Andreas Opitz

List of Publications by Year
in descending order

77	2,811	159358 30	182168 51
papers	citations	h-index	g-index

78	78	78	3749
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thin films of electron donorâ€“acceptor complexes: characterisation of mixed-crystalline phases and implications for electrical doping. Materials Advances, 2022, 3, 1017-1034.	2.6	3
2	Understanding the evolution of the Raman spectra of molecularly p-doped poly(3-hexylthiophene-2,5-diyl): signatures of polarons and bipolarons. Physical Chemistry Chemical Physics, 2022, 24, 3109-3118.	1.3	21
3	Quantum Efficiency Enhancement of Lead-Halide Perovskite Nanocrystal LEDs by Organic Lithium Salt Treatment. ACS Applied Materials & Interfaces, 2022, 14, 28985-28996.	4.0	9
4	Use of a Multiple Hydride Donor To Achieve an n-Doped Polymer with High Solvent Resistance. ACS Applied Materials & Interfaces, 2022, 14, 33598-33605.	4.0	3
5	Disentangling Bulk and Interface Phenomena in a Molecularly Doped Polymer Semiconductor. Advanced Optical Materials, 2021, 9, 2002039.	3.6	6
6	Coupled Organicâ€“Inorganic Nanostructures with Mixed Organic Linker Molecules. ACS Applied Materials & Interfaces, 2021, 13, 37483-37493.	4.0	1
7	Kinetic Study on the Adsorption of 2,3,5,6-Tetrafluoro-7,7,8,8-tetracyanoquinodimethane on Ag Nanoparticles in Chloroform: Implications for the Charge Transfer Complex of Agâ€“F₄TCNQ. ACS Applied Nano Materials, 2021, 4, 11625-11635.	2.4	2
8	Conductive Polymer Work Function Changes due to Residual Water: Impact of Temperatureâ€Dependent Dielectric Constant. Advanced Electronic Materials, 2020, 6, 2000408.	2.6	12
9	Fermi level pinned molecular donor/acceptor junctions: reduction of induced carrier density by interfacial charge transfer complexes. Journal of Materials Chemistry C, 2020, 8, 15199-15207.	2.7	1
10	Single-Step Formation of a Low Work Function Cathode Interlayer and n-type Bulk Doping from Semiconducting Polymer/Polyethylenimine Blend Solution. ACS Applied Materials & Interfaces, 2020, 12, 28801-28807.	4.0	10
11	An Organic Borate Salt with Superior pâ€Doping Capability for Organic Semiconductors. Advanced Science, 2020, 7, 2001322.	5.6	32
12	The optical signatures of molecular-doping induced polarons in poly(3-hexylthiophene-2,5-diyl): individual polymer chainsversusaggregates. Journal of Materials Chemistry C, 2020, 8, 2870-2879.	2.7	32
13	Utilizing Dielsâ€“Alder â€œclickâ€•chemistry to functionalize the organicâ€“organic interface of semiconducting polymers. Journal of Materials Chemistry C, 2020, 8, 3302-3307.	2.7	3
14	Ordered Donorâ€“Acceptor Complex Formation and Electron Transfer in Co-deposited Films of Structurally Dissimilar Molecules. Journal of Physical Chemistry C, 2020, 124, 11023-11031.	1.5	6
15	Electrode Work Function Reduction by Polyethylenimine Interlayers: Choice of Solvent and Residual Solvent Removal for Superior Functionality. Advanced Materials Interfaces, 2020, 7, 2000291.	1.9	6
16	Ground-state charge-transfer interactions in donor:acceptor pairs of organic semiconductors â€“ a spectroscopic study of two representative systems. Physical Chemistry Chemical Physics, 2019, 21, 17190-17199.	1.3	13
17	Impact of intentional photo-oxidation of a donor polymer and PC₇₀BM on solar cell performance. Physical Chemistry Chemical Physics, 2019, 21, 22259-22271.	1.3	4
18	State-of-Matter-Dependent Charge-Transfer Interactions between Planar Molecules for Doping Applications. Chemistry of Materials, 2019, 31, 1237-1249.	3.2	32

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19	Electronic band dispersion determination in azimuthally disordered transition-metal dichalcogenide monolayers. Communications Physics, 2019, 2, .	2.0	11
20	Predicting the yield of ion pair formation in molecular electrical doping: redox-potentials versus ionization energy/electron affinity. Journal of Materials Chemistry C, 2019, 7, 13839-13848.	2.7	20
21	Unraveling the Microstructure of Molecularly Doped Poly(3-hexylthiophene) by Thermally Induced Dedoping. Journal of Physical Chemistry C, 2018, 122, 25893-25899.	1.5	35
22	Thin-Film Texture and Optical Properties of Donor/Acceptor Complexes. Diindenoperylene/F6TCNNQ vs Alpha-Sexithiophene/F6TCNNQ. Journal of Physical Chemistry C, 2018, 122, 18705-18714.	1.5	17
23	Microstructure and Elastic Constants of Transition Metal Dichalcogenide Monolayers from Friction and Shear Force Microscopy. Advanced Materials, 2018, 30, e1803748.	11.1	16
24	Low temperature processed NiOx hole transport layers for efficient polymer solar cells. Organic Electronics, 2017, 44, 59-66.	1.4	24
25	Energy level alignment at planar organic heterojunctions: influence of contact doping and molecular orientation. Journal of Physics Condensed Matter, 2017, 29, 133001.	0.7	25
26	Direct Photoalignment and Optical Patterning of Molecular Thin Films. Advanced Materials, 2017, 29, 1604382.	11.1	7
27	Evidence for Anisotropic Electronic Coupling of Charge Transfer States in Weakly Interacting Organic Semiconductor Mixtures. Journal of the American Chemical Society, 2017, 139, 8474-8486.	6.6	40
28	Brodie vs Hummers graphite oxides for preparation of multi-layered materials. Carbon, 2017, 115, 430-440.	5.4	104
29	Charge Separation at Nanostructured Molecular Donorâ€“Acceptor Interfaces. Advances in Polymer Science, 2017, , 77-108.	0.4	2
30	Design principles of carbazole/dibenzothiophene derivatives as host material in modern efficient organic light-emitting diodes. Journal of Materials Chemistry C, 2017, 5, 6989-6996.	2.7	24
31	Effective Work Function Reduction of Practical Electrodes Using an Organometallic Dimer. Advanced Functional Materials, 2016, 26, 2493-2502.	7.8	28
32	Photo-degradation in air of the active layer components in a thiopheneâ€“quinoxaline copolymer:fullerene solar cell. Physical Chemistry Chemical Physics, 2016, 18, 11132-11138.	1.3	20
33	Organic heterojunctions: Contact-induced molecular reorientation, interface states and charge re-distribution. Scientific Reports, 2016, 6, 21291.	1.6	35
34	Thermally driven smoothening of molecular thin films: Structural transitions in n-alkane layers studied in real-time. Journal of Chemical Physics, 2015, 143, 164707.	1.2	9
35	Vertical and lateral morphology effects on solar cell performance for a thiopheneâ€“quinoxaline copolymer:PC₇₀BM blend. Journal of Materials Chemistry A, 2015, 3, 6970-6979.	5.2	46
36	Charge transfer in and conductivity of molecularly doped thiopheneâ€based copolymers. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 58-63.	2.4	43

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37	Solvent vapor annealing on perylene-based organic solar cells. Journal of Materials Chemistry A, 2015, 3, 15700-15709.	5.2	29
38	Effect of molecular electrical doping on polyfuran based photovoltaic cells. Applied Physics Letters, 2015, 106, .	1.5	19
39	Charge-transfer crystallites as molecular electrical dopants. Nature Communications, 2015, 6, 8560.	5.8	317
40	V_{oc} from a Morphology Point of View: the Influence of Molecular Orientation on the Open Circuit Voltage of Organic Planar Heterojunction Solar Cells. Journal of Physical Chemistry C, 2014, 118, 26462-26470.	1.5	78
41	Performance enhancement of diindenoperylene-based organic photovoltaic cells by nanocolumn-arrays. Organic Electronics, 2014, 15, 2210-2217.	1.4	9
42	Energy level alignment at interfaces in organic photovoltaic devices. Journal of Electron Spectroscopy and Related Phenomena, 2013, 190, 12-24.	0.8	27
43	Doping of Organic Semiconductors: Impact of Dopant Strength and Electronic Coupling. Angewandte Chemie - International Edition, 2013, 52, 7751-7755.	7.2	186
44	Correlating Structure and Morphology to Device Performance of Molecular Organic Donorâ€“Acceptor Photovoltaic Cells Based on Diindenoperylene (DIP) and C₆₀. Advanced Energy Materials, 2013, 3, 1075-1083.	10.2	31
45	Correlation between interface energetics and open circuit voltage in organic photovoltaic cells. Applied Physics Letters, 2012, 101, 233301.	1.5	88
46	Bipolar charge transport in organic field-effect transistors: Enabling high mobilities and transport of photo-generated charge carriers by a molecular passivation layer. Organic Electronics, 2012, 13, 1614-1622.	1.4	46
47	Identification of different origins for s-shaped current voltage characteristics in planar heterojunction organic solar cells. Journal of Applied Physics, 2012, 111, .	1.1	86
48	Thermodynamic Efficiency Limit of Molecular Donorâ€Acceptor Solar Cells and its Application to Diindenoperylene/C₆₀â€Based Planar Heterojunction Devices. Advanced Energy Materials, 2012, 2, 1100-1108.	10.2	84
49	Approaching the ultimate open circuit voltage in thiophene based single junction solar cells by applying diindenoperylene as acceptor. Physica Status Solidi - Rapid Research Letters, 2011, 5, 241-243.	1.2	22
50	Achievement of balanced electron and hole mobility in copper-phthalocyanine field-effect transistors by using a crystalline aliphatic passivation layer. Organic Electronics, 2011, 12, 731-735.	1.4	55
51	Diindenoperylene as ambipolar semiconductor: Influence of electrode materials and mobility asymmetry in organic field-effect transistors. Applied Physics Letters, 2011, 98, 233304.	1.5	34
52	Charge Separation at Molecular Donorâ€“Acceptor Interfaces: Correlation Between Morphology and Solar Cell Performance. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1707-1717.	1.9	53
53	High Fill Factor and Open Circuit Voltage in Organic Photovoltaic Cells with Diindenoperylene as Donor Material. Advanced Functional Materials, 2010, 20, 4295-4303.	7.8	175
54	Unoccupied states in copper phthalocyanine/fullerene blended films determined by inverse photoemission spectroscopy. Organic Electronics, 2010, 11, 1853-1857.	1.4	8

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55	High-mobility copper-phthalocyanine field-effect transistors with tetratetracontane passivation layer and organic metal contacts. Journal of Applied Physics, 2010, 107, .	1.1	96
56	Microstructure and charge carrier transport in phthalocyanine based. Materials Research Society Symposia Proceedings, 2009, 1154, 1.	0.1	3
57	Molecular semiconductor blends: Microstructure, charge carrier transport, and application in photovoltaic cells. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2683-2694.	0.8	47
58	Mixed crystalline films of co-evaporated hydrogen- and fluorine-terminated phthalocyanines and their application in photovoltaic devices. Organic Electronics, 2009, 10, 1259-1267.	1.4	65
59	Transport properties of copper phthalocyanine based organic electronic devices. European Physical Journal: Special Topics, 2009, 180, 117-134.	1.2	22
60	Ambipolar charge carrier transport in organic semiconductor blends of phthalocyanine and fullerene. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 549-563.	0.8	35
61	Effects of X-ray radiation on the surface chemical composition of plasma deposited thin fluorocarbon films. Polymer Degradation and Stability, 2008, 93, 700-706.	2.7	12
62	Bipolar transport in organic field-effect transistors: organic semiconductor blends versus contact modification. New Journal of Physics, 2008, 10, 065006.	1.2	16
63	Ambipolar organic semiconductor blends for photovoltaic cells. , 2008, , .		11
64	Ambipolar Blends of Cuâ€Phthalocyanine and Fullerene: Charge Carrier Mobility, Electronic Structure and their Implications for Solar Cell Applications. Macromolecular Symposia, 2008, 268, 38-42.	0.4	14
65	Charge carrier injection and ambipolar transport in C₆₀/CuPc organic semiconductor blends. Journal of Physics: Conference Series, 2008, 100, 082043.	0.3	3
66	A comparative investigation of thickness measurements of ultra-thin water films by scanning probe techniques. Journal of Applied Physics, 2007, 101, 064310.	1.1	38
67	Ambipolar charge carrier transport in mixed organic layers of phthalocyanine and fullerene. Journal of Applied Physics, 2007, 101, 063709.	1.1	52
68	Electronic properties of organic semiconductor blends: Ambipolar mixtures of phthalocyanine and fullerene. Applied Physics Letters, 2007, 90, 212112.	1.5	39
69	Differences of interface and bulk transport properties in polymer field-effect devices. Organic Electronics, 2006, 7, 276-286.	1.4	84
70	Nanofriction Mechanisms Derived from the Dependence of Friction on Load and Sliding Velocity from Air to UHV on Hydrophilic Silicon. Tribology Letters, 2005, 20, 229-234.	1.2	12
71	Influence of the RF power on the deposition rate and the chemical surface composition of fluorocarbon films prepared in dry etching gas plasma. Surface Science, 2004, 566-568, 1229-1233.	0.8	24
72	Characterization of polymeric metal-insulatorâ€“semiconductor diodes. Synthetic Metals, 2004, 146, 359-363.	2.1	37

#	Article	IF	Citations
73	Surface Science Tools and Their Application to Nanosystems Like C60 on Indium Phosphide. , 2004, , 131-138.		0
74	The effect of wetting on the microhydrodynamics of surfaces lubricated with water and oil. Wear, 2003, 254, 871-875.	1.5	47
75	Nanofriction of silicon oxide surfaces covered with thin water films. Wear, 2003, 254, 924-929.	1.5	33
76	Friction of thin water films: a nanotribological study. Surface Science, 2002, 504, 199-207.	0.8	71
77	Ambipolar Charge Carrier Transport in Organic Semiconductor Blends. , 0, , 347-372.		0