Hsin-Fei Meng

List of Publications by Year
in descending order

129 papers	3,215 citations	147801 31 h-index	161849 54 g-index
129 all docs	129 docs citations	129 times ranked	4564 citing authors

#	Article	IF	Citations
1	Highly efficient flexible inverted organic solar cells using atomic layer deposited ZnO as electron selective layer. Journal of Materials Chemistry, 2010, 20, 862-866.	6.7	212
2	13% Efficiency Hybrid Organic/Silicon-Nanowire Heterojunction Solar Cell via Interface Engineering. ACS Nano, 2013, 7, 10780-10787.	14.6	194
3	One-Minute Fish Freshness Evaluation by Testing the Volatile Amine Gas with an Ultrasensitive Porous-Electrode-Capped Organic Gas Sensor System. ACS Sensors, 2017, 2, 531-539.	7.8	140
4	Polymer solar cell by blade coating. Organic Electronics, 2009, 10, 741-746.	2.6	123
5	Micro-textured conductive polymer/silicon heterojunction photovoltaic devices with high efficiency. Applied Physics Letters, 2012, 101, .	3.3	117
6	Multilayer polymer light-emitting diodes by blade coating method. Applied Physics Letters, 2008, 93, .	3.3	107
7	The effect of carrier mobility in organic solar cells. Journal of Applied Physics, 2010, 107, .	2.5	99
8	Dynamics and reversibility of oxygen doping and de-doping for conjugated polymer. Journal of Applied Physics, 2008, 103, .	2.5	88
9	Dual gate indium-gallium-zinc-oxide thin film transistor with an unisolated floating metal gate for threshold voltage modulation and mobility enhancement. Applied Physics Letters, 2011, 98, .	3.3	87
10	Amorphous indium-gallium-zinc-oxide visible-light phototransistor with a polymeric light absorption layer. Applied Physics Letters, 2010, 97, .	3.3	82
11	Room-temperature-operated sensitive hybrid gas sensor based on amorphous indium gallium zinc oxide thin-film transistors. Applied Physics Letters, 2011, 98, .	3.3	82
12	Organic Gas Sensor with an Improved Lifetime for Detecting Breath Ammonia in Hemodialysis Patients. ACS Sensors, 2017, 2, 1788-1795.	7.8	82
13	Highly Sensitive Ammonia Sensor with Organic Vertical Nanojunctions for Noninvasive Detection of Hepatic Injury. Analytical Chemistry, 2013, 85, 3110-3117.	6.5	81
14	Continuous blade coating for multi-layer large-area organic light-emitting diode and solar cell. Journal of Applied Physics, 2011, 110, .	2.5	70
15	All-solution-processed blue small molecular organic light-emitting diodes with multilayer device structure. Organic Electronics, 2009, 10, 1610-1614.	2.6	67
16	Room-temperature-operated organic-based acetone gas sensor for breath analysis. Sensors and Actuators B: Chemical, 2018, 260, 593-600.	7.8	61
17	Hole doping by molecular oxygen in organic semiconductors: Band-structure calculations. Physical Review B, 2007, 75, .	3.2	57
18	All-small-molecule efficient white organic light-emitting diodes by multi-layer blade coating. Organic Electronics, 2012, 13, 914-918.	2.6	55

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19	A Versatile Method to Enhance the Operational Current of Air-Stable Organic Gas Sensor for Monitoring of Breath Ammonia in Hemodialysis Patients. ACS Sensors, 2019, 4, 1023-1031.	7.8	55
20	High-efficiency polymer solar cells by blade coating in chlorine-free solvents. Organic Electronics, 2014, 15, 893-903.	2.6	51
21	Low operation voltage macromolecular composite memory assisted by graphene nanoflakes. Journal of Materials Chemistry C, 2013, 1, 552-559.	5.5	46
22	Large-area organic solar cells by accelerated blade coating. Organic Electronics, 2015, 22, 166-172.	2.6	46
23	Increasing organic vertical carrier mobility for the application of high speed bilayered organic photodetector. Applied Physics Letters, 2009, 95, .	3.3	42
24	High performance organic photovoltaic cells with blade-coated active layers. Solar Energy Materials and Solar Cells, 2012, 107, 292-297.	6.2	40
25	Efficient inverted quasi-bilayer organic solar cells fabricated by using non-halogenated solvent processes. Journal of Materials Chemistry A, 2014, 2, 13398-13406.	10.3	39
26	Breath Ammonia Is a Useful Biomarker Predicting Kidney Function in Chronic Kidney Disease Patients. Biomedicines, 2020, 8, 468.	3.2	38
27	New thiopheneâ€phenyleneâ€thiophene acceptor random conjugated copolymers for optoelectronic applications. Journal of Polymer Science Part A, 2010, 48, 2351-2360.	2.3	36
28	Unmodified small-molecule organic light-emitting diodes by blade coating. Organic Electronics, 2012, 13, 2149-2155.	2.6	35
29	Highly efficient and stable organic solar cell modules processed by blade coating with 5.6% module efficiency and active area of 216Âcm‹sup›2‹/sup›. Progress in Photovoltaics: Research and Applications, 2019, 27, 264-274.	8.1	34
30	Efficient semitransparent organic solar cells with good color perception and good color rendering by blade coating. Organic Electronics, 2017, 43, 196-206.	2.6	32
31	Electrospun Fibers as a Solidâ€State Realâ€Time Zinc Ion Sensor with High Sensitivity and Cell Medium Compatibility. Advanced Functional Materials, 2013, 23, 1566-1574.	14.9	31
32	Solution-based silk fibroin dielectric in n-type C60 organic field-effect transistors: Mobility enhancement by the pentacene interlayer. Applied Physics Letters, 2013, 103, .	3.3	31
33	Highly efficient organic solar cells using a solution-processed active layer with a small molecule donor and pristine fullerene. Journal of Materials Chemistry A, 2014, 2, 3709-3714.	10.3	31
34	Ultrasensitive detection of hydrogen sulfide gas based on perovskite vertical channel chemo-sensor. Sensors and Actuators B: Chemical, 2021, 326, 128988.	7.8	31
35	Polymer space-charge-limited transistor as a solid-state vacuum tube triode. Applied Physics Letters, 2010, 97, .	3.3	30
36	Efficient inverted organic solar cells without an electron selective layer. Journal of Materials Chemistry, 2011, 21, 5723.	6.7	30

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37	Highly efficient inverted rapid-drying blade-coated organic solar cells. Organic Electronics, 2012, 13, 705-709.	2.6	29
38	A low-cost, portable and easy-operated salivary urea sensor for point-of-care application. Biosensors and Bioelectronics, 2019, 132, 352-359.	10.1	28
39	Porous Organic TFTs for the Applications on Real-Time and Sensitive Gas Sensors. IEEE Electron Device Letters, 2011, 32, 1143-1145.	3.9	27
40	High output current in vertical polymer space-charge-limited transistor induced by self-assembled monolayer. Applied Physics Letters, 2012, 101, 093307.	3.3	27
41	Dark carrier recombination in organic solar cell. Applied Physics Letters, 2008, 93, .	3.3	26
42	UV-enhanced room-temperature ultrasensitive NO gas sensor with vertical channel nano-porous organic diodes. Sensors and Actuators B: Chemical, 2020, 320, 128392.	7.8	26
43	Nonfullerene Polymer Solar Cell with Large Active Area of 216â€‰cm² and High Power Conversion Efficiency of 7.7%. Solar Rrl, 2019, 3, 1900071.	5.8	25
44	Polymer infrared proximity sensor. Applied Physics Letters, 2008, 93, .	3.3	22
45	Polymer photodetector with voltage-adjustable photocurrent spectrum. Applied Physics Letters, 2010, 96, .	3.3	22
46	Gas permeable silver nanowire electrode for realizing vertical type sensitive gas sensor. Organic Electronics, 2014, 15, 2769-2774.	2.6	22
47	Selective real-time nitric oxide detection by functionalized zinc oxide. Journal Physics D: Applied Physics, 2009, 42, 155105.	2.8	20
48	Stable and efficient blue fluorescent organic light-emitting diode by blade coating with or without electron-transport layer. Organic Electronics, 2017, 51, 6-15.	2.6	20
49	Low voltage active pressure sensor based on polymer space-charge-limited transistor. Applied Physics Letters, 2009, 95, 253306.	3.3	19
50	Modulated gas sensor based on vertical organic diode with blended channel for ppb-regime detection. Sensors and Actuators B: Chemical, 2016, 230, 223-230.	7.8	19
51	Blade coating of Tris(8-hydroxyquinolinato)aluminum as the electron-transport layer for all-solution blue fluorescent organic light-emitting diodes. Organic Electronics, 2016, 29, 99-106.	2.6	18
52	Reduced hole injection barrier for achieving ultralow voltage polymer space-charge-limited transistor with a high on/off current ratio. Applied Physics Letters, 2009, 95, 203305.	3.3	17
53	Great improvement of operation-lifetime for all-solution OLEDs with mixed hosts by blade coating. Organic Electronics, 2017, 42, 75-86.	2.6	16
54	Sensitive gas sensor embedded in a vertical polymer space-charge-limited transistor. Applied Physics Letters, 2012, 101, .	3.3	14

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55	Reliable solution processed planar perovskite hybrid solar cells with large-area uniformity by chloroform soaking and spin rinsing induced surface precipitation. AIP Advances, 2015, 5, 087125.	1.3	14
56	Near-Infrared Laser-Annealed IZO Flexible Device as a Sensitive H₂S Sensor at Room Temperature. ACS Applied Materials & Interfaces, 2020, 12, 24984-24991.	8.0	14
57	Achieving a Good Life Time in a Vertical-Organic-Diode Gas Sensor. Sensors, 2014, 14, 16287-16295.	3.8	13
58	Thermal and angular dependence of nextâ€generation photovoltaics under indoor lighting. Progress in Photovoltaics: Research and Applications, 2020, 28, 111-121.	8.1	13
59	Light-emitting polymer space-charge-limited transistor. Applied Physics Letters, 2008, 93, 223301.	3.3	12
60	Blade-coated sol-gel indium-gallium-zinc-oxide for inverted polymer solar cell. AIP Advances, 2016, 6, .	1.3	12
61	Toward Longâ€Term Stable and Efficient Largeâ€Area Organic Solar Cells. ChemSusChem, 2017, 10, 2778-2787.	6.8	12
62	A low-cost miniaturized colorimetric sensor with vertically-stacked semi-transparent finger-type organic photo detector for formaldehyde sensing. Organic Electronics, 2019, 73, 115-121.	2.6	12
63	Enhancement-mode polymer space-charge-limited transistor with low switching swing of 96 mV/decade. Applied Physics Letters, 2011, 98, 223303.	3.3	11
64	Interface and thickness tuning for blade coated small-molecule organic light-emitting diodes with high power efficiency. Journal of Applied Physics, 2013, 114, 123101.	2.5	11
65	Simultaneous enhancement in both large-area coatability and photovoltaic performance of inverted organic solar cells with co-solvent. Solar Energy Materials and Solar Cells, 2014, 120, 197-203.	6.2	11
66	Review of a solution-processed vertical organic transistor as a solid-state vacuum tube. Semiconductor Science and Technology, 2015, 30, 054003.	2.0	11
67	High-performance vertical polymer nanorod transistors based on air-stable conjugated polymer. Applied Physics Letters, 2011, 99, 233308.	3.3	10
68	High-resolution proximity sensor using flexible semi-transparent organic photo detector. Organic Electronics, 2017, 49, 305-312.	2.6	10
69	Allâ€Solutionâ€Processed Red and Orangeâ€Red Organic Lightâ€Emitting Diodes with Highâ€Efficiencies: The Effect of Mixedâ€Host Emissive Layers and Thermal Annealing Treatment. ChemPlusChem, 2019, 84, 1375-1383.	2.8	10
70	Vertical polymer phototransistor featuring photomultiplication due to base-field shielding. Applied Physics Letters, 2011, 98, 053305.	3.3	9
71	Large-area blade-coated organic solar cells processed from halogen-free solvent. Organic Electronics, 2019, 75, 105376.	2.6	9
72	P-25: New Polymer-Capped a-IGZO TFT with High Sensitivity to Visible Light for the Development of Integrated Touch Sensor Array. Digest of Technical Papers SID International Symposium, 2010, 41, 1316.	0.3	8

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73	Achieving saturation in vertical organic transistors for organic light-emitting diode driving by nanorod channel geometric control. Applied Physics Letters, 2013, 102, 163305.	3.3	8
74	Solution-Processed Vertical Organic Transistors Fabricated by Nanoimprint Lithography. IEEE Electron Device Letters, 2013, 34, 313-315.	3.9	8
75	Making optical MEMS sensors more compact using organic light sources and detectors. , 2014, , .		8
76	Hydrogel-based zinc ion sensor on optical fiber with high resolution and application to neural cells. Biosensors and Bioelectronics, 2020, 162, 112230.	10.1	8
77	Pâ€231: Multilayer Polymer Lightâ€Emitting Diodes by Blade Coating Method. Digest of Technical Papers SID International Symposium, 2008, 39, 2067-2070.	0.3	7
78	Multilayer rapid-drying blade coating for organic solar cells by low boiling point solvents. Japanese Journal of Applied Physics, 2014, 53, 062301.	1.5	7
79	Enhancing efficiency for additiveâ€“free bladeâ€“coated smallâ€“molecule solar cells by thermal annealing. Organic Electronics, 2016, 37, 305-311.	2.6	7
80	A 0.05 V driven ammonia gas sensor based on an organic diode with a top porous layered electrode and an air-stable sensing film. Journal of Materials Chemistry C, 2019, 7, 6440-6447.	5.5	7
81	Photo-assisted recovery in ammonia sensor based on organic vertical diode. Organic Electronics, 2019, 67, 272-278.	2.6	6
82	Gas emission from human skin positions detected by vertical-channel organic semiconductor sensor. Sensors and Actuators B: Chemical, 2021, 343, 129994.	7.8	6
83	Real-time and indicator-free detection of aqueous nitric oxide with hydrogel film. Applied Physics Letters, 2010, 96, 223702.	3.3	5
84	Solution p-doped fluorescent polymers for enhanced charge transport of hybrid organic-silicon nanowire photovoltaics. Organic Electronics, 2016, 34, 246-253.	2.6	5
85	Leakage-free solution-processed organic light-emitting diode using a ternary host with single-diode emission area up to 6 Â— 11.5 cm². RSC Advances, 2019, 9, 10584-10598.	3.6	5
86	Electronic nano sponge breath ammonia sensors using hygroscopic polymers on vertical channel nano-porous structure. Journal of Materials Chemistry C, 2021, 9, 12938-12950.	5.5	5
87	Vertical channel metal-oxide clusters as sensitive NO2 sensor with modulated response at room temperature. Sensors and Actuators B: Chemical, 2022, 354, 131222.	7.8	5
88	Thermally Stable Highâ€Performance Polymer Solar Cells Enabled by Interfacial Engineering. ChemSusChem, 2018, 11, 2429-2435.	6.8	4
89	Ternary organic solar cell with 1750 hours half lifetime under UV irradiation with solar intensity. Solar Rrl, 0, , .	5.8	4
90	Accurate real-time sensing tip for aqueous NO with optical fibers embedded in active hydrogel waveguide. AIP Advances, 2018, 8, 025207.	1.3	3

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91	Solution-Processed Chloroaluminum Phthalocyanine (ClAlPc) Ammonia Gas Sensor with Vertical Organic Porous Diodes. Sensors, 2021, 21, 5783.	3.8	3
92	A 1-V operated polymer vertical transistor with high on/off current ratio. , 2009, , .		2
93	4.3: High Performance a-IGZO TFT with Nano-Dots Doping. Digest of Technical Papers SID International Symposium, 2011, 42, 28-31.	0.3	2
94	Solution-processed silicon hybrid heterojunction photovoltaics with silver nanowires. , 2012, , .		2
95	11%-Efficiency hybrid organic/silicon-nanowire heterojunction solar cell with an intermediate 1,1-bis[(di-4-tolylamino)phenyl]cyclohexane layer. , 2013, , .		2
96	Micrometer-Scale Grating Vertical Structure OSC Ammonia Gas Sensor with a PEDOT:PSS Coupling Layer Using the Current Spreading Effect to Achieve ppb-Regime Sensing Capability. ACS Applied Electronic Materials, 2020, 2, 2514-2524.	4.3	2
97	A Cylindrical Ion Sensor Tip with a Diameter of 1.5 mm for Potentially Invasive Medical Application. ACS Omega, 2020, 5, 23021-23027.	3.5	2
98	Stable and Reversible Photoluminescence from GaN Nanowires in Solution Tuning by Ionic Concentration. Nanoscale Research Letters, 2021, 16, 45.	5.7	2
99	Rapid quality test for drinking water by vertical-channel organic semiconductor gas sensor. Analytica Chimica Acta, 2022, 1206, 339729.	5.4	2
100	Population inversion in ap-doped quantum well with reduced photon energy. Physical Review B, 2006, 74, .	3.2	1
101	Conductive polymer/GaAs hybrid heterojunction photovoltaic devices. , 2013, , .		1
102	Hybrid carbon nanotube/silicon Schottky junction solar cells. , 2016, , .		1
103	Hybrid PEDOT: PSS - Silicon Solar Cell Packaging Employing Ultrathin Transparent Conductive Films. , 2018, , .		1
104	Diffusion-Free Organic Hole Selective Contacts for Silicon Solar Cells. , 2019, , .		1
105	The influence of the interfacial layer on the stability of all-solution-processed organic light-emitting diodes. RSC Advances, 2020, 10, 28766-28777.	3.6	1
106	Using light-emitting complex Ir(mppy)3 to detect acetone from 0.5 to 100â€¯ppm by vertical-channel gas sensor. Organic Electronics, 2022, , 106507.	2.6	1
107	Pâ€166: Allâ€Solutionâ€Processed Multilayered Smallâ€Molecule OLEDs with High Device Efficiency. Digest of Technical Papers SID International Symposium, 2009, 40, 1737-1739.	0.3	0
108	Pâ€163: Achieving High Directionality and Extraction of Light Emission from Polymer Light Emitting Diodes Via ITO/Organic Photonic Crystals. Digest of Technical Papers SID International Symposium, 2009, 40, 1726-1729.	0.3	0

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109	Pâ€17: Body Voltage Modulation for High Performance aâ€IGZO TFT and its Application on New Inverter Structure. Digest of Technical Papers SID International Symposium, 2011, 42, 1158-1161.	0.3	0
110	7.2: Integrated Organic Semiconductor Optoelectronic Devices as Real-time and Indicator-free Biosensor. Digest of Technical Papers SID International Symposium, 2011, 42, 70-73.	0.3	0
111	Fabrication and device modeling of micro-textured conductive polymer/silicon heterojunction solar cells. , 2012, , .		0
112	Investigating the gas sensing mechanism of the vertical polymer space-charge-limited transistor. , 2012, , .		0
113	Characteristics of conductive polymer/silicon heterojunction solar cells with periodic nanostructures. , 2013, , .		0
114	Projected efficiency of organic/inorganic hybrid tandem solar cells. , 2013, , .		0
115	Organic transistors fabricated by contact coating at liquid-solid interface for nano-structures. AIP Advances, 2015, 5, 107146.	1.3	0
116	External serial connection without layer patterning for organic solar cells. AIP Advances, 2016, 6, 125028.	1.3	0
117	Solution-processed finger-type organic proximity sensor with high displacement resolution. , 2016, , .		0
118	Memories on Professor Kerson Huang in MIT Around 1990. , 2017, , 17-18.		0
119	Detection of Heart and Respiration Rate with an Organic-Semiconductor-Based Optomechanical MEMS Sensor. Proceedings (mdpi), 2018, 2, 715.	0.2	0
120	50.2: Invited Paper: Improving lifetime and output current of organicâ€based gas sensor for applications in breath detection. Digest of Technical Papers SID International Symposium, 2019, 50, 561-564.	0.3	0
121	10.4: Leakageâ€free solution organic lightâ€emitting diode using ternary host with singleâ€diode emission area up to 6Ã—11.5 cm². Digest of Technical Papers SID International Symposium, 2019, 50, 103-106.	0.3	0
122	Hybrid Organic Silicon Solar Cells Using a Carbon-Nanotube Doped PEDOT:PSS Hole Selective Layer. , 2019, , .		0
123	Silicon Heterojunction Solar Cells Using Thermally -Evaporated Molybdenum Oxides As Dopant-Free Hole Selective Contact. , 2021, , .		0
124	Solution-Processed Molybdenum Trioxide as Hole Selective Contact for Crystalline Silicon Solar Cells. , 2021, , .		0
125	Solution-Processed Organic Hole Selective Layer Achieves 81.6% Fill Factor in Conventional Silicon Solar Cells. , 2020, , .		0
126	Functional Interface Passivation of Hybrid PEDOT:PSS Silicon Solar Cells via Silicon Hydrosilylation. , 2020, , .		0

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127	Evaluation of Organic Electron Selective Contact for Hybrid PEDOT:PSS- Silicon Solar Cells. , 2020, , .		0
128	Hybrid Organic/Silicon Solar Cells Using Solution-Processed Aluminum-Doped Zinc Oxides as Efficient Electron Selective Contact. , 2020, , .		0
129	An Optical pH Sensor with Second Layer to Eliminate Leaching Effect. , 2020, , .		0