Jaeyoung Jang

List of Publications by Year
in descending order

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90 papers	3,310 citations	147801 31 h-index	161849 54 g-index
93 all docs	93 docs citations	93 times ranked	5165 citing authors

#	Article	IF	Citations
1	Colloidal Nanocrystals with Inorganic Halide, Pseudohalide, and Halometallate Ligands. ACS Nano, 2014, 8, 7359-7369.	14.6	204
2	Poly(3-hexylthiophene) wrapped carbon nanotube/poly(dimethylsiloxane) composites for use in finger-sensing piezoresistive pressure sensors. Carbon, 2011, 49, 106-110.	10.3	173
3	Composition-matched molecular â€œsoldersâ€• for semiconductors. Science, 2015, 347, 425-428.	12.6	172
4	Highly Crystalline Soluble Acene Crystal Arrays for Organic Transistors: Mechanism of Crystal Growth During Dipâ€Coating. Advanced Functional Materials, 2012, 22, 1005-1014.	14.9	160
5	Synthesis and Search for Design Principles of New Electron Accepting Polymers for All-Polymer Solar Cells. Chemistry of Materials, 2014, 26, 3450-3459.	6.7	100
6	Reduced Water Vapor Transmission Rate of Graphene Gas Barrier Films for Flexible Organic Field-Effect Transistors. ACS Nano, 2015, 9, 5818-5824.	14.6	93
7	Surface Modification of CdSe Quantum-Dot Floating Gates for Advancing Light-Erasable Organic Field-Effect Transistor Memories. ACS Nano, 2018, 12, 7701-7709.	14.6	89
8	Solution-Processed Transistors Using Colloidal Nanocrystals with Composition-Matched Molecular â€œSoldersâ€• Approaching Single Crystal Mobility. Nano Letters, 2015, 15, 6309-6317.	9.1	88
9	Doping of donor-acceptor polymers with long side chains via solution mixing for advancing thermoelectric properties. Nano Energy, 2019, 58, 585-595.	16.0	83
10	Alkyl Chain Length Dependence of the Field-Effect Mobility in Novel Anthracene Derivatives. ACS Applied Materials & Interfaces, 2015, 7, 351-358.	8.0	80
11	Photoinduced Recovery of Organic Transistor Memories with Photoactive Floating-Gate Interlayers. ACS Applied Materials & Interfaces, 2017, 9, 11759-11769.	8.0	80
12	Effects of direct solvent exposure on the nanoscale morphologies and electrical characteristics of PCBM-based transistors and photovoltaics. Journal of Materials Chemistry, 2012, 22, 5543.	6.7	79
13	Temperature-Dependent Hall and Field-Effect Mobility in Strongly Coupled All-Inorganic Nanocrystal Arrays. Nano Letters, 2014, 14, 653-662.	9.1	71
14	Effect of the hydrophobicity and thickness of polymer gate dielectrics on the hysteresis behavior of pentacene-based field-effect transistors. Journal of Applied Physics, 2009, 105, .	2.5	69
15	High T_g Cyclic Olefin Copolymer Gate Dielectrics for N,Nâ€²â€Ditridecyl Perylene Diimide Based Fieldâ€Effect Transistors: Improving Performance and Stability with Thermal Treatment. Advanced Functional Materials, 2010, 20, 2611-2618.	14.9	69
16	The Origin of Excellent Gateâ€Bias Stress Stability in Organic Fieldâ€Effect Transistors Employing Fluorinatedâ€Polymer Gate Dielectrics. Advanced Materials, 2014, 26, 7241-7246.	21.0	68
17	Solution-Processed, Ultrathin Solar Cells from CdCl₃^{â€“}-Capped CdTe Nanocrystals: The Multiple Roles of CdCl₃^{â€“} Ligands. Journal of the American Chemical Society, 2016, 138, 7464-7467.	13.7	64
18	Composition change-driven texturing and doping in solution-processed SnSe thermoelectric thin films. Nature Communications, 2019, 10, 864.	12.8	62

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19	Direct Writing and Aligning of Small-Molecule Organic Semiconductor Crystals via â€œDragging Modeâ€• Electrohydrodynamic Jet Printing for Flexible Organic Field-Effect Transistor Arrays. Journal of Physical Chemistry Letters, 2017, 8, 5492-5500.	4.6	54
20	Selfâ€Healable and Stretchable Organic Thermoelectric Materials: Electrically Percolated Polymer Nanowires Embedded in Thermoplastic Elastomer Matrix. Advanced Functional Materials, 2020, 30, 1905809.	14.9	52
21	Direct patterning of conductive carbon nanotube/polystyrene sulfonate composites via electrohydrodynamic jet printing for use in organic field-effect transistors. Journal of Materials Chemistry C, 2016, 4, 4912-4919.	5.5	49
22	BrÃ¸nsted Acid Doping of P3HT with Largely Soluble Tris(pentafluorophenyl)borane for Highly Conductive and Stable Organic Thermoelectrics Via Oneâ€Step Solution Mixing. Advanced Energy Materials, 2020, 10, 2002521.	19.5	48
23	Hysteresis-free pentacene field-effect transistors and inverters containing poly(4-vinyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	3.3	47
24	Light-responsive spiropyran based polymer thin films for use in organic field-effect transistor memories. Journal of Materials Chemistry C, 2016, 4, 5398-5406.	5.5	45
25	Photo-Patternable ZnO Thin Films Based on Cross-Linked Zinc Acrylate for Organic/Inorganic Hybrid Complementary Inverters. ACS Applied Materials & Interfaces, 2016, 8, 5499-5508.	8.0	45
26	Efficient Debundling of Few-Walled Carbon Nanotubes by Wrapping with Donorâ€“Acceptor Polymers for Improving Thermoelectric Properties. ACS Applied Materials & Interfaces, 2019, 11, 47330-47339.	8.0	44
27	High-performance solution-processed triisopropylsilylethynyl pentacene transistors and inverters fabricated by using the selective self-organization technique. Applied Physics Letters, 2008, 93, .	3.3	41
28	Solution-processed indium-free ZnO/SnO₂ bilayer heterostructures as a low-temperature route to high-performance metal oxide thin-film transistors with excellent stabilities. Journal of Materials Chemistry C, 2016, 4, 11298-11304.	5.5	41
29	Hysteresis-free organic field-effect transistors and inverters using photocrosslinkable poly(vinyl) Tj ETQq1 1 0.784314 rgBT /Overlock	3.3	40
30	Optimization of Al₂O₃/TiO₂ nanolaminate thin films prepared with different oxide ratios, for use in organic light-emitting diode encapsulation, via plasma-enhanced atomic layer deposition. Physical Chemistry Chemical Physics, 2016, 18, 1042-1049.	2.8	38
31	High-Performance Organic Complementary Inverters Using Monolayer Graphene Electrodes. ACS Applied Materials & Interfaces, 2014, 6, 6816-6824.	8.0	35
32	Grafting Fluorinated Polymer Nanolayer for Advancing the Electrical Stability of Organic Field-Effect Transistors. Chemistry of Materials, 2014, 26, 6467-6476.	6.7	34
33	High-Performance Triethylsilylethynyl Anthradithiophene Transistors Prepared without Solvent Vapor Annealing: The Effects of Self-Assembly during Dip-Coating. ACS Applied Materials & Interfaces, 2013, 5, 2146-2154.	8.0	32
34	Solvent-free solution processed passivation layer for improved long-term stability of organic field-effect transistors. Journal of Materials Chemistry, 2011, 21, 775-780.	6.7	30
35	An artificial solid interphase with polymers of intrinsic microporosity for highly stable Li metal anodes. Chemical Communications, 2019, 55, 6313-6316.	4.1	29
36	Inâ€Situ Photoelectron Spectroscopy Study on the Air Degradation of PEDOT:PSS in Terms of Electrical and Thermoelectric Properties. Advanced Electronic Materials, 2020, 6, 2000620.	5.1	29

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37	High Tg cyclic olefin copolymer/Al2O3 bilayer gate dielectrics for flexible organic complementary circuits with low-voltage and air-stable operation. Journal of Materials Chemistry, 2011, 21, 12542.	6.7	28
38	Graphene Oxide/Polystyrene Bilayer Gate Dielectrics for Low-Voltage Organic Field-Effect Transistors. Applied Sciences (Switzerland), 2019, 9, 2.	2.5	28
39	An inkjet-printed passivation layer based on a photocrosslinkable polymer for long-term stable pentacene field-effect transistors. Organic Electronics, 2009, 10, 67-72.	2.6	27
40	The effect of surfactants on electrohydrodynamic jet printing and the performance of organic field-effect transistors. Physical Chemistry Chemical Physics, 2018, 20, 1210-1220.	2.8	27
41	Enhanced Stabilities and Production Yields of MAPbBr₃ Quantum Dots and Their Applications as Stretchable and Self-Healable Color Filters. ACS Applied Materials & Interfaces, 2021, 13, 4374-4384.	8.0	26
42	Directly drawn ZnO semiconductors and MWCNT/PSS electrodes via electrohydrodynamic jet printing for use in thin-film transistors: The ideal combination for reliable device performances. Organic Electronics, 2016, 39, 272-278.	2.6	25
43	Photopatternable ultrathin gate dielectrics for low-voltage-operating organic circuits. Applied Physics Letters, 2009, 95, .	3.3	24
44	Photoâ€Curable Polymer Blend Dielectrics for Advancing Organic Fieldâ€Effect Transistor Applications. Advanced Materials, 2010, 22, 4809-4813.	21.0	24
45	Self-organizing properties of triethylsilylethynyl-anthradithiophene on monolayer graphene electrodes in solution-processed transistors. Nanoscale, 2013, 5, 11094.	5.6	24
46	Fabrication of high-performance composite electrodes composed of multiwalled carbon nanotubes and glycerol-doped poly(3,4-ethylenedioxythiophene):polystyrene sulfonate for use in organic devices. Journal of Materials Chemistry C, 2015, 3, 7325-7335.	5.5	24
47	Photo-patternable high-k ZrOx dielectrics prepared using zirconium acrylate for low-voltage-operating organic complementary inverters. Organic Electronics, 2016, 33, 40-47.	2.6	23
48	Vacuum thermally evaporated polymeric zinc acrylate as an organic interlayer of organic/inorganic multilayer passivation for flexible organic thin-film transistors. Journal of Materials Chemistry, 2012, 22, 25395.	6.7	22
49	Sub-5 nm Graphene Oxide Nanofilm with Exceptionally High H⁺/V Selectivity for Vanadium Redox Flow Battery. ACS Applied Energy Materials, 2019, 2, 4590-4596.	5.1	22
50	Effective Way To Enhance the Electrode Performance of Multiwall Carbon Nanotube and Poly(3,4-ethylenedioxythiophene): Poly(styrene sulfonate) Composite Using HClâ€“Methanol Treatment. Journal of Physical Chemistry C, 2016, 120, 10919-10926.	3.1	21
51	Direct printing of soluble acene crystal stripes by a programmed dip-coating process for organic field-effect transistor applications. Journal of Materials Chemistry C, 2018, 6, 799-807.	5.5	21
52	Ionic-liquid doping of carbon nanotubes with [HMIM][BF4] for flexible thermoelectric generators. Chemical Engineering Journal, 2022, 438, 135526.	12.7	21
53	Improved n-type bottom-contact organic transistors by introducing a poly(3,4-ethylenedioxythiophene):poly(4-styrene sulfonate) coating on the source/drain electrodes. Applied Physics Letters, 2010, 97, 103304.	3.3	20
54	CsPbBr₃ Perovskite Quantum Dot Lightâ€Emitting Diodes Using Atomic Layer Deposited Al₂O₃ and ZnO Interlayers. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900573.	2.4	19

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55	Novel naphthalene-diimide-based small molecule with a bithiophene linker for use in organic field-effect transistors. Organic Electronics, 2018, 63, 250-256.	2.6	18
56	Polyphosphide Precursor for Low-Temperature Solution-Processed Fibrous Phosphorus Thin Films. Chemistry of Materials, 2019, 31, 5909-5918.	6.7	18
57	High-Performance Low-Voltage Organic Field-Effect Transistors Prepared on Electro-Polished Aluminum Wires. ACS Applied Materials & Interfaces, 2012, 4, 6-10.	8.0	17
58	Synthesis and characterization of a fluorinated oligosiloxane-containing encapsulation material for organic field-effect transistors, prepared via a non-hydrolytic solâ€“gel process. Organic Electronics, 2012, 13, 2786-2792.	2.6	16
59	The effects of organic material-treated SiO₂ dielectric surfaces on the electrical characteristics of inorganic amorphous In-Ga-Zn-O thin film transistors. Applied Physics Letters, 2012, 100, 102110.	3.3	16
60	New Forms of CdSe: Molecular Wires, Gels, and Ordered Mesoporous Assemblies. Journal of the American Chemical Society, 2017, 139, 3368-3377.	13.7	16
61	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
62	Enhanced gate-bias stress stability of organic field-effect transistors by introducing a fluorinated polymer in semiconductor/insulator ternary blends. Applied Surface Science, 2019, 481, 642-648.	6.1	15
63	Enhanced doping efficiency and thermoelectric performance of diketopyrrolopyrrole-based conjugated polymers with extended thiophene donors. Journal of Materials Chemistry C, 2021, 9, 340-347.	5.5	15
64	The role of oxygen in dramatically enhancing the electrical properties of solution-processed Znâ€“Snâ€“O thin-film transistors. Journal of Materials Chemistry C, 2017, 5, 6521-6526.	5.5	14
65	Bipolar Membranes to Promote Formation of Tight Iceâ€Like Water for Efficient and Sustainable Water Splitting. Small, 2020, 16, e2002641.	10.0	14
66	Reduced water vapor transmission rates of low-temperature-processed and sol-gel-derived titanium oxide thin films on flexible substrates. Organic Electronics, 2016, 36, 133-139.	2.6	12
67	Systematic optimization of MWCNT-PEDOT:PSS composite electrodes for organic transistors and dye-sensitized solar cells: Effects of MWCNT diameter and purity. Organic Electronics, 2018, 52, 7-16.	2.6	12
68	Acceptorâ€“acceptor-type conjugated polymer for use in n-type organic thin-film transistors and thermoelectric devices. Organic Electronics, 2020, 86, 105921.	2.6	12
69	Synthetic strategy for thienothiophene-benzotriazole-based polymers with high backbone planarity and solubility for field-effect transistor applications. Journal of Industrial and Engineering Chemistry, 2020, 86, 150-157.	5.8	12
70	Electrically stable polymer-only dielectrics for organic field-effect transistors with low gate leakage current. Organic Electronics, 2020, 85, 105828.	2.6	12
71	Enhanced gas barrier properties of graphene-TiO2 nanocomposites on plastic substrates assisted by UV photoreduction of graphene oxide. Organic Electronics, 2017, 48, 323-329.	2.6	11
72	Rational Design of Highly Soluble and Crystalline Conjugated Polymers for Highâ€Performance Fieldâ€Effect Transistors. Advanced Electronic Materials, 2022, 8, .	5.1	10

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73	Imidazolium Iodide-Doped PEDOT Nanofibers as Conductive Catalysts for Highly Efficient Solid-State Dye-Sensitized Solar Cells Employing Polymer Electrolyte. ACS Applied Materials & Interfaces, 2018, 10, 2537-2545.	8.0	9
74	Multi-walled carbon nanotube forests covered with atomic-layer-deposited ruthenium layers for high-performance counter electrodes of dye-sensitized solar cells. Organic Electronics, 2019, 65, 349-356.	2.6	9
75	Thiophene backbone-based polymers with electron-withdrawing pendant groups for application in organic thin-film transistors. New Journal of Chemistry, 2020, 44, 9321-9327.	2.8	9
76	Solution-Processed Fabrication of Light-Emitting Diodes Using CsPbBr₃ Perovskite Nanocrystals. ACS Applied Nano Materials, 2020, 3, 11801-11810.	5.0	8
77	Effect of selenophene in naphthalene-diimide-vinylene-based small molecules on n-type organic field-effect transistors. Organic Electronics, 2021, 89, 106032.	2.6	7
78	Interfacial Engineering at Quantum Dot-Sensitized TiO₂ Photoelectrodes for Ultrahigh Photocurrent Generation. ACS Applied Materials & Interfaces, 2021, 13, 6208-6218.	8.0	7
79	Doping and Thermoelectric Behaviors of Donor-Acceptor Polymers with Extended Planar Backbone. Macromolecular Research, 2021, 29, 887-894.	2.4	7
80	Lewis acidic water as a new carrier for facilitating CO₂ transport. Journal of Materials Chemistry A, 2019, 7, 5190-5194.	10.3	6
81	Solutionâ€state dopingâ€assisted molecular ordering and enhanced thermoelectric properties of an amorphous polymer. International Journal of Energy Research, 2021, 45, 21540-21551.	4.5	6
82	Spin Selfâ€Assembled Clay Nanocomposite Passivation Layers Made from a Photocrosslinkable Poly(vinyl) Tj ETQq0 0 0 rgBT /Overlock 1 Thinâ€Film Transistors. Chinese Journal of Chemistry, 2016, 34, 1103-1108.	4.9	4
83	Naphthalene-Diimide-Based Small Molecule Containing a Thienothiophene Linker for n-Type Organic Field-Effect Transistors. Macromolecular Research, 2022, 30, 470-476.	2.4	4
84	Facile method for the environmentally friendly fabrication of reduced graphene oxide films assisted by a metal substrate and saline solution. RSC Advances, 2013, 3, 14286.	3.6	3
85	CsPbBr₃ Perovskite Quantum Dot Lightâ€Emitting Diodes Using Atomic Layer Deposited Al₂O₃ and ZnO Interlayers. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2070012.	2.4	3
86	Reduced water vapor transmission rates of low-temperature solution-processed metal oxide barrier films via ultraviolet annealing. Applied Surface Science, 2017, 414, 262-269.	6.1	2
87	Nitroaromatic Compounds to Induce a Partial Positive Charge on the Silver Nanoparticle Surface for Facilitated Transport Membranes for Olefin/Paraffin Separation. Macromolecular Research, 2020, 28, 1026-1031.	2.4	1
88	Organic Fieldâ€Effect Transistors: The Origin of Excellent Gateâ€Bias Stress Stability in Organic Fieldâ€Effect Transistors Employing Fluorinatedâ€Polymer Gate Dielectrics (Adv. Mater. 42/2014). Advanced Materials, 2014, 26, 7280-7280.	21.0	0
89	Intrinsically microporous oligomers as organic porogens for mixed-matrix membranes. Korean Journal of Chemical Engineering, 2020, 37, 1050-1056.	2.7	0
90	Stretchable Thermoelectric Materials: Selfâ€Healable and Stretchable Organic Thermoelectric Materials: Electrically Percolated Polymer Nanowires Embedded in Thermoplastic Elastomer Matrix (Adv. Funct. Mater. 9/2020). Advanced Functional Materials, 2020, 30, 2070059.	14.9	0