

# Kang-Jun Baeg

## List of Publications by Year in descending order

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96  
papers

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81900

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56724

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docs citations

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times ranked

7511  
citing authors

#	ARTICLE	IF	CITATIONS
1	Organic Light Detectors: Photodiodes and Phototransistors. <i>Advanced Materials</i> , 2013, 25, 4267-4295.	21.0	1,088
2	Polymer and Organic Nonvolatile Memory Devices. <i>Chemistry of Materials</i> , 2011, 23, 341-358.	6.7	506
3	Toward Printed Integrated Circuits based on Unipolar or Ambipolar Polymer Semiconductors. <i>Advanced Materials</i> , 2013, 25, 4210-4244.	21.0	473
4	Organic Non-Volatile Memory Based on Pentacene Field-Effect Transistors Using a Polymeric Gate Electret. <i>Advanced Materials</i> , 2006, 18, 3179-3183.	21.0	294
5	Controllable Shifts in Threshold Voltage of Top-Gate Polymer Field-Effect Transistors for Applications in Organic Nano Floating Gate Memory. <i>Advanced Functional Materials</i> , 2010, 20, 224-230.	14.9	258
6	Polarity Effects of Polymer Gate Electrets on Non-Volatile Organic Field-Effect Transistor Memory. <i>Advanced Functional Materials</i> , 2008, 18, 3678-3685.	14.9	256
7	Bithiophene-Imide-Based Polymeric Semiconductors for Field-Effect Transistors: Synthesis, Structure-Property Correlations, Charge Carrier Polarity, and Device Stability. <i>Journal of the American Chemical Society</i> , 2011, 133, 1405-1418.	13.7	231
8	Combining Electron-Neutral Building Blocks with Intramolecular Conformational Locks Affords Stable, High-Mobility P- and N-Channel Polymer Semiconductors. <i>Journal of the American Chemical Society</i> , 2012, 134, 10966-10973.	13.7	220
9	Simple Bar-Coating Process for Large-Area, High-Performance Organic Field-Effect Transistors and Ambipolar Complementary Integrated Circuits. <i>Advanced Materials</i> , 2013, 25, 4302-4308.	21.0	210
10	Printed, Flexible, Organic Nano-Floating-Gate Memory: Effects of Metal Nanoparticles and Blocking Dielectrics on Memory Characteristics. <i>Advanced Functional Materials</i> , 2013, 23, 3503-3512.	14.9	200
11	High-Performance Top-Gated Organic Field-Effect Transistor Memory using Electrets for Monolithic Printed Flexible NAND Flash Memory. <i>Advanced Functional Materials</i> , 2012, 22, 2915-2926.	14.9	184
12	Remarkable Enhancement of Hole Transport in Top-Gated N-Type Polymer Field-Effect Transistors by a High- $\kappa$ Dielectric for Ambipolar Electronic Circuits. <i>Advanced Materials</i> , 2012, 24, 5433-5439.	21.0	176
13	Charge Injection Engineering of Ambipolar Field-Effect Transistors for High-Performance Organic Complementary Circuits. <i>ACS Applied Materials &amp; Interfaces</i> , 2011, 3, 3205-3214.	8.0	150
14	A New Poly(thienylenevinylene) Derivative with High Mobility and Oxidative Stability for Organic Thin-Film Transistors and Solar Cells. <i>Advanced Materials</i> , 2009, 21, 2808-2814.	21.0	118
15	Control of Ambipolar and Unipolar Transport in Organic Transistors by Selective Inkjet-Printed Chemical Doping for High Performance Complementary Circuits. <i>Advanced Functional Materials</i> , 2014, 24, 6252-6261.	14.9	116
16	High speeds complementary integrated circuits fabricated with all-printed polymeric semiconductors. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2011, 49, 62-67.	2.1	102
17	Materials Design via Optimized Intramolecular Noncovalent Interactions for High-Performance Organic Semiconductors. <i>Chemistry of Materials</i> , 2016, 28, 2449-2460.	6.7	99
18	Large Enhancement of Carrier Transport in Solution-Processed Field-Effect Transistors by Fluorinated Dielectric Engineering. <i>Advanced Materials</i> , 2016, 28, 518-526.	21.0	87

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19	Controlled aqueous synthesis of ultra-long copper nanowires for stretchable transparent conducting electrode. <i>Journal of Materials Chemistry C</i> , 2016, 4, 1441-1447.	5.5	78
20	Controlled Charge Transport by Polymer Blend Dielectrics in Top-Gate Organic Field-Effect Transistors for Low-Voltage-Operating Complementary Circuits. <i>ACS Applied Materials &amp; Interfaces</i> , 2012, 4, 6176-6184.	8.0	77
21	Highly Soluble Poly(thienylenevinylene) Derivatives with Charge-Carrier Mobility Exceeding 1 cm <sup>2</sup> V <sup>-1</sup> s <sup>-1</sup> . <i>Chemistry of Materials</i> , 2011, 23, 4663-4665.	6.7	72
22	Flexible Electronic Systems on Plastic Substrates and Textiles for Smart Wearable Technologies. <i>Advanced Materials Technologies</i> , 2020, 5, 2000071.	5.8	72
23	Effect of light irradiation on the characteristics of organic field-effect transistors. <i>Journal of Applied Physics</i> , 2006, 100, 094501.	2.5	65
24	Improved performance uniformity of inkjet printed n-channel organic field-effect transistors and complementary inverters. <i>Organic Electronics</i> , 2011, 12, 634-640.	2.6	65
25	Synthesis, Electronic Structure, and Charge Transport Characteristics of Naphthalenediimide-Based Co-polymers with Different Oligothiophene Donor Units. <i>Advanced Functional Materials</i> , 2014, 24, 1151-1162.	14.9	65
26	Stable charge storing in two-dimensional MoS <sub>2</sub> nanoflake floating gates for multilevel organic flash memory. <i>Nanoscale</i> , 2014, 6, 12315-12323.	5.6	64
27	Low-voltage, high speed inkjet-printed flexible complementary polymer electronic circuits. <i>Organic Electronics</i> , 2013, 14, 1407-1418.	2.6	63
28	Solution-Processed Nonvolatile Organic Transistor Memory Based on Semiconductor Blends. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 8327-8336.	8.0	62
29	High Performance and Stable N-Channel Organic Field-Effect Transistors by Patterned Solvent-Vapor Annealing. <i>ACS Applied Materials &amp; Interfaces</i> , 2013, 5, 10745-10752.	8.0	60
30	Optimal Ambipolar Charge Transport of Thienylenevinylene-Based Polymer Semiconductors by Changes in Conformation for High-Performance Organic Thin Film Transistors and Inverters. <i>Chemistry of Materials</i> , 2013, 25, 1572-1583.	6.7	55
31	Systematic Study of Widely Applicable N-Doping Strategy for High-Performance Solution-Processed Field-Effect Transistors. <i>Advanced Functional Materials</i> , 2016, 26, 7886-7894.	14.9	53
32	High mobility top-gated poly(3-hexylthiophene) field-effect transistors with high work-function Pt electrodes. <i>Thin Solid Films</i> , 2010, 518, 4024-4029.	1.8	51
33	Synergistic High Charge-Storage Capacity for Multi-level Flexible Organic Flash Memory. <i>Scientific Reports</i> , 2015, 5, 12299.	3.3	50
34	Improved transfer of chemical-vapor-deposited graphene through modification of intermolecular interactions and solubility of poly(methylmethacrylate) layers. <i>Carbon</i> , 2014, 66, 612-618.	10.3	49
35	Effect of rubbed polyimide layer on the field-effect mobility in pentacene thin-film transistors. <i>Applied Physics Letters</i> , 2008, 92, 052107.	3.3	47
36	Effects of gate dielectrics and their solvents on characteristics of solution-processed N-channel polymer field-effect transistors. <i>Journal of Materials Chemistry</i> , 2012, 22, 21138.	6.7	46

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37	Flexible organic phototransistors based on a combination of printing methods. <i>Organic Electronics</i> , 2014, 15, 2677-2684.	2.6	46
38	Organic nano-floating-gate transistor memory with metal nanoparticles. <i>Nano Convergence</i> , 2016, 3, 10.	12.1	46
39	Flexible Complementary Logic Gates Using Inkjet-Printed Polymer Field-Effect Transistors. <i>IEEE Electron Device Letters</i> , 2013, 34, 126-128.	3.9	44
40	Spray-printed organic field-effect transistors and complementary inverters. <i>Journal of Materials Chemistry C</i> , 2013, 1, 1500.	5.5	40
41	Organic Nano-Floating-Gate Memory with Polymer:[6,6]-Phenyl-C61Butyric Acid Methyl Ester Composite Films. <i>Japanese Journal of Applied Physics</i> , 2010, 49, 05EB01.	1.5	39
42	Synthesis and characterization of low-band-gap poly(thienylenevinylene) derivatives for polymer solar cells. <i>Journal of Materials Chemistry</i> , 2011, 21, 11822.	6.7	33
43	Efficient Charge Injection in p-Type Polymer Field-Effect Transistors with Low-Cost Molybdenum Electrodes through V2O5 Interlayer. <i>ACS Applied Materials &amp; Interfaces</i> , 2013, 5, 5804-5810.	8.0	33
44	A thermally resistant and air-stable n-type organic semiconductor: Naphthalene diimide of 3,5-bis-trifluoromethyl aniline. <i>Synthetic Metals</i> , 2009, 159, 2117-2121.	3.9	32
45	Low-voltage-operated top-gate polymer thin-film transistors with high-capacitance P(VDF-TrFE)/PVDF-blended dielectrics. <i>Current Applied Physics</i> , 2011, 11, S213-S218.	2.4	32
46	Electron injection enhancement by a Cs-salt interlayer in ambipolar organic field-effect transistors and complementary circuits. <i>Journal of Materials Chemistry</i> , 2012, 22, 16979.	6.7	32
47	Charge-Trap Flash-Memory Oxide Transistors Enabled by Copper-Zirconia Composites. <i>Advanced Materials</i> , 2014, 26, 7170-7177.	21.0	32
48	Gradual Controlling the Work Function of Metal Electrodes by Solution-Processed Mixed Interlayers for Ambipolar Polymer Field-Effect Transistors and Circuits. <i>Advanced Functional Materials</i> , 2014, 24, 6484-6491.	14.9	32
49	Highly stable printed polymer field-effect transistors and inverters via polyselenophene conjugated polymers. <i>Journal of Materials Chemistry</i> , 2012, 22, 12774.	6.7	31
50	Effects of Copper Oxide/Gold Electrode as the Source-Drain Electrodes in Organic Thin-Film Transistors. <i>Electrochemical and Solid-State Letters</i> , 2007, 10, H340.	2.2	30
51	Low-voltage-operated top-gate polymer thin-film transistors with high capacitance poly(vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlook 108, .	2.5	30
52	Polymer Dielectrics and Orthogonal Solvent Effects for High-Performance Inkjet-Printed Top-Gated P-Channel Polymer Field-Effect Transistors. <i>ETRI Journal</i> , 2011, 33, 887-896.	2.0	29
53	Facile fabrication of solution-processed solid-electrolytes for high-energy-density all-solid-state-batteries by enhanced interfacial contact. <i>Scientific Reports</i> , 2020, 10, 11923.	3.3	29
54	Flexible high-energy-density lithium-sulfur batteries using nanocarbon-embedded fibrous sulfur cathodes and membrane separators. <i>NPG Asia Materials</i> , 2021, 13, .	7.9	28

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55	Multimodal Capturing of Polysulfides by Phosphorus-Doped Carbon Composites for Flexible High-Energy-Density Lithium-Sulfur Batteries. <i>Small</i> , 2022, 18, e2200326.	10.0	28
56	Regulating Charge Injection in Ambipolar Organic Field-Effect Transistors by Mixed Self-Assembled Monolayers. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 14493-14499.	8.0	27
57	Tuning non-volatile memory characteristics via molecular doping of polymer semiconductors based on ambipolar organic field-effect transistors. <i>Organic Electronics</i> , 2018, 58, 12-17.	2.6	25
58	Simultaneous enhancement of charge density and molecular stacking order of polymer semiconductors by viologen dopants for high performance organic field-effect transistors. <i>Journal of Materials Chemistry C</i> , 2018, 6, 5497-5505.	5.5	23
59	Charge transfer and trapping properties in polymer gate dielectrics for non-volatile organic field-effect transistor memory applications. <i>Solid-State Electronics</i> , 2009, 53, 1165-1168.	1.4	22
60	Templated assembly of metal nanoparticles in nanoimprinted patterns for metal nanowire fabrication. <i>Nanotechnology</i> , 2009, 20, 355302.	2.6	21
61	Rearrangement of 1D Conducting Nanomaterials towards Highly Electrically Conducting Nanocomposite Fibres for Electronic Textiles. <i>Scientific Reports</i> , 2015, 5, 9300.	3.3	20
62	Monolithic Graphene Trees as Anode Material for Lithium Ion Batteries with High Rates. <i>Small</i> , 2015, 11, 2774-2781.	10.0	19
63	Versatile Solution-Processed Organic-Inorganic Hybrid Superlattices for Ultraflexible and Transparent High-Performance Optoelectronic Devices. <i>Advanced Functional Materials</i> , 2021, 31, 2103285.	14.9	19
64	Perfluorocyclobutane containing polymeric gate dielectric for organic thin film transistors with high on/off ratio. <i>Applied Physics Letters</i> , 2006, 89, 202516.	3.3	18
65	Simultaneous Enhancement of Electron Injection and Air Stability in N-Type Organic Field-Effect Transistors by Water-Soluble Polyfluorene Interlayers. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 8108-8114.	8.0	18
66	Favorable Molecular Orientation Enhancement in Semiconducting Polymer Assisted by Conjugated Organic Small Molecules. <i>Advanced Functional Materials</i> , 2016, 26, 8527-8536.	14.9	18
67	Polymeric N Heterointerface for Solution-Processed Integrated Organic Optoelectronic Systems. <i>Advanced Optical Materials</i> , 2017, 5, 1700655.	7.3	16
68	All-Printed Paper-Based Micro-supercapacitors Using Water-Based Additive-Free Oxidized Single-Walled Carbon Nanotube Pastes. <i>ACS Applied Energy Materials</i> , 2021, 4, 13666-13675.	5.1	16
69	One-Step Transfer and Integration of Multifunctionality in CVD Graphene by TiO <sub>2</sub> /Graphene Oxide Hybrid Layer. <i>Small</i> , 2014, 10, 2057-2066.	10.0	15
70	A Novel Strategy to Overcome the Hurdle for Commercial All-Solid-State Batteries via Low-Cost Synthesis of Sulfide Solid Electrolytes. <i>Small Methods</i> , 2021, 5, e2100793.	8.6	14
71	Synthesis and Characterization of Poly(Dithieno[3,2-b:2',3'-d]pyrrole) Derivatives Containing Thiophene Moieties and Their Application to Organic Devices. <i>Macromolecular Chemistry and Physics</i> , 2011, 212, 2308-2318.	2.2	12
72	Top-gate staggered poly(3,3'-dialkyl-quarterthiophene) organic thin-film transistors with reverse-offset-printed silver source/drain electrodes. <i>Applied Physics Letters</i> , 2012, 101, 133306.	3.3	12

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73	Inkjet-Printing-Based Soft-Etching Technique for High-Speed Polymer Ambipolar Integrated Circuits. ACS Applied Materials & Interfaces, 2013, 5, 12579-12586.	8.0	12
74	Optimized Activation of Solution-Processed Amorphous Oxide Semiconductors for Flexible Transparent Conductive Electrodes. Advanced Electronic Materials, 2018, 4, 1700386.	5.1	12
75	Low-voltage-operating complementary-like circuits using ambipolar organic-inorganic hybrid thin-film transistors with solid-state-electrolyte gate insulator. Organic Electronics, 2019, 75, 105358.	2.6	12
76	Nonvolatile Ferroelectric P(VDF-TrFE) Memory Transistors Based on Inkjet-Printed Organic Semiconductor. ETRI Journal, 2013, 35, 734-737.	2.0	11
77	Chemically doped three-dimensional porous graphene monoliths for high-performance flexible field emitters. Nanoscale, 2015, 7, 5495-5502.	5.6	11
78	Controlled ambipolar charge transport of polymer semiconductors by viologen-doping for complementary-like electronic circuits. Organic Electronics, 2018, 59, 224-229.	2.6	11
79	Multi-layered nanocomposite dielectrics for high density organic memory devices. Applied Physics Letters, 2015, 106, .	3.3	9
80	Solution-processed flexible nonvolatile organic field-effect transistor memory using polymer electret. Organic Electronics, 2021, 99, 106331.	2.6	9
81	Ultrafast Heating for Intrinsic Properties of Atomically Thin Two-Dimensional Materials on Plastic Substrates. ACS Applied Materials & Interfaces, 2016, 8, 31222-31230.	8.0	7
82	Enhanced ambipolar charge transport in staggered carbon nanotube field-effect transistors for printed complementary-like circuits. Current Applied Physics, 2017, 17, 541-547.	2.4	7
83	Effect of Curing Temperature on Nano-Silver Paste Ink for Organic Thin-Film Transistors. Journal of Nanoscience and Nanotechnology, 2012, 12, 3272-3275.	0.9	4
84	Effect of gate electrode conductivity on operation frequency of inkjet-printed complementary polymer ring oscillators. Thin Solid Films, 2013, 546, 141-146.	1.8	4
85	Synthesis of Poly(p-phenylene-vinylene) Derivatives Containing an Oxadiazole Pendant Group and Their Applications to Organic Electronic Devices. Journal of Nanoscience and Nanotechnology, 2013, 13, 3321-3330.	0.9	4
86	Organic Electronics: Printed, Flexible, Organic Nano-Floating-Gate Memory: Effects of Metal Nanoparticles and Blocking Dielectrics on Memory Characteristics (Adv. Funct. Mater. 28/2013). Advanced Functional Materials, 2013, 23, 3482-3482.	14.9	4
87	Minimizing Temperature Gradient in Photonic Sintering for Defect-Free High-Conductivity Cu-Based Printed Patterns by Bidirectional Irradiation. Advanced Materials Interfaces, 2021, 8, 2100769.	3.7	4
88	High Throughput Bar-Coating Processed Organic-Inorganic Hybrid Multi-Layers for Gas Barrier Thin-Films. Journal of Nanoscience and Nanotechnology, 2019, 19, 4299-4304.	0.9	3
89	Reduction Treatment of Molecular-Doped Polymer Semiconductors for High-Performance N-Channel Organic Field-Effect Transistors. Journal of the Korean Physical Society, 2019, 75, 821-826.	0.7	3
90	Versatile Solution-Processed Reductive Interface Layer for Contact Engineering of Staggered Organic Field-Effect Transistors. ACS Applied Materials & Interfaces, 2022, 14, 13560-13571.	8.0	3

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91	Air-stable ambipolarity of nanofibril polymer semiconductors in staggered organic field-effect transistors. <i>Journal of the Korean Physical Society</i> , 2021, 79, 468-476.	0.7	2
92	Mass Production of Polyfluorene Nanowires Using a Melt-Assisted Wetting Method. <i>Journal of Nanoscience and Nanotechnology</i> , 2012, 12, 1260-1264.	0.9	1
93	Organic Complementary Circuits: Remarkable Enhancement of Hole Transport in Top-Gated N-Type Polymer Field-Effect Transistors by a High-k Dielectric for Ambipolar Electronic Circuits ( <i>Adv. Mater.</i> ) Tj ETQq1 1 0.784014 rgBT /Overlaid	0.7	1
94	Diels-Alder Crosslinked Block-Copolymer Gate Dielectrics for Low Voltage Operated Top-Gate Organic Field-Effect Transistors. <i>Molecular Crystals and Liquid Crystals</i> , 2014, 598, 69-77.	0.9	1
95	Facile Preparation of Polyacrylic Acid-Bentonite Nanocomposite Inks for Gas Barrier Thin-Films with Ultrasonic Treatment. <i>Journal of the Korean Physical Society</i> , 2018, 73, 973-977.	0.7	1
96	A Novel Strategy to Overcome the Hurdle for Commercial All-Solid-State Batteries via Low-Cost Synthesis of Sulfide Solid Electrolytes ( <i>Small Methods</i> 11/2021). <i>Small Methods</i> , 2021, 5, 2170058.	8.6	1