Hwa Sung Lee

List of Publications by Year
in descending order

65 papers	2,171 citations	331670 21 h-index	223800 46 g-index
65 all docs	65 docs citations	65 times ranked	2879 citing authors

#	Article	IF	Citations
1	Interface engineering in organic transistors. Materials Today, 2007, 10, 46-54.	14.2	278
2	Effect of the Phase States of Self-Assembled Monolayers on Pentacene Growth and Thin-Film Transistor Characteristics. Journal of the American Chemical Society, 2008, 130, 10556-10564.	13.7	221
3	Control of the Morphology and Structural Development of Solutionâ€Processed Functionalized Acenes for Highâ€Performance Organic Transistors. Advanced Functional Materials, 2009, 19, 1515-1525.	14.9	147
4	Tunable Crystal Nanostructures of Pentacene Thin Films on Gate Dielectrics Possessing Surfaceâ€Order Control. Advanced Functional Materials, 2008, 18, 1363-1370.	14.9	135
5	Semiconductorâ€Dielectric Blends: A Facile All Solution Route to Flexible Allâ€Organic Transistors. Advanced Materials, 2009, 21, 4243-4248.	21.0	120
6	High performance polythiophene thin-film transistors doped with very small amounts of an electron acceptor. Applied Physics Letters, 2008, 92, .	3.3	109
7	Inkjetâ€Printed Singleâ€Droplet Organic Transistors Based on Semiconductor Nanowires Embedded in Insulating Polymers. Advanced Functional Materials, 2010, 20, 3292-3297.	14.9	100
8	The Influence of the Solvent Evaporation Rate on the Phase Separation and Electrical Performances of Soluble Aceneâ€Polymer Blend Semiconductors. Advanced Functional Materials, 2012, 22, 267-281.	14.9	90
9	Novel Ecoâ€Friendly Starch Paper for Use in Flexible, Transparent, and Disposable Organic Electronics. Advanced Functional Materials, 2018, 28, 1704433.	14.9	87
10	Flexible piezocapacitive sensors based on wrinkled microstructures: toward low-cost fabrication of pressure sensors over large areas. RSC Advances, 2017, 7, 39420-39426.	3.6	84
11	A polymer brush organic interlayer improves the overlying pentacene nanostructure and organic field-effect transistor performance. Journal of Materials Chemistry, 2011, 21, 15580.	6.7	71
12	Solubility-driven polythiophene nanowires and their electrical characteristics. Journal of Materials Chemistry, 2011, 21, 2338-2343.	6.7	59
13	Low-voltage organic transistors with titanium oxide/polystyrene bilayer dielectrics. Applied Physics Letters, 2009, 94, 113303.	3.3	55
14	Directly Drawn Organic Transistors by Capillary Pen: A New Facile Patterning Method using Capillary Action for Soluble Organic Materials. Advanced Materials, 2013, 25, 4117-4122.	21.0	43
15	Electrohydrodynamic printing of poly(3,4-ethylenedioxythiophene):poly(4-styrenesulfonate) electrodes with ratio-optimized surfactant. RSC Advances, 2016, 6, 2004-2010.	3.6	37
16	Surface-Order Mediated Assembly of Ï€-Conjugated Molecules on Self-Assembled Monolayers with Controlled Grain Structures. Chemistry of Materials, 2015, 27, 4669-4676.	6.7	33
17	Patterning the organic electrodes of all-organic thin film transistors with a simple spray printing technique. Applied Physics Letters, 2006, 89, 183501.	3.3	27
18	Interpenetrating polymer network dielectrics for high-performance organic field-effect transistors. Journal of Materials Chemistry, 2011, 21, 6968.	6.7	26

#	Article	IF	Citations
19	Fully Drawn Allâ€Organic Flexible Transistors Prepared by Capillary Pen Printing on Flexible Planar and Curvilinear Substrates. Advanced Electronic Materials, 2015, 1, 1500301.	5.1	26
20	A highly sensitive and stress-direction-recognizing asterisk-shaped carbon nanotube strain sensor. Journal of Materials Chemistry C, 2019, 7, 9504-9512.	5.5	26
21	Optimization of electrohydrodynamic-printed organic electrodes for bottom-contact organic thin film transistors. Organic Electronics, 2016, 38, 48-54.	2.6	23
22	Engineering Asymmetric Charge Injection/Extraction to Optimize Organic Transistor Performances. ACS Applied Materials & Interfaces, 2019, 11, 10108-10117.	8.0	21
23	A Battery-Free, Chipless, Highly Sensitive LC Pressure Sensor Tag Using PEDOT: PSS and Melamine Foam. IEEE Sensors Journal, 2021, 21, 2184-2193.	4.7	18
24	Microstructural Control over Soluble Pentacene Deposited by Capillary Pen Printing for Organic Electronics. ACS Applied Materials & Interfaces, 2013, 5, 7838-7844.	8.0	17
25	Preparation of highly conductive reduced graphite oxide/poly(styrene-co-butyl acrylate) composites via miniemulsion polymerization. Polymer, 2014, 55, 5088-5094.	3.8	17
26	Impact of Energetically Engineered Dielectrics on Charge Transport in Vacuum-Deposited Bis(triisopropylsilylethynyl)pentacene. Journal of Physical Chemistry C, 2015, 119, 28819-28827.	3.1	15
27	Tuning the Work Function of Printed Polymer Electrodes by Introducing a Fluorinated Polymer To Enhance the Operational Stability in Bottom-Contact Organic Field-Effect Transistors. ACS Applied Materials & Interfaces, 2017, 9, 12637-12646.	8.0	15
28	Crisscross-designed piezoresistive strain sensors with a cracked microtectonic architecture for direction-selective tensile perception. Journal of Materials Chemistry C, 2018, 6, 11170-11177.	5.5	15
29	Behavior of pentacene molecules deposited onto roughness-controlled polymer dielectrics films and its effect on FET performance. Synthetic Metals, 2013, 163, 7-12.	3.9	14
30	Direct Printing of Asymmetric Electrodes for Improving Charge Injection/Extraction in Organic Electronics. ACS Applied Materials & Interfaces, 2020, 12, 33999-34010.	8.0	13
31	Branched Segments in Polymer Gate Dielectric as Intrinsic Charge Trap Sites in Organic Transistors. Journal of Physical Chemistry C, 2015, 119, 7670-7677.	3.1	12
32	Thermally Crosslinked Biocompatible Hydrophilic Polyvinylpyrrolidone Coatings on Polypropylene with Enhanced Mechanical and Adhesion Properties. Macromolecular Research, 2018, 26, 151-156.	2.4	12
33	Omnidirectionally Stretchable Organic Transistors for Use in Wearable Electronics: Ensuring Overall Stretchability by Applying Nonstretchable Wrinkled Components. ACS Applied Materials & Interfaces, 2020, 12, 32979-32986.	8.0	12
34	Selectively patterned highly conductive poly(3,4-ethylenedioxythiophene)-tosylate electrodes for high performance organic field-effect transistors. Applied Physics Letters, 2009, 95, 233509.	3.3	11
35	Dense Assembly of Soluble Acene Crystal Ribbons and Its Application to Organic Transistors. ACS Applied Materials & Interfaces, 2016, 8, 24753-24760.	8.0	11
36	Exploring the ultrasonic nozzle spray-coating technique for the fabrication of solution-processed organic electronics. Organic Electronics, 2017, 49, 212-217.	2.6	11

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37	Fabrication of Highly Sensitive Piezocapacitive Pressure Sensors using a Simple and Inexpensive Home Milk Frother. Physical Review Applied, 2019, 11, .	3.8	11
38	Tuning Interfacial Properties by Spontaneously Generated Organic Interlayers in Topâ€Contactâ€Structured Organic Transistors. Advanced Functional Materials, 2020, 30, 2002979.	14.9	11
39	Highly sensitive, fast and wide dynamic range lactate sensor containing solvatochromic sensing membrane by combining the capacitance-to-phase conversion technique. Sensors and Actuators B: Chemical, 2020, 309, 127783.	7.8	11
40	Advanced Organic Transistor-Based Sensors Utilizing a Solvatochromic Medium with Twisted Intramolecular Charge-Transfer Behavior and Its Application to Ammonia Gas Detection. ACS Applied Materials & Interfaces, 2021, 13, 56385-56393.	8.0	11
41	Effect of curing conditions of a poly(4-vinylphenol)gate dielectric on the performance of a pentacene-based thin film transistor. Macromolecular Research, 2009, 17, 436-440.	2.4	10
42	Gate-Bias Stability Behavior Tailored by Dielectric Polymer Stereostructure in Organic Transistors. ACS Applied Materials & Interfaces, 2015, 7, 25045-25052.	8.0	10
43	Omnidirectional Strainâ€Independent Organic Transistors Integrated onto an Elastomer Template with a Spontaneously Formed Fingerprintâ€Mimicking Microtopography. Advanced Electronic Materials, 2019, 5, 1900441.	5.1	9
44	Precise Control over Polymer Semiconducting Films by Tuning the Thermal Behavior of the Thin-Film Stateâ€™s Crystalline and Morphological Structures. ACS Applied Materials & Interfaces, 2019, 11, 40358-40365.	8.0	9
45	Influences of Energetically Controlled Dielectric Functionality on Polymer Field-Effect Transistor Performance. Journal of Physical Chemistry C, 2020, 124, 161-166.	3.1	9
46	Surface Viscoelasticity of an Organic Interlayer Affects the Crystalline Nanostructure of an Organic Semiconductor and Its Electrical Performance. Journal of Physical Chemistry C, 2012, 116, 21673-21678.	3.1	7
47	Macroscopic Interfacial Property as a Determining Parameter for Reliable Prediction of Charge Mobility in Organic Transistors. Journal of Physical Chemistry C, 2018, 122, 17695-17705.	3.1	7
48	Understanding Marangoni flow-driven solidification of polymer semiconducting films on an aqueous substrate. Journal of Materials Chemistry C, 2020, 8, 10010-10020.	5.5	7
49	Marginal solvents preferentially improve the molecular order of thin polythiophene films. RSC Advances, 2016, 6, 23640-23644.	3.6	6
50	Enhancement of electron injection in polymer light-emitting diodes with a supramolecular insulating nanolayer on the bottom cathode. Applied Physics Letters, 2006, 89, 083508.	3.3	5
51	Surface treatment of Parylene-C gate dielectric for highly stable organic field-effect transistors. Organic Electronics, 2019, 69, 128-134.	2.6	5
52	Thermal Gradient During Vacuum-Deposition Dramatically Enhances Charge Transport in Organic Semiconductors: Toward High-Performance N-Type Organic Field-Effect Transistors. ACS Applied Materials & Interfaces, 2017, 9, 9910-9917.	8.0	4
53	Chemically Robust Superhydrophobic Poly(vinylidene fluoride) Films with Grafting Crosslinkable Fluorinated Silane. Macromolecular Research, 2018, 26, 493-499.	2.4	4
54	Design Strategies in the Pen-Printing Technique toward Elaborated Organic Electronics. Journal of Physical Chemistry C, 2019, 123, 5255-5263.	3.1	4

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55	Polymeric Conformation of Organic Interlayers as a Determining Parameter for the Charge Transport of Organic Field-Effect Transistors. Macromolecular Research, 2020, 28, 670-676.	2.4	4
56	Photocrosslinkable zinc diacrylate-based gate insulators for reliable operation of organic thin film transistors. Organic Electronics, 2018, 59, 49-55.	2.6	3
57	Electron-interfered field-effect transistors as a sensing platform for detecting a delicate surface chemical reaction. Journal of Materials Chemistry C, 2021, 9, 8179-8188.	5.5	3
58	Highly Reliable Passive RFID-Based Inductorâ€“Capacitor Sensory System Strengthened by Solvatochromism for Fast and Wide-Range Lactate Detection. IEEE Sensors Journal, 2022, 22, 12228-12236.	4.7	3
59	Tuning Organic Semiconducting Binary Heterostructures Inherited by Template Nanostructures for Achieving Highâ€Performance Organic Transistors. Advanced Electronic Materials, 0, , 2101115.	5.1	2
60	Vacuum Lamination of Polymer Gate Dielectric Layers for Facile Fabrication of Organic Transistors. ACS Applied Electronic Materials, 2022, 4, 3640-3647.	4.3	2
61	Facile and reliable route to ensure chemical-environmental stability of pen-printed organic transistors with blended polymer Semiconductorâ€“Insulator. Materials Chemistry and Physics, 2021, 263, 124346.	4.0	1
62	Understanding adsorption geometry of organometallic molecules on graphite. Scientific Reports, 2021, 11, 18497.	3.3	1
63	Anti-dryable, anti-freezable, and self-healable conductive hydrogel for adhesive electrodes. Composite Interfaces, 2022, 29, 1561-1571.	2.3	1
64	Effect of Phase State of Self-Assembled Monolayers on Pentacene Growth and Thin Film Transistors Characteristics. AIP Conference Proceedings, 2007, , .	0.4	0
65	Organic Field Effect Transistors: Directly Drawn Organic Transistors by Capillary Pen: A New Facile Patterning Method using Capillary Action for Soluble Organic Materials (Adv. Mater. 30/2013). Advanced Materials, 2013, 25, 4062-4062.	21.0	0