Choongik Kim

List of Publications by Citations

94 papers	2,999 citations	28 h-index	53 g-index
99 ext. papers	3,360 ext. citations	6.7 avg, IF	5.09 L-index

#	Paper	IF	Citations
94	Gate dielectric chemical structure-organic field-effect transistor performance correlations for electron, hole, and ambipolar organic semiconductors. *Journal of the American Chemical Society*, **2006**, 128, 12851-69	16.4	418
93	Polymer gate dielectric surface viscoelasticity modulates pentacene transistor performance. *Science*, **2007**, 318, 76-80	33.3	344
92	Stretchable microfluidic radiofrequency antennas. *Advanced Materials*, **2010**, 22, 2749-52	24	337
91	Solution-processable low-molecular weight extended arylacetylenes: versatile p-type semiconductors for field-effect transistors and bulk heterojunction solar cells. *Journal of the American Chemical Society*, **2010**, 132, 6108-23	16.4	145
90	Printable cross-linked polymer blend dielectrics. Design strategies, synthesis, microstructures, and electrical properties, with organic field-effect transistors as testbeds. *Journal of the American Chemical Society*, **2008**, 130, 6867-78	16.4	111
89	Functionalized anthradithiophenes for organic field-effect transistors. *Journal of Materials Chemistry*, **2008**, 18, 1029		98
88	One-pot [1+1+1] synthesis of dithieno[2,3-b:3$2Sd]thiophene (DTT) and their functionalized derivatives for organic thin-film transistors. *Chemical Communications*, **2009**, 1846-8	5.8	80
87	Functionalized dithieno[2,3-b:3?,2?-d]thiophenes (DTTs) for organic thin-film transistors. *Organic Electronics*, **2010**, 11, 801-813	3.5	62
86	Fused-Thiophene Based Materials for Organic Photovoltaics and Dye-Sensitized Solar Cells. *Polymers*, **2014**, 6, 2645-2669	4.5	61
85	Probing the surface glass transition temperature of polymer films via organic semiconductor growth mode, microstructure, and thin-film transistor response. *Journal of the American Chemical Society*, **2009**, 131, 9122-32	16.4	55
84	Novel soluble pentacene and anthradithiophene derivatives for organic thin-film transistors. *Organic Electronics*, **2010**, 11, 1363-1375	3.5	54
83	Biocatalytic conversion of methane to methanol as a key step for development of methane-based biorefineries. *Journal of Microbiology and Biotechnology*, **2014**, 24, 1597-605	3.3	54
82	Low-Dimensional Arylacetylenes for Solution-Processable Organic Field-Effect Transistors. *Chemistry of Materials*, **2009**, 21, 2592-2594	9.6	52
81	Solution-Processed Small-Molecule Bulk Heterojunction Ambipolar Transistors. *Advanced Functional Materials*, **2014**, 24, 2057-2063	15.6	51
80	Anthracenedicarboximide-based semiconductors for air-stable, n-channel organic thin-film transistors: materials design, synthesis, and structural characterization. *Journal of Materials Chemistry*, **2012**, 22, 4459-4472		49
79	BODIPY-Based Semiconducting Materials for Organic Bulk Heterojunction Photovoltaics and Thin-Film Transistors. *ChemPlusChem*, **2019**, 84, 18-37	2.8	46
78	Solution-Processable Dithienothiophenoquinoid (DTTQ) Structures for Ambient-Stable n-Channel Organic Field Effect Transistors. *Advanced Functional Materials*, **2017**, 27, 1606761	15.6	44

77	Solution-Processable BODIPY-Based Small Molecules for Semiconducting Microfibers in Organic Thin-Film Transistors. *ACS Applied Materials & Interfaces*, **2016**, 8, 14077-87	9.5	44
76	Novel Semiconductors Based on Functionalized Benzo[d,d?]thieno[3,2-b;4,5-b?]dithiophenes and the Effects of Thin Film Growth Conditions on Organic Field Effect Transistor Performance. *Chemistry of Materials*, **2010**, 22, 5031-5041	9.6	43
75	Solution-Processed Nonvolatile Organic Transistor Memory Based on Semiconductor Blends. *ACS Applied Materials & Interfaces*, **2019**, 11, 8327-8336	9.5	41
74	Ultralow bandgap molecular semiconductors for ambient-stable and solution-processable ambipolar organic field-effect transistors and inverters. *Journal of Materials Chemistry C*, **2017**, 5, 2368-2379	7.1	39
73	Asymmetric fused thiophenes for field-effect transistors: crystal structure–film microstructure–transistor performance correlations. *Journal of Materials Chemistry C*, **2014**, 2, 8892-8902	7.1	36
72	Enhanced performance of benzothieno[3,2-b]thiophene (BTT)-based bottom-contact thin-film transistors. *Chemistry - A European Journal*, **2013**, 19, 3721-8	4.8	36
71	Multifunctional Organic-Semiconductor Interfacial Layers for Solution-Processed Oxide-Semiconductor Thin-Film Transistor. *Advanced Materials*, **2017**, 29, 1607055	24	35
70	Diperfluorophenyl Fused Thiophene Semiconductors for n-Type Organic Thin Film Transistors (OTFTs). *Advanced Electronic Materials*, **2015**, 1, 1500098	6.4	33
69	Design, synthesis, and characterization of ##disubstituted indeno[1,2-b]fluorene-6,12-dione-thiophene molecular semiconductors. Enhancement of ambipolar charge transport through synthetic tailoring of alkyl substituents. *RSC Advances*, **2016**, 6, 212-226	3.7	32
68	Silver nanowire-polymer composite electrode for high performance solution-processed thin-film transistors. *Organic Electronics*, **2012**, 13, 1881-1886	3.5	31
67	Pentacene transistors fabricated on photocurable polymer gate dielectrics: tuning surface viscoelasticity and device response. *Advanced Materials*, **2010**, 22, 342-6	24	30
66	Solution-Processed Rad-Hard Amorphous Metal-Oxide Thin-Film Transistors. *Advanced Functional Materials*, **2018**, 28, 1802717	15.6	28
65	Gas-liquid mass transfer coefficient of methane in bubble column reactor. *Korean Journal of Chemical Engineering*, **2015**, 32, 1060-1063	2.8	22
64	2-Thiopene[1]benzothieno[3,2- b]benzothiophene derivatives as solution-processable organic semiconductors for organic thin-film transistors. *Synthetic Metals*, **2018**, 235, 153-159	3.6	20
63	Solution-processable dithieno[3,2-b:2?,3?-d]thiophene derivatives for organic thin-film transistors and complementary-like inverters. *Organic Electronics*, **2018**, 52, 356-363	3.5	20
62	A new rod-shaped BODIPY-acetylene molecule for solution-processed semiconducting microribbons in n-channel organic field-effect transistors. *New Journal of Chemistry*, **2017**, 41, 6232-6240	3.6	19
61	High-performance bottom-contact organic thin-film transistors based on benzo[d,d$]thieno[3,2-b;4,5-b$]dithiophenes (BTDTs) derivatives. *ACS Applied Materials & Interfaces*, **2012**, 4, 6992-8	9.5	19
60	Green solvents for organic thin-film transistor processing. *Journal of Materials Chemistry C*, **2020**, 8, 5786-5794	7.1	18

59	Synthesis and characterization of solution-processable diketopyrrolopyrrole (DPP) and tetrathienothiophene (TTA)-based small molecules for organic thin film transistors and organic photovoltaic cells. *Dyes and Pigments*, **2016**, 133, 280-291	4.6	18
58	A Solution-Processable Liquid-Crystalline Semiconductor for Low-Temperature-Annealed Air-Stable N-Channel Field-Effect Transistors. *ChemPhysChem*, **2017**, 18, 850-861	3.2	17
57	Synthesis and characterization of carbazole- and □carboline-based thiophene derivatives as organic semiconductors for organic thin-film transistors. *Dyes and Pigments*, **2015**, 114, 78-84	4.6	17
56	Enhanced mass transfer rate of methane in aqueous phase via methyl-functionalized SBA-15. *Journal of Molecular Liquids*, **2016**, 215, 154-160	6	16
55	Enhancement of methane□water volumetric mass transfer coefficient by inhibiting bubble coalescence with electrolyte. *Journal of Industrial and Engineering Chemistry*, **2016**, 33, 326-329	6.3	16
54	Squaraine-Based Polymers: Toward Optimized Structures for Optoelectronic Devices. *Macromolecular Chemistry and Physics*, **2017**, 218, 1600487	2.6	15
53	Functionalized benzothieno[3,2 b]thiophenes (BTTs) for high performance organic thin-film transistors (OTFTs). *Journal of Materials Chemistry C*, **2014**, 2, 7599	7.1	14
52	Green solvent-processed organic electronic devices. *Journal of Materials Chemistry C*, **2020**, 8, 15027-15047	7.1	14
51	Triisopropylsilylethynyl-substituted indenofluorenes: carbonyl versus dicyanovinylene functionalization in one-dimensional molecular crystals and solution-processed n-channel OFETs. *Organic Chemistry Frontiers*, **2018**, 5, 2912-2924	5.2	14
50	Solution-processable small molecules for bulk heterojunction ambipolar thin-film transistors and complementary-like inverters. *Dyes and Pigments*, **2019**, 163, 725-733	4.6	13
49	Solution-processable fluorene derivative for organic thin-film transistors. *Organic Electronics*, **2020**, 76, 105464	3.5	13
48	Semiconducting Copolymers Based on meso-Substituted BODIPY for Inverted Organic Solar Cells and Field-Effect Transistors. *Advanced Electronic Materials*, **2018**, 4, 1700354	6.4	13
47	Enhanced mass transfer rate of methane via hollow fiber membrane modules for Methylosinus trichosporium OB3b fermentation. *Journal of Industrial and Engineering Chemistry*, **2016**, 39, 149-152	6.3	12
46	Investigation and prediction of the salting-out effect of methane in various aqueous electrolyte solutions. *Journal of Industrial and Engineering Chemistry*, **2016**, 34, 117-121	6.3	12
45	Ambipolar thin-film transistors based on organic semiconductor blend. *Synthetic Metals*, **2019**, 253, 40-47	3.6	11
44	Solution-processable end-functionalized tetrathienoacene semiconductors: Synthesis, characterization and organic field effect transistors applications. *Dyes and Pigments*, **2017**, 145, 584-590	4.6	11
43	A Solution-Processable meso-Phenyl-BODIPY-Based n-Channel Semiconductor with Enhanced Fluorescence Emission. *ChemPlusChem*, **2019**, 84, 1423-1431	2.8	10
42	Optimized Activation of Solution-Processed Amorphous Oxide Semiconductors for Flexible Transparent Conductive Electrodes. *Advanced Electronic Materials*, **2018**, 4, 1700386	6.4	10

41	Enhanced Performance of Pseudo-Bilayer Organic Photovoltaic Devices via Small Molecule Doping. *Journal of Physical Chemistry C*, **2014**, 118, 9958-9965	3.8	10
40	Organic materials as a passivation layer for metal oxide semiconductors. *Journal of Materials Chemistry C*, **2020**, 8, 14983-14995	7.1	9
39	Cooperative behavior of perfluoro carboxylic acid on cyclohexane oxidation catalyzed by nitrido diiron phthalocyanine complex. *Journal of Industrial and Engineering Chemistry*, **2017**, 53, 371-374	6.3	8
38	Enhanced mass transfer rate and solubility of methane via addition of alcohols for Methylosinus trichosporium OB3b fermentation. *Journal of Industrial and Engineering Chemistry*, **2017**, 46, 350-355	6.3	8
37	Multi-layered nanocomposite dielectrics for high density organic memory devices. *Applied Physics Letters*, **2015**, 106, 043302	3.4	8
36	Versatile Solution-Processed Organic–Inorganic Hybrid Superlattices for Ultraflexible and Transparent High-Performance Optoelectronic Devices. *Advanced Functional Materials*, **2021**, 31, 2103285	15.6	8
35	Benzothiadiazole-Based Small-Molecule Semiconductors for Organic Thin-Film Transistors and Complementary-like Inverters. *ChemPlusChem*, **2017**, 82, 742-749	2.8	7
34	Synthesis and Characterization of Quinoxaline Derivative as Organic Semiconductors for Organic Thin-Film Transistors. *Journal of Nanoscience and Nanotechnology*, **2017**, 17, 5530-5538	1.3	7
33	Bulk charge-transfer doping of amorphous metal oxide: fullerene blends for solution-processed amorphous indium zinc oxide thin-film transistors. *Journal of Materials Chemistry C*, **2019**, 7, 10635-10641	7.1	7
32	Enhanced performance of solution-processed TESPE-ADT thin-film transistors. *ChemPhysChem*, **2013**, 14, 2772-6	3.2	6
31	Influence of polymer dielectric surface energy on thin-film transistor performance of solution-processed triethylsilylethynyl anthradithiophene (TES-ADT). *Physica Status Solidi - Rapid Research Letters*, **2012**, 6, 71-73	2.5	6
30	Synthesis and Characterization of Fluorenone-Based Donor-Acceptor Small Molecule Organic Semiconductors for Organic Field-Effect Transistors. *Macromolecular Research*, **2020**, 28, 654-659	1.9	5
29	Synthesis and characterization of fluorene derivatives as organic semiconductors for organic field-effect transistor. *Molecular Crystals and Liquid Crystals*, **2019**, 690, 56-66	0.5	5
28	Effect of methane-sugar interaction on the solubility of methane in an aqueous solution. *Journal of Colloid and Interface Science*, **2017**, 500, 113-118	9.3	4
27	Boosting the proton conduction using protonated imidazole for advanced ion conducting membrane. *Journal of Membrane Science*, **2021**, 620, 118904	9.6	4
26	High Throughput Bar-Coating Processed Organic-Inorganic Hybrid Multi-Layers for Gas Barrier Thin-Films. *Journal of Nanoscience and Nanotechnology*, **2019**, 19, 4299-4304	1.3	3
25	Enhancing gas–liquid volumetric mass transfer coefficient. *Journal of Industrial and Engineering Chemistry*, **2020**, 87, 1-17	6.3	3
24	Synthesis and characterization of 2,7-diethynyl-benzo[b]benzo[4,5]thieno[2,3-d]thiophene derivative as organic semiconductors for organic thin-film transistors. *Synthetic Metals*, **2016**, 220, 599-605	3.6	3

23	Functionalized soluble triethylsilylethynyl anthradithiophenes (TESADTs) for organic electronic devices. *Dyes and Pigments*, **2016**, 126, 261-269	4.6	3
22	Development of Dithieno[3,2-b:2?,3?-d]thiophene (DTT) Derivatives as Solution-Processable Small Molecular Semiconductors for Organic Thin Film Transistors. *Coatings*, **2021**, 11, 1222	2.9	3
21	Synthesis and characterization of benzo[b]thieno[2,3-d]thiophene (BTT) derivatives as solution-processable organic semiconductors for organic field-effect transistors. *Synthetic Metals*, **2021**, 282, 116944	3.6	3
20	Cationic surfactant as methane–water mass transfer enhancer for the fermentation of Methylosinus trichosporium OB3b. *Journal of Industrial and Engineering Chemistry*, **2017**, 53, 228-232	6.3	2
19	Synthesis and Characterization of Diketopyrrolopyrrole Derivatives as Organic Semiconductors for Organic Thin-Film Transistors. *Journal of Nanoscience and Nanotechnology*, **2017**, 17, 4312-4317	1.3	2
18	First Tetrabutylanthradithiophene (TBADT) Derivatives for Solution-Processed Thin-Film Transistors. *Synlett*, **2011**, 2011, 2151-2156	2.2	2
17	Asymmetric dithieno[3,2-b:2?,3?-d]thiophene derivatives as solution-processable small molecular organic semiconductors for organic thin film transistors. *Thin Solid Films*, **2022**, 745, 139112	2.2	2
16	Side chain engineering of [1]benzothieno[3,2-b]benzothiophene (BTBT)-based semiconductors for organic field-effect transistors. *Synthetic Metals*, **2022**, 285, 117022	3.6	2
15	Microstructural modulation of organic passivation layers for metal oxide semiconductors to achieve high bias stability. *Journal of Materials Chemistry C*, **2020**, 8, 11209-11222	7.1	2
14	Polyurethane triblock copolymer gate dielectrics for low-voltage organic thin-film transistors. *Journal of Industrial and Engineering Chemistry*, **2019**, 71, 460-464	6.3	2
13	Solution-Processable Diketopyrrolopyrrole Derivatives as Organic Semiconductors for Organic Thin-Film Transistors. *Journal of Nanoscience and Nanotechnology*, **2018**, 18, 705-712	1.3	2
12	Solution-processed flexible nonvolatile organic field-effect transistor memory using polymer electret. *Organic Electronics*, **2021**, 99, 106331	3.5	2
11	Effect of acidity of oxide support on the activity and stability of chloro nitrido diiron phthalocyanine complex. *Chemical Engineering Research and Design*, **2019**, 144, 429-433	5.5	1
10	Probing the surface viscoelasticity of polymer films **2014**, 26, 29-37		1
9	Green solvent-processed complementary-like inverters based on ambipolar organic thin-film transistors. *Journal of Industrial and Engineering Chemistry*, **2021**,	6.3	1
8	A Ladder-Type Organosilicate Copolymer Gate Dielectric Materials for Organic Thin-Film Transistors. *Coatings*, **2018**, 8, 236	2.9	1
7	Meso-Extended/Deficient BODIPYs and Low-Band-Gap Donor–Acceptor Copolymers for Organic Optoelectronics. *ACS Applied Polymer Materials*, **2022**, 4, 1991-2005	4.3	1
6	Sustainable approaches in the design of dielectric materials for organic thin-film transistors **2022**, 179-208		0

5	Organic Electronics: Semiconducting Copolymers Based on meso-Substituted BODIPY for Inverted Organic Solar Cells and Field-Effect Transistors (Adv. Electron. Mater. 10/2018). *Advanced Electronic Materials*, **2018**, 4, 1870049	6.4	0
4	Interfacial Phenomena Affecting Charge Transport In Small Molecule Organic Thin-Film Transistors. *Materials Research Society Symposia Proceedings*, **2006**, 965, 1		
3	OligofuranBenzothiadiazole Co-oligomers: Synthesis, Optoelectronic Properties and Reactivity. *Organic Materials*, **2021**, 03, 303-308	1.9	
2	Metal Oxide Semiconductors: Solution-Processed Rad-Hard Amorphous Metal-Oxide Thin-Film Transistors (Adv. Funct. Mater. 47/2018). *Advanced Functional Materials*, **2018**, 28, 1870333	15.6	
1	Electrical defect passivation of nanocrystalline In-Ga-O thin film transistor with organic-inorganic superlattice structure. *Composite Interfaces*,1-10	2.3	