Boseok Kang

List of Publications by Citations

85 papers	2,624 citations	28 h-index	49 g-index
91 ext. papers	2,957 ext. citations	10.5 avg, IF	5.23 L-index

#	Paper	IF	Citations
85	Recent advances in organic transistor printing processes. *ACS Applied Materials & Interfaces*, **2013**, 5, 2302-15	9.5	278
84	Side-Chain-Induced Rigid Backbone Organization of Polymer Semiconductors through Semifluoroalkyl Side Chains. *Journal of the American Chemical Society*, **2016**, 138, 3679-86	16.4	202
83	Stretchable and Transparent Organic Semiconducting Thin Film with Conjugated Polymer Nanowires Embedded in an Elastomeric Matrix. *Advanced Electronic Materials*, **2016**, 2, 1500250	6.4	121
82	Enhancing 2D growth of organic semiconductor thin films with macroporous structures via a small-molecule heterointerface. *Nature Communications*, **2014**, 5, 4752	17.4	110
81	Synthetic Tailoring of Solid-State Order in Diketopyrrolopyrrole-Based Copolymers via Intramolecular Noncovalent Interactions. *Chemistry of Materials*, **2015**, 27, 829-838	9.6	107
80	Understanding Solidification of Polythiophene Thin Films during Spin-Coating: Effects of Spin-Coating Time and Processing Additives. *Scientific Reports*, **2015**, 5, 13288	4.9	91
79	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	3.8	85
78	Work-function-tuned reduced graphene oxide via direct surface functionalization as source/drain electrodes in bottom-contact organic transistors. *Advanced Materials*, **2013**, 25, 5856-62	24	82
77	A Pseudo-Regular Alternating Conjugated Copolymer Using an Asymmetric Monomer: A High-Mobility Organic Transistor in Nonchlorinated Solvents. *Advanced Materials*, **2015**, 27, 3626-31	24	75
76	A bis(2-oxoindolin-3-ylidene)-benzodifuran-dione containing copolymer for high-mobility ambipolar transistors. *Chemical Communications*, **2014**, 50, 3180-3	5.8	68
75	Effective Use of Electrically Insulating Units in Organic Semiconductor Thin Films for High-Performance Organic Transistors. *Advanced Electronic Materials*, **2017**, 3, 1600240	6.4	66
74	Side-Chain Engineering for Fine-Tuning of Energy Levels and Nanoscale Morphology in Polymer Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1400087	21.8	65
73	Boosting Photon Harvesting in Organic Solar Cells with Highly Oriented Molecular Crystals via Graphene-Organic Heterointerface. *ACS Nano*, **2015**, 9, 8206-19	16.7	64
72	Clean Transfer of Wafer-Scale Graphene via Liquid Phase Removal of Polycyclic Aromatic Hydrocarbons. *ACS Nano*, **2015**, 9, 4726-33	16.7	54
71	Self-stratified semiconductor/dielectric polymer blends: vertical phase separation for facile fabrication of organic transistors. *Journal of Materials Chemistry C*, **2013**, 1, 3989	7.1	53
70	Self-Organization of Inkjet-Printed Organic Semiconductor Films Prepared in Inkjet-Etched Microwells. *Advanced Functional Materials*, **2013**, 23, 5224-5231	15.6	47
69	Atomically thin epitaxial template for organic crystal growth using graphene with controlled surface wettability. *Nano Letters*, **2015**, 15, 2474-84	11.5	46

68	Substrate-induced solvent intercalation for stable graphene doping. *ACS Nano*, **2013**, 7, 1155-62	16.7	46
67	New Donor□Donor Type Copolymers with Rigid and Coplanar Structures for High-Mobility Organic Field-Effect Transistors. *Chemistry of Materials*, **2014**, 26, 6907-6910	9.6	44
66	Design, Synthesis, and Versatile Processing of Indolo[3,2-b]indole-Based □Conjugated Molecules for High-Performance Organic Field-Effect Transistors. *Advanced Functional Materials*, **2016**, 26, 2966-2973	15.6	41
65	Directly drawn organic transistors by capillary pen: a new facile patterning method using capillary action for soluble organic materials. *Advanced Materials*, **2013**, 25, 4117-22	24	40
64	Polyelectrolyte interlayer for ultra-sensitive organic transistor humidity sensors. *ACS Applied Materials & Interfaces*, **2013**, 5, 8591-6	9.5	39
63	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, 1524-7	5.8	37
62	Precise Side-Chain Engineering of Thienylenevinylene-Benzotriazole-Based Conjugated Polymers with Coplanar Backbone for Organic Field Effect Transistors and CMOS-like Inverters. *ACS Applied Materials & Interfaces*, **2017**, 9, 2758-2766	9.5	34
61	Tailoring Morphology and Structure of Inkjet-Printed Liquid-Crystalline Semiconductor/Insulating Polymer Blends for High-Stability Organic Transistors. *Advanced Functional Materials*, **2016**, 26, 3003-3011	15.6	34
60	Graphene oxide as a multi-functional p-dopant of transparent single-walled carbon nanotube films for optoelectronic devices. *Nanoscale*, **2012**, 4, 7735-42	7.7	34
59	Recent Advances in the Bias Stress Stability of Organic Transistors. *Advanced Functional Materials*, **2020**, 30, 1904590	15.6	32
58	Surface-Order Mediated Assembly of □Conjugated Molecules on Self-Assembled Monolayers with Controlled Grain Structures. *Chemistry of Materials*, **2015**, 27, 4669-4676	9.6	28
57	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	9.5	27
56	Organic thin-film transistors with a photo-patternable semiconducting polymer blend. *Journal of Materials Chemistry*, **2011**, 21, 15637		25
55	Fused Heptacyclic-Based Acceptor□Donor□Acceptor Small Molecules: N-Substitution toward High-Performance Solution-Processable Field-Effect Transistors. *Chemistry of Materials*, **2019**, 31, 2027-2035	9.6	25
54	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	9.5	25
53	Surface-Mediated Solidification of a Semiconducting Polymer during Time-Controlled Spin-Coating. *ACS Applied Materials & Interfaces*, **2017**, 9, 9871-9879	9.5	24
52	High performance of low band gap polymer-based ambipolar transistor using single-layer graphene electrodes. *ACS Applied Materials & Interfaces*, **2015**, 7, 6002-12	9.5	24
51	Inverse transfer method using polymers with various functional groups for controllable graphene doping. *ACS Nano*, **2014**, 8, 7968-75	16.7	23

50	Relationship between the dipole moment of self-assembled monolayers incorporated in graphene transistors and device electrical stabilities. *RSC Advances*, **2017**, 7, 27100-27104	3.7	21
49	Grain Boundary Induced Bias Instability in Soluble Acene-Based Thin-Film Transistors. *Scientific Reports*, **2016**, 6, 33224	4.9	21
48	Fully Drawn All-Organic Flexible Transistors Prepared by Capillary Pen Printing on Flexible Planar and Curvilinear Substrates. *Advanced Electronic Materials*, **2015**, 1, 1500301	6.4	20
47	Stretchable Polymer Gate Dielectric with Segmented Elastomeric Network for Organic Soft Electronics. *Chemistry of Materials*, **2018**, 30, 6353-6360	9.6	19
46	Anisotropy of Charge Transport in a Uniaxially Aligned Fused Electron-Deficient Polymer Processed by Solution Shear Coating. *Advanced Materials*, **2020**, 32, e2000063	24	18
45	Sequential solvent casting for improving the structural ordering and electrical characteristics of polythiophene thin films. *RSC Advances*, **2014**, 4, 41159-41163	3.7	18
44	Post-deposition dipping method for improving the electronic properties of a narrow bandgap conjugated polymer. *Journal of Materials Chemistry*, **2012**, 22, 11462		17
43	Nanopatched Graphene with Molecular Self-Assembly Toward Graphene-Organic Hybrid Soft Electronics. *Advanced Materials*, **2018**, 30, e1706480	24	16
42	Microstructural control over soluble pentacene deposited by capillary pen printing for organic electronics. *ACS Applied Materials & Interfaces*, **2013**, 5, 7838-44	9.5	16
41	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	13	16
40	Graphene growth under Knudsen molecular flow on a confined catalytic metal coil. *Nanoscale*, **2015**, 7, 1314-24	7.7	16
39	pn-Heterojunction effects of perylene tetracarboxylic diimide derivatives on pentacene field-effect transistor. *ACS Applied Materials & Interfaces*, **2015**, 7, 2025-31	9.5	15
38	Aqueous-Alcohol-Processable High-Mobility Semiconducting Copolymers with Engineered Oligo(ethylene glycol) Side Chains. *Chemistry of Materials*, **2020**, 32, 1111-1119	9.6	15
37	Low-Band-Gap Polymer-Based Ambipolar Transistors and Inverters Fabricated Using a Flow-Coating Method. *Journal of Physical Chemistry C*, **2016**, 120, 13865-13872	3.8	13
36	Critical role of silk fibroin secondary structure on the dielectric performances of organic thin-film transistors. *RSC Advances*, **2016**, 6, 5907-5914	3.7	13
35	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	9.5	13
34	Universal Route to Impart Orthogonality to Polymer Semiconductors for Sub-Micrometer Tandem Electronics. *Advanced Materials*, **2019**, 31, e1901400	24	12
33	Dicyanovinyl-substituted indolo[3,2-b]indole derivatives: low-band-gap π-conjugated molecules for a single-component ambipolar organic field-effect transistor. *Journal of Materials Chemistry C*, **2016**, 4, 9460-9468	7.1	11

32	Molecular Orientation-Dependent Bias Stress Stability in Bottom-Gate Organic Transistors Based on an n-Type Semiconducting Polymer. *Advanced Electronic Materials*, **2016**, 2, 1500380	6.4	11
31	Heat-Assisted Photoacidic Oxidation Method for Tailoring the Surface Chemistry of Polymer Dielectrics for Low-Power Organic Soft Electronics. *Advanced Functional Materials*, **2019**, 29, 1806030	15.6	10
30	Electric-Field-Tunable Growth of Organic Semiconductor Crystals on Graphene. *Nano Letters*, **2019**, 19, 1758-1766	11.5	9
29	Solutal-Marangoni-Flow-Mediated Growth of Patterned Highly Crystalline Organic Semiconductor Thin Film Via Gap-Controlled Bar Coating. *Advanced Functional Materials*, **2021**, 31, 2100196	15.6	9
28	Atomically-thin molecular layers for electrode modification of organic transistors. *Nanoscale*, **2015**, 7, 14100-8	7.7	8
27	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	3.8	8
26	Cyanothiophene-based low band-gap polymer for organic solar cells. *RSC Advances*, **2013**, 3, 6799	3.7	7
25	Singlet Exciton Delocalization in Gold Nanoparticle-Tethered Poly(3-hexylthiophene) Nanofibers with Enhanced Intrachain Ordering. *Macromolecules*, **2017**, 50, 8487-8496	5.5	7
24	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	9.5	7
23	Effects of varying the lengths of the donor units in extended thienothiophene isoindigo-based polymer semiconductors. *Journal of Materials Chemistry C*, **2018**, 6, 9972-9980	7.1	7
22	Bistable Solid-State Fluorescence Switching in Photoluminescent, Infinite Coordination Polymers. *Chemistry - A European Journal*, **2017**, 23, 10017-10022	4.8	6
21	Built-in water resistance in organic transistors modified with self-assembled monolayers. *RSC Advances*, **2014**, 4, 45082-45087	3.7	6
20	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	7.1	6
19	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	9.5	6
18	Wafer-scale and patternable synthesis of NbS2 for electrodes of organic transistors and logic gates. *Journal of Materials Chemistry C*, **2019**, 7, 8599-8606	7.1	5
17	Metal-Organic Framework as a Functional Analyte Channel of Organic-Transistor-Based Air Pollution Sensors. *ACS Applied Materials & Interfaces*, **2021**, 13, 24005-24012	9.5	4
16	Extended Thiazole-Containing Polymer Semiconductor for Balanced Charge-Carrier Mobilities. *Macromolecular Rapid Communications*, **2021**, 42, e2000741	4.8	3
15	Organic small-molecule heterointerface for use in transistor-type non-volatile memory. *Organic Electronics*, **2021**, 93, 106107	3.5	3

14	Organic Soft Electronics: Heat-Assisted Photoacidic Oxidation Method for Tailoring the Surface Chemistry of Polymer Dielectrics for Low-Power Organic Soft Electronics (Adv. Funct. Mater. 11/2019). *Advanced Functional Materials*, **2019**, 29, 1970071	15.6	2
13	Controllable Bipolar Doping of Graphene with 2D Molecular Dopants. *Small*, **2018**, 14, e1703697	11	2
12	65.2: Invited Paper: Bias-Stress-Induced Charge Trapping in Flexible Polymer Gate Dielectrics in Organic TFTs. *Digest of Technical Papers SID International Symposium*, **2015**, 46, 966-968	0.5	2
11	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	21.8	2
10	Consideration of Azobenzene-Based Self-Assembled Monolayer Deposition Conditions for Maximizing Optoelectronic Switching Performances. *Chemistry of Materials*, **2021**, 33, 5991-6002	9.6	2
9	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,	6.4	2
8	Organic Semiconductors: Solutal-Marangoni-Flow-Mediated Growth of Patterned Highly Crystalline Organic Semiconductor Thin Film Via Gap-Controlled Bar Coating (Adv. Funct. Mater. 28/2021). *Advanced Functional Materials*, **2021**, 31, 2170200	15.6	1
7	Unidirectional Macroscopic Alignment of Chlorobenzo[c]-[1,2,5]thiadiazole-Based Semiconducting Copolymers with Controlled Regiochemistry. *Advanced Electronic Materials*,2100551	6.4	1
6	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	15.6	
5	Organic Electronics: Universal Route to Impart Orthogonality to Polymer Semiconductors for Sub-Micrometer Tandem Electronics (Adv. Mater. 28/2019). *Advanced Materials*, **2019**, 31, 1970204	24	
4	Organic Transistors: A Pseudo-Regular Alternating Conjugated Copolymer Using an Asymmetric Monomer: A High-Mobility Organic Transistor in Nonchlorinated Solvents (Adv. Mater. 24/2015). *Advanced Materials*, **2015**, 27, 3707-3707	24	
3	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	24	
2	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	4.9	
1	Novel Dithienopyrrole-Based Conjugated Copolymers: Importance of Backbone Planarity in Achieving High Electrical Conductivity and Thermoelectric Performance. *Macromolecular Rapid Communications*,2200277	4.8	