

# Hsin-Fei Meng

## List of Publications by Year in descending order

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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	Vertical channel metal-oxide clusters as sensitive NO <sub>2</sub> sensor with modulated response at room temperature. <i>Sensors and Actuators B: Chemical</i> , 2022, 354, 131222.	7.8	5
2	Using light-emitting complex Ir(mppy) <sub>3</sub> to detect acetone from 0.5 to 100 µppm by vertical-channel gas sensor. <i>Organic Electronics</i> , 2022, , 106507.	2.6	1
3	Rapid quality test for drinking water by vertical-channel organic semiconductor gas sensor. <i>Analytica Chimica Acta</i> , 2022, 1206, 339729.	5.4	2
4	Ultrasensitive detection of hydrogen sulfide gas based on perovskite vertical channel chemo-sensor. <i>Sensors and Actuators B: Chemical</i> , 2021, 326, 128988.	7.8	31
5	Electronic nano sponge breath ammonia sensors using hygroscopic polymers on vertical channel nano-porous structure. <i>Journal of Materials Chemistry C</i> , 2021, 9, 12938-12950.	5.5	5
6	Stable and Reversible Photoluminescence from GaN Nanowires in Solution Tuning by Ionic Concentration. <i>Nanoscale Research Letters</i> , 2021, 16, 45.	5.7	2
7	Silicon Heterojunction Solar Cells Using Thermally -Evaporated Molybdenum Oxides As Dopant-Free Hole Selective Contact. , 2021, , .		0
8	Solution-Processed Molybdenum Trioxide as Hole Selective Contact for Crystalline Silicon Solar Cells. , 2021, , .		0
9	Solution-Processed Chloroaluminum Phthalocyanine (ClAlPc) Ammonia Gas Sensor with Vertical Organic Porous Diodes. <i>Sensors</i> , 2021, 21, 5783.	3.8	3
10	Gas emission from human skin positions detected by vertical-channel organic semiconductor sensor. <i>Sensors and Actuators B: Chemical</i> , 2021, 343, 129994.	7.8	6
11	Thermal and angular dependence of next-generation photovoltaics under indoor lighting. <i>Progress in Photovoltaics: Research and Applications</i> , 2020, 28, 111-121.	8.1	13
12	Breath Ammonia Is a Useful Biomarker Predicting Kidney Function in Chronic Kidney Disease Patients. <i>Biomedicines</i> , 2020, 8, 468.	3.2	38
13	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. <i>ACS Applied Electronic Materials</i> , 2020, 2, 2514-2524.	4.3	2
14	The influence of the interfacial layer on the stability of all-solution-processed organic light-emitting diodes. <i>RSC Advances</i> , 2020, 10, 28766-28777.	3.6	1
15	A Cylindrical Ion Sensor Tip with a Diameter of 1.5 mm for Potentially Invasive Medical Application. <i>ACS Omega</i> , 2020, 5, 23021-23027.	3.5	2
16	Near-Infrared Laser-Annealed IZO Flexible Device as a Sensitive H <sub>2</sub> S Sensor at Room Temperature. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 24984-24991.	8.0	14
17	UV-enhanced room-temperature ultrasensitive NO gas sensor with vertical channel nano-porous organic diodes. <i>Sensors and Actuators B: Chemical</i> , 2020, 320, 128392.	7.8	26
18	Hydrogel-based zinc ion sensor on optical fiber with high resolution and application to neural cells. <i>Biosensors and Bioelectronics</i> , 2020, 162, 112230.	10.1	8

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19	Solution-Processed Organic Hole Selective Layer Achieves 81.6% Fill Factor in Conventional Silicon Solar Cells. , 2020, , .		0
20	Functional Interface Passivation of Hybrid PEDOT:PSS Silicon Solar Cells via Silicon Hydrosilylation. , 2020, , .		0
21	Evaluation of Organic Electron Selective Contact for Hybrid PEDOT:PSS- Silicon Solar Cells. , 2020, , .		0
22	Hybrid Organic/Silicon Solar Cells Using Solution-Processed Aluminum-Doped Zinc Oxides as Efficient Electron Selective Contact. , 2020, , .		0
23	An Optical pH Sensor with Second Layer to Eliminate Leaching Effect. , 2020, , .		0
24	Large-area blade-coated organic solar cells processed from halogen-free solvent. Organic Electronics, 2019, 75, 105376.	2.6	9
25	50.2: Invited Paper: Improving lifetime and output current of organic-based gas sensor for applications in breath detection. Digest of Technical Papers SID International Symposium, 2019, 50, 561-564.	0.3	0
26	10.4: Leakage-free solution organic light-emitting diode using ternary host with single-diode emission area up to $6 \text{ \AA} - 11.5 \text{ cm}^2$ . Digest of Technical Papers SID International Symposium, 2019, 50, 103-106.	0.3	0
27	Photo-assisted recovery in ammonia sensor based on organic vertical diode. Organic Electronics, 2019, 67, 272-278.	2.6	6
28	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
29	All-Solution-Processed Red and Orange-Red Organic Light-Emitting Diodes with High-Efficiencies: The Effect of Mixed-Host Emissive Layers and Thermal Annealing Treatment. ChemPlusChem, 2019, 84, 1375-1383.	2.8	10
30	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
31	Nonfullerene Polymer Solar Cell with Large Active Area of $216 \text{ cm}^2$ and High Power Conversion Efficiency of 7.7%. Solar Rrl, 2019, 3, 1900071.	5.8	25
32	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
33	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
34	Leakage-free solution-processed organic light-emitting diode using a ternary host with single-diode emission area up to $6 \text{ \AA} - 11.5 \text{ cm}^2$ . RSC Advances, 2019, 9, 10584-10598.	3.6	5
35	Hybrid Organic Silicon Solar Cells Using a Carbon-Nanotube Doped PEDOT:PSS Hole Selective Layer. , 2019, , .		0
36	Diffusion-Free Organic Hole Selective Contacts for Silicon Solar Cells. , 2019, , .		1

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37	Highly efficient and stable organic solar cell modules processed by blade coating with 5.6% module efficiency and active area of 216 cm <sup>2</sup> . Progress in Photovoltaics: Research and Applications, 2019, 27, 264-274.	8.1	34
38	Room-temperature-operated organic-based acetone gas sensor for breath analysis. Sensors and Actuators B: Chemical, 2018, 260, 593-600.	7.8	61
39	Detection of Heart and Respiration Rate with an Organic-Semiconductor-Based Optomechanical MEMS Sensor. Proceedings (mdpi), 2018, 2, 715.	0.2	0
40	Hybrid PEDOT: PSS - Silicon Solar Cell Packaging Employing Ultrathin Transparent Conductive Films. , 2018, , .		1
41	Thermally Stable High-Performance Polymer Solar Cells Enabled by Interfacial Engineering. ChemSusChem, 2018, 11, 2429-2435.	6.8	4
42	Accurate real-time sensing tip for aqueous NO with optical fibers embedded in active hydrogel waveguide. AIP Advances, 2018, 8, 025207.	1.3	3
43	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
44	Toward Long-Term Stable and Efficient Large-Area Organic Solar Cells. ChemSusChem, 2017, 10, 2778-2787.	6.8	12
45	Great improvement of operation-lifetime for all-solution OLEDs with mixed hosts by blade coating. Organic Electronics, 2017, 42, 75-86.	2.6	16
46	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
47	Memories on Professor Kerson Huang in MIT Around 1990. , 2017, , 17-18.		0
48	Organic Gas Sensor with an Improved Lifetime for Detecting Breath Ammonia in Hemodialysis Patients. ACS Sensors, 2017, 2, 1788-1795.	7.8	82
49	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
50	High-resolution proximity sensor using flexible semi-transparent organic photo detector. Organic Electronics, 2017, 49, 305-312.	2.6	10
51	External serial connection without layer patterning for organic solar cells. AIP Advances, 2016, 6, 125028.	1.3	0
52	Blade-coated sol-gel indium-gallium-zinc-oxide for inverted polymer solar cell. AIP Advances, 2016, 6, .	1.3	12
53	Solution p-doped fluorescent polymers for enhanced charge transport of hybrid organic-silicon nanowire photovoltaics. Organic Electronics, 2016, 34, 246-253.	2.6	5
54	Solution-processed finger-type organic proximity sensor with high displacement resolution. , 2016, , .		0

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55	Enhancing efficiency for additive-free blade-coated small-molecule solar cells by thermal annealing. <i>Organic Electronics</i> , 2016, 37, 305-311.	2.6	7
56	Hybrid carbon nanotube/silicon Schottky junction solar cells. , 2016, , .		1
57	Modulated gas sensor based on vertical organic diode with blended channel for ppb-regime detection. <i>Sensors and Actuators B: Chemical</i> , 2016, 230, 223-230.	7.8	19
58	Blade coating of Tris(8-hydroxyquinolino)aluminum as the electron-transport layer for all-solution blue fluorescent organic light-emitting diodes. <i>Organic Electronics</i> , 2016, 29, 99-106.	2.6	18
59	Organic transistors fabricated by contact coating at liquid-solid interface for nano-structures. <i>AIP Advances</i> , 2015, 5, 107146.	1.3	0
60	Review of a solution-processed vertical organic transistor as a solid-state vacuum tube. <i>Semiconductor Science and Technology</i> , 2015, 30, 054003.	2.0	11
61	Large-area organic solar cells by accelerated blade coating. <i>Organic Electronics</i> , 2015, 22, 166-172.	2.6	46
62	Reliable solution processed planar perovskite hybrid solar cells with large-area uniformity by chloroform soaking and spin rinsing induced surface precipitation. <i>AIP Advances</i> , 2015, 5, 087125.	1.3	14
63	Making optical MEMS sensors more compact using organic light sources and detectors. , 2014, , .		8
64	Achieving a Good Life Time in a Vertical-Organic-Diode Gas Sensor. <i>Sensors</i> , 2014, 14, 16287-16295.	3.8	13
65	High-efficiency polymer solar cells by blade coating in chlorine-free solvents. <i>Organic Electronics</i> , 2014, 15, 893-903.	2.6	51
66	Highly efficient organic solar cells using a solution-processed active layer with a small molecule donor and pristine fullerene. <i>Journal of Materials Chemistry A</i> , 2014, 2, 3709-3714.	10.3	31
67	Simultaneous enhancement in both large-area coatibility and photovoltaic performance of inverted organic solar cells with co-solvent. <i>Solar Energy Materials and Solar Cells</i> , 2014, 120, 197-203.	6.2	11
68	Efficient inverted quasi-bilayer organic solar cells fabricated by using non-halogenated solvent processes. <i>Journal of Materials Chemistry A</i> , 2014, 2, 13398-13406.	10.3	39
69	Gas permeable silver nanowire electrode for realizing vertical type sensitive gas sensor. <i>Organic Electronics</i> , 2014, 15, 2769-2774.	2.6	22
70	Multilayer rapid-drying blade coating for organic solar cells by low boiling point solvents. <i>Japanese Journal of Applied Physics</i> , 2014, 53, 062301.	1.5	7
71	Electrospun Fibers as a Solid-State Real-Time Zinc Ion Sensor with High Sensitivity and Cell Medium Compatibility. <i>Advanced Functional Materials</i> , 2013, 23, 1566-1574.	14.9	31
72	Achieving saturation in vertical organic transistors for organic light-emitting diode driving by nanorod channel geometric control. <i>Applied Physics Letters</i> , 2013, 102, 163305.	3.3	8

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73	13% Efficiency Hybrid Organic/Silicon-Nanowire Heterojunction Solar Cell <i>via</i> Interface Engineering. ACS Nano, 2013, 7, 10780-10787.	14.6	194
74	Characteristics of conductive polymer/silicon heterojunction solar cells with periodic nanostructures. , 2013, , .		0
75	Conductive polymer/GaAs hybrid heterojunction photovoltaic devices. , 2013, , .		1
76	Low operation voltage macromolecular composite memory assisted by graphene nanoflakes. Journal of Materials Chemistry C, 2013, 1, 552-559.	5.5	46
77	Highly Sensitive Ammonia Sensor with Organic Vertical Nanojunctions for Noninvasive Detection of Hepatic Injury. Analytical Chemistry, 2013, 85, 3110-3117.	6.5	81
78	11%-Efficiency hybrid organic/silicon-nanowire heterojunction solar cell with an intermediate 1,1-bis[(di-4-tolylamino)phenyl]cyclohexane layer. , 2013, , .		2
79	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
80	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
81	Solution-Processed Vertical Organic Transistors Fabricated by Nanoimprint Lithography. IEEE Electron Device Letters, 2013, 34, 313-315.	3.9	8
82	Projected efficiency of organic/inorganic hybrid tandem solar cells. , 2013, , .		0
83	Sensitive gas sensor embedded in a vertical polymer space-charge-limited transistor. Applied Physics Letters, 2012, 101, .	3.3	14
84	High output current in vertical polymer space-charge-limited transistor induced by self-assembled monolayer. Applied Physics Letters, 2012, 101, 093307.	3.3	27
85	Fabrication and device modeling of micro-textured conductive polymer/silicon heterojunction solar cells. , 2012, , .		0
86	Solution-processed silicon hybrid heterojunction photovoltaics with silver nanowires. , 2012, , .		2
87	High performance organic photovoltaic cells with blade-coated active layers. Solar Energy Materials and Solar Cells, 2012, 107, 292-297.	6.2	40
88	Investigating the gas sensing mechanism of the vertical polymer space-charge-limited transistor. , 2012, , .		0
89	Unmodified small-molecule organic light-emitting diodes by blade coating. Organic Electronics, 2012, 13, 2149-2155.	2.6	35
90	Micro-textured conductive polymer/silicon heterojunction photovoltaic devices with high efficiency. Applied Physics Letters, 2012, 101, .	3.3	117

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91	Highly efficient inverted rapid-drying blade-coated organic solar cells. <i>Organic Electronics</i> , 2012, 13, 705-709.	2.6	29
92	All-small-molecule efficient white organic light-emitting diodes by multi-layer blade coating. <i>Organic Electronics</i> , 2012, 13, 914-918.	2.6	55
93	Porous Organic TFTs for the Applications on Real-Time and Sensitive Gas Sensors. <i>IEEE Electron Device Letters</i> , 2011, 32, 1143-1145.	3.9	27
94	Continuous blade coating for multi-layer large-area organic light-emitting diode and solar cell. <i>Journal of Applied Physics</i> , 2011, 110, .	2.5	70
95	Efficient inverted organic solar cells without an electron selective layer. <i>Journal of Materials Chemistry</i> , 2011, 21, 5723.	6.7	30
96	P-17: Body Voltage Modulation for High Performance a-IGZO TFT and its Application on New Inverter Structure. <i>Digest of Technical Papers SID International Symposium</i> , 2011, 42, 1158-1161.	0.3	0
97	4.3: High Performance a-IGZO TFT with Nano-Dots Doping. <i>Digest of Technical Papers SID International Symposium</i> , 2011, 42, 28-31.	0.3	2
98	7.2: Integrated Organic Semiconductor Optoelectronic Devices as Real-time and Indicator-free Biosensor. <i>Digest of Technical Papers SID International Symposium</i> , 2011, 42, 70-73.	0.3	0
99	Dual gate indium-gallium-zinc-oxide thin film transistor with an unisolated floating metal gate for threshold voltage modulation and mobility enhancement. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	87
100	Room-temperature-operated sensitive hybrid gas sensor based on amorphous indium gallium zinc oxide thin-film transistors. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	82
101	Vertical polymer phototransistor featuring photomultiplication due to base-field shielding. <i>Applied Physics Letters</i> , 2011, 98, 053305.	3.3	9
102	High-performance vertical polymer nanorod transistors based on air-stable conjugated polymer. <i>Applied Physics Letters</i> , 2011, 99, 233308.	3.3	10
103	Enhancement-mode polymer space-charge-limited transistor with low switching swing of 96 mV/decade. <i>Applied Physics Letters</i> , 2011, 98, 223303.	3.3	11
104	P-25: New Polymer-Capped a-IGZO TFT with High Sensitivity to Visible Light for the Development of Integrated Touch Sensor Array. <i>Digest of Technical Papers SID International Symposium</i> , 2010, 41, 1316.	0.3	8
105	Real-time and indicator-free detection of aqueous nitric oxide with hydrogel film. <i>Applied Physics Letters</i> , 2010, 96, 223702.	3.3	5
106	New thiophene-phenylene-thiophene acceptor random conjugated copolymers for optoelectronic applications. <i>Journal of Polymer Science Part A</i> , 2010, 48, 2351-2360.	2.3	36
107	The effect of carrier mobility in organic solar cells. <i>Journal of Applied Physics</i> , 2010, 107, .	2.5	99
108	Polymer space-charge-limited transistor as a solid-state vacuum tube triode. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	30

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109	Amorphous indium-gallium-zinc-oxide visible-light phototransistor with a polymeric light absorption layer. Applied Physics Letters, 2010, 97, .	3.3	82
110	Polymer photodetector with voltage-adjustable photocurrent spectrum. Applied Physics Letters, 2010, 96, .	3.3	22
111	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
112	Low voltage active pressure sensor based on polymer space-charge-limited transistor. Applied Physics Letters, 2009, 95, 253306.	3.3	19
113	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
114	A 1-V operated polymer vertical transistor with high on/off current ratio. , 2009, , .		2
115	Increasing organic vertical carrier mobility for the application of high speed bilayered organic photodetector. Applied Physics Letters, 2009, 95, .	3.3	42
116	Selective real-time nitric oxide detection by functionalized zinc oxide. Journal Physics D: Applied Physics, 2009, 42, 155105.	2.8	20
117	Polymer solar cell by blade coating. Organic Electronics, 2009, 10, 741-746.	2.6	123
118	All-solution-processed blue small molecular organic light-emitting diodes with multilayer device structure. Organic Electronics, 2009, 10, 1610-1614.	2.6	67
119	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
120	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
121	Dynamics and reversibility of oxygen doping and de-doping for conjugated polymer. Journal of Applied Physics, 2008, 103, .	2.5	88
122	Light-emitting polymer space-charge-limited transistor. Applied Physics Letters, 2008, 93, 223301.	3.3	12
123	Multilayer polymer light-emitting diodes by blade coating method. Applied Physics Letters, 2008, 93, .	3.3	107
124	Dark carrier recombination in organic solar cell. Applied Physics Letters, 2008, 93, .	3.3	26
125	Polymer infrared proximity sensor. Applied Physics Letters, 2008, 93, .	3.3	22
126	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



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127	Hole doping by molecular oxygen in organic semiconductors: Band-structure calculations. Physical Review B, 2007, 75, .	3.2	57
128	Population inversion in ap-doped quantum well with reduced photon energy. Physical Review B, 2006, 74, .	3.2	1
129	Ternary organic solar cell with 1750 hours half lifetime under UV irradiation with solar intensity. Solar Rrl, 0, , .	5.8	4