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	Charge-transfer crystallites as molecular electrical dopants. Nature Communications, 2015, 6, 8560.	5.8	317
2	Doping of Organic Semiconductors: Impact of Dopant Strength and Electronic Coupling. Angewandte Chemie - International Edition, 2013, 52, 7751-7755.	7.2	186
3	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
4	Brodie vs Hummers graphite oxides for preparation of multi-layered materials. Carbon, 2017, 115, 430-440.	5.4	104
5	High-mobility copper-phthalocyanine field-effect transistors with tetratetracontane passivation layer and organic metal contacts. Journal of Applied Physics, 2010, 107, .	1.1	96
6	Correlation between interface energetics and open circuit voltage in organic photovoltaic cells. Applied Physics Letters, 2012, 101, 233301.	1.5	88
7	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
8	Differences of interface and bulk transport properties in polymer field-effect devices. Organic Electronics, 2006, 7, 276-286.	1.4	84
9	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
10	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
11	Friction of thin water films: a nanotribological study. Surface Science, 2002, 504, 199-207.	0.8	71
12	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
13	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
14	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
15	Ambipolar charge carrier transport in mixed organic layers of phthalocyanine and fullerene. Journal of Applied Physics, 2007, 101, 063709.	1.1	52
16	The effect of wetting on the microhydrodynamics of surfaces lubricated with water and oil. Wear, 2003, 254, 871-875.	1.5	47
17	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
18	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

#	Article	IF	Citations
19	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
20	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
21	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
22	Electronic properties of organic semiconductor blends: Ambipolar mixtures of phthalocyanine and fullerene. Applied Physics Letters, 2007, 90, 212112.	1.5	39
23	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
24	Characterization of polymeric metal-insulatorâ€semiconductor diodes. Synthetic Metals, 2004, 146, 359-363.	2.1	37
25	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
26	Organic heterojunctions: Contact-induced molecular reorientation, interface states and charge re-distribution. Scientific Reports, 2016, 6, 21291.	1.6	35
27	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
28	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
29	Nanofriction of silicon oxide surfaces covered with thin water films. Wear, 2003, 254, 924-929.	1.5	33
30	State-of-Matter-Dependent Charge-Transfer Interactions between Planar Molecules for Doping Applications. Chemistry of Materials, 2019, 31, 1237-1249.	3.2	32
31	An Organic Borate Salt with Superior pâ€Doping Capability for Organic Semiconductors. Advanced Science, 2020, 7, 2001322.	5.6	32
32	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
33	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
34	Solvent vapor annealing on perylene-based organic solar cells. Journal of Materials Chemistry A, 2015, 3, 15700-15709.	5.2	29
35	Effective Work Function Reduction of Practical Electrodes Using an Organometallic Dimer. Advanced Functional Materials, 2016, 26, 2493-2502.	7.8	28
36	Energy level alignment at interfaces in organic photovoltaic devices. Journal of Electron Spectroscopy and Related Phenomena, 2013, 190, 12-24.	0.8	27

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37	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
38	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
39	Low temperature processed NiOx hole transport layers for efficient polymer solar cells. Organic Electronics, 2017, 44, 59-66.	1.4	24
40	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
41	Transport properties of copper phthalocyanine based organic electronic devices. European Physical Journal: Special Topics, 2009, 180, 117-134.	1.2	22
42	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
43	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
44	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
45	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
46	Effect of molecular electrical doping on polyfuran based photovoltaic cells. Applied Physics Letters, 2015, 106, .	1.5	19
47	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
48	Bipolar transport in organic field-effect transistors: organic semiconductor blends versus contact modification. New Journal of Physics, 2008, 10, 065006.	1.2	16
49	Microstructure and Elastic Constants of Transition Metal Dichalcogenide Monolayers from Friction and Shear Force Microscopy. Advanced Materials, 2018, 30, e1803748.	11.1	16
50	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
51	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
52	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
53	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
54	Conductive Polymer Work Function Changes due to Residual Water: Impact of Temperatureâ€Dependent Dielectric Constant. Advanced Electronic Materials, 2020, 6, 2000408.	2.6	12

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55	Ambipolar organic semiconductor blends for photovoltaic cells. , 2008, , .		11
56	Electronic band dispersion determination in azimuthally disordered transition-metal dichalcogenide monolayers. Communications Physics, 2019, 2, .	2.0	11
57	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
58	Performance enhancement of diindenoperylene-based organic photovoltaic cells by nanocolumn-arrays. Organic Electronics, 2014, 15, 2210-2217.	1.4	9
59	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
60	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
61	Unoccupied states in copper phthalocyanine/fullerene blended films determined by inverse photoemission spectroscopy. Organic Electronics, 2010, 11, 1853-1857.	1.4	8
62	Direct Photoalignment and Optical Patterning of Molecular Thin Films. Advanced Materials, 2017, 29, 1604382.	11.1	7
63	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
64	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
65	Disentangling Bulk and Interface Phenomena in a Molecularly Doped Polymer Semiconductor. Advanced Optical Materials, 2021, 9, 2002039.	3.6	6
66	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
67	Charge carrier injection and ambipolar transport in C₆₀/CuPc organic semiconductor blends. Journal of Physics: Conference Series, 2008, 100, 082043.	0.3	3
68	Microstructure and charge carrier transport in phthalocyanine based. Materials Research Society Symposia Proceedings, 2009, 1154, 1.	0.1	3
69	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
70	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
71	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
72	Charge Separation at Nanostructured Molecular Donorâ€“Acceptor Interfaces. Advances in Polymer Science, 2017, , 77-108.	0.4	2

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73	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
74	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
75	Coupled Organicâ€“Inorganic Nanostructures with Mixed Organic Linker Molecules. ACS Applied Materials & Interfaces, 2021, 13, 37483-37493.	4.0	1
76	Ambipolar Charge Carrier Transport in Organic Semiconductor Blends. , 0, , 347-372.		0
77	Surface Science Tools and Their Application to Nanosystems Like C60 on Indium Phosphide. , 2004, , 131-138.		0