules. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 1398-1416.	3.0	132
96	Consensus stability testing protocols for organic photovoltaic materials and devices. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 1253-1267.	3.0	812
97	Ellipsometric Investigation of the Shape of Nanodomains in Polymer/Fullerene Films. <i>Advanced Energy Materials</i> , 2011, 1, 684-689.	10.2	22
98	Anthracene Based Conjugated Polymers: Correlation between π - π -Stacking Ability, Photophysical Properties, Charge Carrier Mobility, and Photovoltaic Performance. <i>Macromolecules</i> , 2010, 43, 1261-1269.	2.2	117
99	P3HT/PCBM Bulk Heterojunction Solar Cells: Impact of Blend Composition and 3D Morphology on Device Performance. <i>Advanced Functional Materials</i> , 2010, 20, 1458-1463.	7.8	259
100	Correlation Between Crystallinity and Solar Cell Efficiency of the Low Bandgap Polymer PDDTP. <i>Macromolecular Chemistry and Physics</i> , 2010, 211, 1689-1694.	1.1	2
101	Organic solar cells characterized by dark lock-in thermography. <i>Solar Energy Materials and Solar Cells</i> , 2010, 94, 642-647.	3.0	39
102	Laser structuring of thin films for organic solar cells. , 2010, , .		1
103	Quality control of polymer solar modules by lock-in thermography. <i>Journal of Applied Physics</i> , 2010, 107, 014505.	1.1	48
104	Intercorrelation between Structural Ordering and Emission Properties in Photoconducting Polymers. <i>Macromolecules</i> , 2010, 43, 306-315.	2.2	40
105	Improvement in carrier mobility and photovoltaic performance through random distribution of segments of linear and branched side chains. <i>Journal of Materials Chemistry</i> , 2010, 20, 9726.	6.7	43
106	Material Solubility-Photovoltaic Performance Relationship in the Design of Novel Fullerene Derivatives for Bulk Heterojunction Solar Cells. <i>Advanced Functional Materials</i> , 2009, 19, 779-788.	7.8	355
107	Multiparametric optimization of polymer solar cells: A route to reproducible high efficiency. <i>Solar Energy Materials and Solar Cells</i> , 2009, 93, 508-513.	3.0	49
108	Influence of polymer solar cell geometry on series resistance and device efficiency. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 2771-2774.	0.8	31

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109	Anthracene-containing PPE-PPV copolymers: Effect of side-chain nature and length on photophysical and photovoltaic properties. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 2695-2699.	0.8	10
110	Back Cover (<i>Phys. Status Solidi A</i> 12/2009). <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, .	0.8	9
111	Efficient polymer solar cell modules. <i>Synthetic Metals</i> , 2009, 159, 2358-2361.	2.1	16
112	Fullerene solubility-current density relationship in polymer solar cells. <i>Physica Status Solidi - Rapid Research Letters</i> , 2008, 2, 263-265.	1.2	31
113	Polymer Solar Cells. , 2007, , 1-86.		37
114	Inverse relation between photocurrent and absorption layer thickness in polymer solar cells. <i>Physica Status Solidi - Rapid Research Letters</i> , 2007, 1, R40-R42.	1.2	51
115	Morphology of polymer/fullerene bulk heterojunction solar cells. <i>Journal of Materials Chemistry</i> , 2006, 16, 45-61.	6.7	1,341
116	Synthesis and properties of fluorene-based polyheteroarylenes for photovoltaic devices. <i>Journal of Polymer Science Part A</i> , 2006, 44, 6952-6961.	2.5	56
117	Effect of annealing of poly(3-hexylthiophene)/fullerene bulk heterojunction composites on structural and optical properties. <i>Thin Solid Films</i> , 2006, 496, 679-682.	0.8	161
118	Absorption and crystallinity of poly(3-hexylthiophene)/fullerene blends in dependence on annealing temperature. <i>Thin Solid Films</i> , 2006, 511-512, 483-485.	0.8	61
119	Photophysical, electrochemical and photovoltaic properties of thiophene-containing arylene-ethynylene/arylene-vinylene polymers. <i>Thin Solid Films</i> , 2006, 511-512, 486-488.	0.8	19
120	Side Chain Influence on Electrochemical and Photovoltaic Properties of Yne-Containing Poly(phenylene vinylene)s. <i>Macromolecular Rapid Communications</i> , 2005, 26, 1389-1394.	2.0	71
121	Kelvin Probe Force Microscopy Study of Conjugated Polymer/Fullerene Organic Solar Cells. <i>Japanese Journal of Applied Physics</i> , 2005, 44, 5370-5373.	0.8	46
122	Stabilization of the nanomorphology of polymer-fullerene bulk heterojunction blends using a novel polymerizable fullerene derivative. <i>Journal of Materials Chemistry</i> , 2005, 15, 5158.	6.7	221
123	A systematic study of the anisotropic optical properties of thin poly(3-octylthiophene)-films in dependence on growth parameters. <i>Thin Solid Films</i> , 2004, 451-452, 69-73.	0.8	34
124	Anisotropic optical properties of thin poly(3-octylthiophene)-films as a function of preparation conditions. <i>Synthetic Metals</i> , 2004, 143, 113-117.	2.1	39
125	Organic solar cells: An overview. <i>Journal of Materials Research</i> , 2004, 19, 1924-1945.	1.2	2,242
126	Long-lived photoinduced charge separation for solar cell applications in phthalocyanine-fulleropyrrolidine dyad thin films Electronic supplementary information (ESI) available: plots of the refractive index, extinction coefficient and dielectric function of Pc-C60. See http://www.rsc.org/suppdata/jm/b2/b212621d/ . <i>Journal of Materials Chemistry</i> , 2003, 13, 700-704.	6.7	210

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127	Self-Similarity and Pattern Selection in the Roughening of Binary Liquid Films. Physical Review Letters, 2001, 86, 4863-4866.	2.9	21
128	Response to Christopher P. Muzzillo's Comments on "Introduction of a Novel Figure of Merit for the Assessment of Transparent Conductive Electrodes in Photovoltaics: Exact and Approximate Form" Advanced Energy Materials, 0, , 2200828.	10.2	0