Boseok Kang

List of Publications by Year
in descending order

90 papers	3,270 citations	136940 32 h-index	155644 55 g-index
91 all docs	91 docs citations	91 times ranked	4675 citing authors

#	Article	IF	Citations
1	Recent Advances in Organic Transistor Printing Processes. ACS Applied Materials & Interfaces, 2013, 5, 2302-2315.	8.0	331
2	Side-Chain-Induced Rigid Backbone Organization of Polymer Semiconductors through Semifluoroalkyl Side Chains. Journal of the American Chemical Society, 2016, 138, 3679-3686.	13.7	229
3	Stretchable and Transparent Organic Semiconducting Thin Film with Conjugated Polymer Nanowires Embedded in an Elastomeric Matrix. Advanced Electronic Materials, 2016, 2, 1500250.	5.1	154
4	Enhancing 2D growth of organic semiconductor thin films with macroporous structures via a small-molecule heterointerface. Nature Communications, 2014, 5, 4752.	12.8	138
5	Synthetic Tailoring of Solid-State Order in Diketopyrrolopyrrole-Based Copolymers via Intramolecular Noncovalent Interactions. Chemistry of Materials, 2015, 27, 829-838.	6.7	125
6	Understanding Solidification of Polythiophene Thin Films during Spin-Coating: Effects of Spin-Coating Time and Processing Additives. Scientific Reports, 2015, 5, 13288.	3.3	111
7	Workâ€Functionâ€Tuned Reduced Graphene Oxide via Direct Surface Functionalization as Source/Drain Electrodes in Bottomâ€Contact Organic Transistors. Advanced Materials, 2013, 25, 5856-5862.	21.0	102
8	Inkjet-Printed Reduced Graphene Oxide/Poly(Vinyl Alcohol) Composite Electrodes for Flexible Transparent Organic Field-Effect Transistors. Journal of Physical Chemistry C, 2012, 116, 7520-7525.	3.1	95
9	A Pseudoâ€Regular Alternating Conjugated Copolymer Using an Asymmetric Monomer: A Highâ€Mobility Organic Transistor in Nonchlorinated Solvents. Advanced Materials, 2015, 27, 3626-3631.	21.0	84
10	Effective Use of Electrically Insulating Units in Organic Semiconductor Thin Films for Highâ€Performance Organic Transistors. Advanced Electronic Materials, 2017, 3, 1600240.	5.1	80
11	Boosting Photon Harvesting in Organic Solar Cells with Highly Oriented Molecular Crystals via Grapheneâ€“Organic Heterointerface. ACS Nano, 2015, 9, 8206-8219.	14.6	77
12	A bis(2-oxoindolin-3-ylidene)-benzodifuran-dione containing copolymer for high-mobility ambipolar transistors. Chemical Communications, 2014, 50, 3180.	4.1	72
13	Sideâ€Chain Engineering for Fineâ€Tuning of Energy Levels and Nanoscale Morphology in Polymer Solar Cells. Advanced Energy Materials, 2014, 4, 1400087.	19.5	67
14	Clean Transfer of Wafer-Scale Graphene via Liquid Phase Removal of Polycyclic Aromatic Hydrocarbons. ACS Nano, 2015, 9, 4726-4733.	14.6	61
15	Self-stratified semiconductor/dielectric polymer blends: vertical phase separation for facile fabrication of organic transistors. Journal of Materials Chemistry C, 2013, 1, 3989.	5.5	59
16	Recent Advances in the Bias Stress Stability of Organic Transistors. Advanced Functional Materials, 2020, 30, 1904590.	14.9	59
17	Transparent and Colorless Polyimides Containing Multiple Trifluoromethyl Groups as Gate Insulators for Flexible Organic Transistors with Superior Electrical Stability. ACS Applied Materials & Interfaces, 2020, 12, 18739-18747.	8.0	58
18	Selfâ€Organization of Inkjetâ€Printed Organic Semiconductor Films Prepared in Inkjetâ€Etched Microwells. Advanced Functional Materials, 2013, 23, 5224-5231.	14.9	55

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19	Atomically Thin Epitaxial Template for Organic Crystal Growth Using Graphene with Controlled Surface Wettability. Nano Letters, 2015, 15, 2474-2484.	9.1	55
20	Substrate-Induced Solvent Intercalation for Stable Graphene Doping. ACS Nano, 2013, 7, 1155-1162.	14.6	54
21	Design, Synthesis, and Versatile Processing of Indolo[3,2â€b]indoleâ€Based Ï€â€Conjugated Molecules for Highâ€Performance Organic Fieldâ€Effect Transistors. Advanced Functional Materials, 2016, 26, 2966-2973.	14.9	54
22	New Donorâ€“Donor Type Copolymers with Rigid and Coplanar Structures for High-Mobility Organic Field-Effect Transistors. Chemistry of Materials, 2014, 26, 6907-6910.	6.7	49
23	Polyelectrolyte Interlayer for Ultra-Sensitive Organic Transistor Humidity Sensors. ACS Applied Materials & Interfaces, 2013, 5, 8591-8596.	8.0	48
24	Oligo(ethylene glycol)-incorporated hybrid linear alkyl side chains for n-channel polymer semiconductors and their effect on the thin-film crystalline structure. Chemical Communications, 2015, 51, 1524-1527.	4.1	46
25	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
26	Tailoring Morphology and Structure of Inkjetâ€Printed Liquidâ€Crystalline Semiconductor/Insulating Polymer Blends for Highâ€Stability Organic Transistors. Advanced Functional Materials, 2016, 26, 3003-3011.	14.9	43
27	Precise Side-Chain Engineering of Thienylenevinyleneâ€“Benzotriazole-Based Conjugated Polymers with Coplanar Backbone for Organic Field Effect Transistors and CMOS-like Inverters. ACS Applied Materials & Interfaces, 2017, 9, 2758-2766.	8.0	39
28	Anisotropy of Charge Transport in a Uniaxially Aligned Fused Electronâ€Deficient Polymer Processed by Solution Shear Coating. Advanced Materials, 2020, 32, e2000063.	21.0	38
29	Graphene oxide as a multi-functional p-dopant of transparent single-walled carbon nanotube films for optoelectronic devices. Nanoscale, 2012, 4, 7735.	5.6	37
30	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
31	Fused Heptacyclic-Based Acceptorâ€“Donorâ€“Acceptor Small Molecules: N-Substitution toward High-Performance Solution-Processable Field-Effect Transistors. Chemistry of Materials, 2019, 31, 2027-2035.	6.7	33
32	Control of Concentration of Nonhydrogen-Bonded Hydroxyl Groups in Polymer Dielectrics for Organic Field-Effect Transistors with Operational Stability. ACS Applied Materials & Interfaces, 2018, 10, 24055-24063.	8.0	32
33	Surface-Mediated Solidification of a Semiconducting Polymer during Time-Controlled Spin-Coating. ACS Applied Materials & Interfaces, 2017, 9, 9871-9879.	8.0	30
34	Organic thin-film transistors with a photo-patternable semiconducting polymer blend. Journal of Materials Chemistry, 2011, 21, 15637.	6.7	29
35	Relationship between the dipole moment of self-assembled monolayers incorporated in graphene transistors and device electrical stabilities. RSC Advances, 2017, 7, 27100-27104.	3.6	28
36	Grain Boundary Induced Bias Instability in Soluble Acene-Based Thin-Film Transistors. Scientific Reports, 2016, 6, 33224.	3.3	27

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37	Solutalâ€Marangoniâ€Flowâ€Mediated Growth of Patterned Highly Crystalline Organic Semiconductor Thin Film Via Gapâ€Controlled Bar Coating. Advanced Functional Materials, 2021, 31, 2100196.	14.9	27
38	Inverse Transfer Method Using Polymers with Various Functional Groups for Controllable Graphene Doping. ACS Nano, 2014, 8, 7968-7975.	14.6	26
39	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
40	High Performance of Low Band Gap Polymer-Based Ambipolar Transistor Using Single-Layer Graphene Electrodes. ACS Applied Materials & Interfaces, 2015, 7, 6002-6012.	8.0	26
41	Nanopatched Graphene with Molecular Selfâ€Assembly Toward Grapheneâ€“Organic Hybrid Soft Electronics. Advanced Materials, 2018, 30, e1706480.	21.0	26
42	Stretchable Polymer Gate Dielectric with Segmented Elastomeric Network for Organic Soft Electronics. Chemistry of Materials, 2018, 30, 6353-6360.	6.7	23
43	Motion-Programmed Bar-Coating Method with Controlled Gap for High-Speed Scalable Preparation of Highly Crystalline Organic Semiconductor Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 47153-47161.	8.0	22
44	Aqueous-Alcohol-Processable High-Mobility Semiconducting Copolymers with Engineered Oligo(ethylene glycol) Side Chains. Chemistry of Materials, 2020, 32, 1111-1119.	6.7	22
45	Sequential solvent casting for improving the structural ordering and electrical characteristics of polythiophene thin films. RSC Advances, 2014, 4, 41159-41163.	3.6	21
46	Impact of side-chain fluorination on photovoltaic properties: fine tuning of the microstructure and energy levels of 2D-conjugated copolymers. Journal of Materials Chemistry A, 2017, 5, 16702-16711.	10.3	20
47	Post-deposition dipping method for improving the electronic properties of a narrow bandgap conjugated polymer. Journal of Materials Chemistry, 2012, 22, 11462.	6.7	19
48	Influence of Molecular Weight on the Solidification of a Semiconducting Polymer during Time-Controlled Spin-Coating. Journal of Physical Chemistry C, 2019, 123, 17102-17111.	3.1	19
49	Microstructural Control over Soluble Pentacene Deposited by Capillary Pen Printing for Organic Electronics. ACS Applied Materials & Interfaces, 2013, 5, 7838-7844.	8.0	17
50	Graphene growth under Knudsen molecular flow on a confined catalytic metal coil. Nanoscale, 2015, 7, 1314-1324.	5.6	17
51	pn-Heterojunction Effects of Perylene Tetracarboxylic Diimide Derivatives on Pentacene Field-Effect Transistor. ACS Applied Materials & Interfaces, 2015, 7, 2025-2031.	8.0	17
52	Dicyanovinyl-substituted indolo[3,2-b]indole derivatives: low-band-gap Ï€-conjugated molecules for a single-component ambipolar organic field-effect transistor. Journal of Materials Chemistry C, 2016, 4, 9460-9468.	5.5	16
53	Molecular Orientationâ€Dependent Bias Stress Stability in Bottomâ€Gate Organic Transistors Based on an nâ€Type Semiconducting Polymer. Advanced Electronic Materials, 2016, 2, 1500380.	5.1	16
54	Universal Route to Impart Orthogonality to Polymer Semiconductors for Subâ€Micrometer Tandem Electronics. Advanced Materials, 2019, 31, e1901400.	21.0	16

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55	Charge Trapping in a Low-Crystalline High-Mobility Conjugated Polymer and Its Effects on the Operational Stability of Organic Field-Effect Transistors. ACS Applied Materials & Interfaces, 2021, 13, 16722-16731.	8.0	16
56	Consideration of Azobenzene-Based Self-Assembled Monolayer Deposition Conditions for Maximizing Optoelectronic Switching Performances. Chemistry of Materials, 2021, 33, 5991-6002.	6.7	16
57	Low-Band-Gap Polymer-Based Ambipolar Transistors and Inverters Fabricated Using a Flow-Coating Method. Journal of Physical Chemistry C, 2016, 120, 13865-13872.	3.1	15
58	Critical role of silk fibroin secondary structure on the dielectric performances of organic thin-film transistors. RSC Advances, 2016, 6, 5907-5914.	3.6	14
59	Effects of varying the lengths of the donor units in Ï€-extended thienothiophene isoindigo-based polymer semiconductors. Journal of Materials Chemistry C, 2018, 6, 9972-9980.	5.5	13
60	Singlet Exciton Delocalization in Gold Nanoparticle-Tethered Poly(3-hexylthiophene) Nanofibers with Enhanced Intrachain Ordering. Macromolecules, 2017, 50, 8487-8496.	4.8	12
61	Electric-Field-Tunable Growth of Organic Semiconductor Crystals on Graphene. Nano Letters, 2019, 19, 1758-1766.	9.1	12
62	Heatâ€Assisted Photoacidic Oxidation Method for Tailoring the Surface Chemistry of Polymer Dielectrics for Lowâ€Power Organic Soft Electronics. Advanced Functional Materials, 2019, 29, 1806030.	14.9	12
63	Formation of Large Crystalline Domains in a Semiconducting Polymer with Semi-fluorinated Alkyl Side Chains and Application to High-Performance Thin-Film Transistors. ACS Applied Materials & Interfaces, 2020, 12, 49886-49894.	8.0	12
64	Improved charge transport in fused-ring bridged hemi-isoindigo-based small molecules by incorporating a thiophene unit for solution-processed organic field-effect transistors. Journal of Materials Chemistry C, 2020, 8, 1398-1404.	5.5	11
65	Atomically-thin molecular layers for electrode modification of organic transistors. Nanoscale, 2015, 7, 14100-14108.	5.6	9
66	Metalâ€“Organic Framework as a Functional Analyte Channel of Organic-Transistor-Based Air Pollution Sensors. ACS Applied Materials & Interfaces, 2021, 13, 24005-24012.	8.0	9
67	Organic small-molecule heterointerface for use in transistor-type non-volatile memory. Organic Electronics, 2021, 93, 106107.	2.6	9
68	Cyanothiophene-based low band-gap polymer for organic solar cells. RSC Advances, 2013, 3, 6799.	3.6	7
69	Built-in water resistance in organic transistors modified with self-assembled monolayers. RSC Advances, 2014, 4, 45082-45087.	3.6	7
70	Bistable Solidâ€State Fluorescence Switching in Photoluminescent, Infinite Coordination Polymers. Chemistry - A European Journal, 2017, 23, 10017-10022.	3.3	6
71	Wafer-scale and patternable synthesis of NbS₂ for electrodes of organic transistors and logic gates. Journal of Materials Chemistry C, 2019, 7, 8599-8606.	5.5	6
72	Ï€â€Extended Thiazoleâ€Containing Polymer Semiconductor for Balanced Chargeâ€“Carrier Mobilities. Macromolecular Rapid Communications, 2021, 42, 2000741.	3.9	5

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73	Unidirectional Macroscopic Alignment of Chlorobenzo[c]â€[1,2,5]thiadiazoleâ€Based Semiconducting Copolymers with Controlled Regiochemistry. Advanced Electronic Materials, 2021, 7, 2100551.	5.1	4
74	Organic-Transistor-Based NO₂ Sensor Fabricated with Surface-Modified Faujasite-Type Zeolite as an Efficient Nanochannel for Gas Analytes. ACS Applied Electronic Materials, 2022, 4, 3686-3693.	4.3	4
75	Organic Semiconductors: Solutalâ€Marangoniâ€Flowâ€Mediated Growth of Patterned Highly Crystalline Organic Semiconductor Thin Film Via Gapâ€Controlled Bar Coating (Adv. Funct. Mater. 28/2021). Advanced Functional Materials, 2021, 31, 2170200.	14.9	3
76	Novel Dithienopyrroleâ€Based Conjugated Copolymers: Importance of Backbone Planarity in Achieving High Electrical Conductivity and Thermoelectric Performance. Macromolecular Rapid Communications, 2022, 43, .	3.9	3
77	Polymer Solar Cells: Side-Chain Engineering for Fine-Tuning of Energy Levels and Nanoscale Morphology in Polymer Solar Cells (Adv. Energy Mater. 10/2014). Advanced Energy Materials, 2014, 4, n/a-n/a.	19.5	2
78	65.2: Invited Paper: Biasâ€Stressâ€Induced Charge Trapping in Flexible Polymer Gate Dielectrics in Organic TFTs. Digest of Technical Papers SID International Symposium, 2015, 46, 966-968.	0.3	2
79	Stretchable electronics: Stretchable and Transparent Organic Semiconducting Thin Film with Conjugated Polymer Nanowires Embedded in an Elastomeric Matrix (Adv. Electron. Mater. 1/2016). Advanced Electronic Materials, 2016, 2, .	5.1	2
80	Controllable Bipolar Doping of Graphene with 2D Molecular Dopants. Small, 2018, 14, e1703697.	10.0	2
81	Organic Soft Electronics: Heatâ€Assisted Photoacidic Oxidation Method for Tailoring the Surface Chemistry of Polymer Dielectrics for Lowâ€Power Organic Soft Electronics (Adv. Funct. Mater. 11/2019). Advanced Functional Materials, 2019, 29, 1970071.	14.9	2
82	Vacuum Lamination of Polymer Gate Dielectric Layers for Facile Fabrication of Organic Transistors. ACS Applied Electronic Materials, 2022, 4, 3640-3647.	4.3	2
83	Extrapolation method for reliable measurement of Seebeck coefficient of organic thin films. Organic Electronics, 2022, 108, 106582.	2.6	1
84	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
85	Organic Transistors: A Pseudoâ€Regular Alternating Conjugated Copolymer Using an Asymmetric Monomer: A Highâ€Mobility Organic Transistor in Nonchlorinated Solvents (Adv. Mater. 24/2015). Advanced Materials, 2015, 27, 3707-3707.	21.0	0
86	Liquid-Crystalline Semiconductors: Tailoring Morphology and Structure of Inkjet-Printed Liquid-Crystalline Semiconductor/Insulating Polymer Blends for High-Stability Organic Transistors (Adv. Funct. Mater. 18/2016). Advanced Functional Materials, 2016, 26, 3180-3180.	14.9	0
87	Organic Transistors: Molecular Orientation-Dependent Bias Stress Stability in Bottom-Gate Organic Transistors Based on ann-Type Semiconducting Polymer (Adv. Electron. Mater. 3/2016). Advanced Electronic Materials, 2016, 2, .	5.1	0
88	Organic Electronics: Universal Route to Impart Orthogonality to Polymer Semiconductors for Subâ€Micrometer Tandem Electronics (Adv. Mater. 28/2019). Advanced Materials, 2019, 31, 1970204.	21.0	0
89	Structural influence of a dichalcogenopheno-1,3,4-chalcogenodiazole comonomer on the optoelectronic properties of diketopyrrolopyrrole-based conjugated polymers. Polymer Chemistry, 2021, 12, 1758-1767.	3.9	0
90	Solution-Processable Semiconducting Conjugated Planar Network. ACS Applied Materials & Interfaces, 2022, 14, 14588-14595.	8.0	0