Kilwon Cho

List of Publications by Citations

334 papers	15,083 citations	68 h-index	110 g-index
360 ext. papers	16,944 ext. citations	11.5 avg, IF	6.81 L-index

#	Paper	IF	Citations
334	Critical assessment of charge mobility extraction in FETs. *Nature Materials*, **2017**, 17, 2-7	27	443
333	Linearly and Highly Pressure-Sensitive Electronic Skin Based on a Bioinspired Hierarchical Structural Array. *Advanced Materials*, **2016**, 28, 5300-6	24	371
332	Super-Hydrophobic PDMS Surface with Ultra-Low Adhesive Force. *Macromolecular Rapid Communications*, **2005**, 26, 1805-1809	4.8	302
331	Surface-directed molecular assembly of pentacene on monolayer graphene for high-performance organic transistors. *Journal of the American Chemical Society*, **2011**, 133, 4447-54	16.4	287
330	Recent advances in organic transistor printing processes. *ACS Applied Materials & Interfaces*, **2013**, 5, 2302-15	9.5	278
329	UV-driven reversible switching of a roselike vanadium oxide film between superhydrophobicity and superhydrophilicity. *Journal of the American Chemical Society*, **2007**, 129, 4128-9	16.4	278
328	Conducting AFM and 2D GIXD studies on pentacene thin films. *Journal of the American Chemical Society*, **2005**, 127, 11542-3	16.4	278
327	Switchable transparency and wetting of elastomeric smart windows. *Advanced Materials*, **2010**, 22, 5013-7	24	236
326	Enhanced Performance in Polymer Solar Cells by Surface Energy Control. *Advanced Functional Materials*, **2010**, 20, 4381-4387	15.6	232
325	Work-Function Engineering of Graphene Electrodes by Self-Assembled Monolayers for High-Performance Organic Field-Effect Transistors. *Journal of Physical Chemistry Letters*, **2011**, 2, 841-5	6.4	224
324	Effect of Annealing Solvent Solubility on the Performance of Poly(3-hexylthiophene)/Methanofullerene Solar Cells. *Journal of Physical Chemistry C*, **2009**, 113, 17579-17584	4.8	224
323	Single-gate bandgap opening of bilayer graphene by dual molecular doping. *Advanced Materials*, **2012**, 24, 407-11	24	212
322	Liquid-crystalline semiconducting copolymers with intramolecular donor-acceptor building blocks for high-stability polymer transistors. *Journal of the American Chemical Society*, **2009**, 131, 6124-32	16.4	212
321	High-Efficiency Organic Solar Cells Based on Preformed Poly(3-hexylthiophene) Nanowires. *Advanced Functional Materials*, **2011**, 21, 480-486	15.6	210
320	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
319	Effect of the phase states of self-assembled monolayers on pentacene growth and thin-film transistor characteristics. *Journal of the American Chemical Society*, **2008**, 130, 10556-64	16.4	199
318	Organic Thin-film Transistors Based on Polythiophene Nanowires Embedded in Insulating Polymer. *Advanced Materials*, **2009**, 21, 1349-1353	24	195

317	Versatile Use of Vertical-Phase-Separation-Induced Bilayer Structures in Organic Thin-Film Transistors. *Advanced Materials*, **2008**, 20, 1141-1145	24	191
316	Solubility-Induced Ordered Polythiophene Precursors for High-Performance Organic Thin-Film Transistors. *Advanced Functional Materials*, **2009**, 19, 1200-1206	15.6	190
315	High efficiency polymer solar cells with wet deposited plasmonic gold nanodots. *Organic Electronics* , **2009**, 10, 416-420	3.5	188
314	A Nonfullerene Small Molecule Acceptor with 3D Interlocking Geometry Enabling Efficient Organic Solar Cells. *Advanced Materials*, **2016**, 28, 69-76	24	186
313	Transparent, low-power pressure sensor matrix based on coplanar-gate graphene transistors. *Advanced Materials*, **2014**, 26, 4735-40	24	160
312	Pressure/Temperature Sensing Bimodal Electronic Skin with Stimulus Discriminability and Linear Sensitivity. *Advanced Materials*, **2018**, 30, e1803388	24	158
311	High-efficiency organic solar cells based on end-functional-group-modified poly(3-hexylthiophene). *Advanced Materials*, **2010**, 22, 1355-60	24	155
310	ZnTe/ZnSe (Core/Shell) Type-II Quantum Dots: Their Optical and Photovoltaic Properties. *Chemistry of Materials*, **2010**, 22, 233-240	9.6	152
309	Bulk heterojunction solar cells based on preformed polythiophene nanowires via solubility-induced crystallization. *Journal of Materials Chemistry*, **2010**, 20, 7398		141
308	Control of the Morphology and Structural Development of Solution-Processed Functionalized Acenes for High-Performance Organic Transistors. *Advanced Functional Materials*, **2009**, 19, 1515-1525	15.6	138
307	A High-Performance Solution-Processed Organic Photodetector for Near-Infrared Sensing. *Advanced Materials*, **2020**, 32, e1906027	24	138
306	Recent Advances in Morphology Optimization for Organic Photovoltaics. *Advanced Materials*, **2018**, 30, e1800453	24	136
305	25th anniversary article: microstructure dependent bias stability of organic transistors. *Advanced Materials*, **2014**, 26, 1660-80	24	135
304	Tunable Anisotropic Wettability of Rice Leaf-Like Wavy Surfaces. *Advanced Functional Materials*, **2013**, 23, 547-553	15.6	134
303	Transparent superhydrophobic/translucent superamphiphobic coatings based on silica-fluoropolymer hybrid nanoparticles. *Langmuir*, **2013**, 29, 15051-7	4	126
302	Three-dimensional monolithic integration in flexible printed organic transistors. *Nature Communications*, **2019**, 10, 54	17.4	122
301	Low-voltage and high-field-effect mobility organic transistors with a polymer insulator. *Applied Physics Letters*, **2006**, 88, 072101	3.4	121
300	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

299	Solvent Vapor-Induced Nanowire Formation in Poly(3-hexylthiophene) Thin Films. *Macromolecular Rapid Communications*, **2005**, 26, 834-839	4.8	120
298	Control of graphene field-effect transistors by interfacial hydrophobic self-assembled monolayers. *Advanced Materials*, **2011**, 23, 3460-4	24	119
297	Highly crystalline low-bandgap polymer nanowires towards high-performance thick-film organic solar cells exceeding 10% power conversion efficiency. *Energy and Environmental Science*, **2017**, 10, 247-257	35.4	117
296	Semiconductor-Dielectric Blends: A Facile All Solution Route to Flexible All-Organic Transistors. *Advanced Materials*, **2009**, 21, 4243-4248	24	113
295	High Performance Organic Photovoltaic Cells Using Polymer-Hybridized ZnO Nanocrystals as a Cathode Interlayer. *Advanced Energy Materials*, **2011**, 1, 690-698	21.8	112
294	Enhancing 2D growth of organic semiconductor thin films with macroporous structures via a small-molecule heterointerface. *Nature Communications*, **2014**, 5, 4752	17.4	110
293	Synthetic Tailoring of Solid-State Order in Diketopyrrolopyrrole-Based Copolymers via Intramolecular Noncovalent Interactions. *Chemistry of Materials*, **2015**, 27, 829-838	9.6	107
292	Side-Chain Engineering of Nonfullerene Acceptors for Near-Infrared Organic Photodetectors and Photovoltaics. *ACS Energy Letters*, **2019**, 4, 1401-1409	20.1	106
291	High-mobility low-temperature ZnO transistors with low-voltage operation. *Applied Physics Letters*, **2010**, 96, 192115	3.4	102
290	Superhydrophobic to Superhydrophilic Wetting Transition with Programmable Ion-Pairing Interaction. *Advanced Materials*, **2008**, 20, 4438-4441	24	102
289	Evaporation-induced self-organization of inkjet-printed organic semiconductors on surface-modified dielectrics for high-performance organic transistors. *Langmuir*, **2009**, 25, 5404-10	4	94
288	Control of mesoscale and nanoscale ordering of organic semiconductors at the gate dielectric/semiconductor interface for organic transistors. *Journal of Materials Chemistry*, **2010**, 20, 2549		93
287	Fabrication of a bionic superhydrophobic metal surface by sulfur-induced morphological development. *Journal of Materials Chemistry*, **2005**, 15, 3089		93
286	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
285	Inkjet-Printed Single-Droplet Organic Transistors Based on Semiconductor Nanowires Embedded in Insulating Polymers. *Advanced Functional Materials*, **2010**, 20, 3292-3297	15.6	90
284	Three-Dimensional, Inkjet-Printed Organic Transistors and Integrated Circuits with 100% Yield, High Uniformity, and Long-Term Stability. *ACS Nano*, **2016**, 10, 10324-10330	16.7	88
283	Bandgap Narrowing in Non-Fullerene Acceptors: Single Atom Substitution Leads to High Optoelectronic Response Beyond 1000 nm. *Advanced Energy Materials*, **2018**, 8, 1801212	21.8	86
282	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

281	Hydrolytic degradation behavior of poly(butylene succinate)s with different crystalline morphologies. *Journal of Applied Polymer Science*, **2001**, 79, 1025-1033	2.9	85
280	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
279	The Influence of the Solvent Evaporation Rate on the Phase Separation and Electrical Performances of Soluble Acene-Polymer Blend Semiconductors. *Advanced Functional Materials*, **2012**, 22, 267-281	15.6	80
278	Design of Nonfullerene Acceptors with Near-Infrared Light Absorption Capabilities. *Advanced Energy Materials*, **2018**, 8, 1801209	21.8	79
277	Extremely efficient liquid exfoliation and dispersion of layered materials by unusual acoustic cavitation. *Scientific Reports*, **2014**, 4, 5133	4.9	78
276	Organic Semiconductors: Charge-Transfer-Controlled Growth of Organic Semiconductor Crystals on Graphene (Adv. Sci. 6/2020). *Advanced Science*, **2020**, 7, 2070031	13.6	78
275	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
274	Dependence of Exciton Diffusion Length on Crystalline Order in Conjugated Polymers. *Journal of Physical Chemistry C*, **2014**, 118, 760-766	3.8	75
273	Influence of the dielectric constant of a polyvinyl phenol insulator on the field-effect mobility of a pentacene-based thin-film transistor. *Applied Physics Letters*, **2005**, 87, 152105	3.4	73
272	Organometal Halide Perovskite Solar Cells with Improved Thermal Stability via Grain Boundary Passivation Using a Molecular Additive. *Advanced Functional Materials*, **2017**, 27, 1703546	15.6	72
271	Quantifying the Nongeminate Recombination Dynamics in Nonfullerene Bulk Heterojunction Organic Solar Cells. *Advanced Energy Materials*, **2019**, 9, 1901438	21.8	71
270	Layered Molecular Ordering of Self-Organized Poly(3-hexylthiophene) Thin Films on Hydrophobized Surfaces. *Macromolecules*, **2006**, 39, 5843-5847	5.5	70
269	Exploiting □Stacking for Stretchable Semiconducting Polymers. *Macromolecules*, **2018**, 51, 2572-2579	5.5	69
268	An ABA triblock copolymer strategy for intrinsically stretchable semiconductors. *Journal of Materials Chemistry C*, **2015**, 3, 3599-3606	7.1	69
267	A bis(2-oxoindolin-3-ylidene)-benzodifuran-dione containing copolymer for high-mobility ambipolar transistors. *Chemical Communications*, **2014**, 50, 3180-3	5.8	68
266	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
265	Perovskite solar cells with an MoS2 electron transport layer. *Journal of Materials Chemistry A*, **2019**, 7, 7151-7158	13	66
264	Polymer blends with semiconducting nanowires for organic electronics. *Journal of Materials Chemistry*, **2012**, 22, 4244		66

263	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
262	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
261	Hierarchical gecko-inspired nanohairs with a high aspect ratio induced by nanoyielding. *Soft Matter*, **2012**, 8, 4905	3.6	64
260	Two-Dimensionally Extended π-Conjugation of Donor–Acceptor Copolymers via Oligothienyl Side Chains for Efficient Polymer Solar Cells. *Macromolecules*, **2015**, 48, 1723-1735	5.5	63
259	Donor-acceptor alternating copolymer nanowires for highly efficient organic solar cells. *Advanced Materials*, **2014**, 26, 6706-14	24	63
258	Electrical Performance of Organic Solar Cells with Additive-Assisted Vertical Phase Separation in the Photoactive Layer. *Advanced Energy Materials*, **2014**, 4, 1300612	21.8	63
257	Conformation-Insensitive Ambipolar Charge Transport in a Diketopyrrolopyrrole-Based Co-polymer Containing Acetylene Linkages. *Chemistry of Materials*, **2014**, 26, 3928-3937	9.6	59
256	Water-free transfer method for CVD-grown graphene and its application to flexible air-stable graphene transistors. *Advanced Materials*, **2014**, 26, 3213-7	24	58
255	Evaporation-induced self-alignment and transfer of semiconductor nanowires by wrinkled elastomeric templates. *Advanced Materials*, **2013**, 25, 2162-6	24	57
254	Bias-Stress-Induced Charge Trapping at Polymer Chain Ends of Polymer Gate-Dielectrics in Organic Transistors. *Advanced Functional Materials*, **2012**, 22, 4833-4839	15.6	56
253	Clean Transfer of Wafer-Scale Graphene via Liquid Phase Removal of Polycyclic Aromatic Hydrocarbons. *ACS Nano*, **2015**, 9, 4726-33	16.7	54
252	An Ultrastable Ionic Chemiresistor Skin with an Intrinsically Stretchable Polymer Electrolyte. *Advanced Materials*, **2018**, 30, e1706851	24	54
251	Wetting-Assisted Crack- and Wrinkle-Free Transfer of Wafer-Scale Graphene onto Arbitrary Substrates over a Wide Range of Surface Energies. *Advanced Functional Materials*, **2016**, 26, 2070-2077	15.6	54
250	An ultrathin conformable vibration-responsive electronic skin for quantitative vocal recognition. *Nature Communications*, **2019**, 10, 2468	17.4	53
249	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
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246	Solubility-driven polythiophene nanowires and their electrical characteristics. *Journal of Materials Chemistry*, **2011**, 21, 2338-2343		49

245	Enhancing the power conversion efficiency of perovskite solar cells via the controlled growth of perovskite nanowires. *Nano Energy*, **2018**, 51, 192-198	17.1	48
244	Chirality detection of amino acid enantiomers by organic electrochemical transistor. *Biosensors and Bioelectronics*, **2018**, 105, 121-128	11.8	47
243	Self-Organization of Inkjet-Printed Organic Semiconductor Films Prepared in Inkjet-Etched Microwells. *Advanced Functional Materials*, **2013**, 23, 5224-5231	15.6	47
242	Effect of rubbed polyimide layer on the field-effect mobility in pentacene thin-film transistors. *Applied Physics Letters*, **2008**, 92, 052107	3.4	47
241	Atomically thin epitaxial template for organic crystal growth using graphene with controlled surface wettability. *Nano Letters*, **2015**, 15, 2474-84	11.5	46
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238	Heterogeneous Solid Carbon Source-Assisted Growth of High-Quality Graphene via CVD at Low Temperatures. *Advanced Functional Materials*, **2016**, 26, 562-568	15.6	44
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236	Negative Transconductance Heterojunction Organic Transistors and their Application to Full-Swing Ternary Circuits. *Advanced Materials*, **2019**, 31, e1808265	24	42
235	Reinforcement of Amorphous and Semicrystalline Polymer Interfaces via in-Situ Reactive Compatibilization. *Macromolecules*, **1998**, 31, 7495-7505	5.5	42
234	Effect of Crystallization Modes in TIPS-pentacene/Insulating Polymer Blends on the Gas Sensing Properties of Organic Field-Effect Transistors. *Scientific Reports*, **2019**, 9, 21	4.9	41
233	Germanium- and Silicon-Substituted Donor□Acceptor Type Copolymers: Effect of the Bridging Heteroatom on Molecular Packing and Photovoltaic Device Performance. *Advanced Energy Materials*, **2014**, 4, 1400527	21.8	41
232	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
231	Combinatorial Study of Temperature-Dependent Nanostructure and Electrical Conduction of Polymer Semiconductors: Even Bimodal Orientation Can Enhance 3D Charge Transport. *Advanced Functional Materials*, **2016**, 26, 4627-4634	15.6	41
230	Bar-Coated Ultrathin Semiconductors from Polymer Blend for One-Step Organic Field-Effect Transistors. *ACS Applied Materials & Interfaces*, **2018**, 10, 21510-21517	9.5	39
229	Solubility-Controlled Structural Ordering of Narrow Bandgap Conjugated Polymers. *Advanced Energy Materials*, **2011**, 1, 63-67	21.8	38
228	Effect of the microstructure of copper oxide on the adhesion behavior of epoxy/copper leadframe joints. *Journal of Adhesion Science and Technology*, **2000**, 14, 1333-1353	2	38

227	High Electron Mobility in [1]Benzothieno[3,2-b][1]benzothiophene-Based Field-Effect Transistors: Toward n-Type BTBTs. *Chemistry of Materials*, **2019**, 31, 5254-5263	9.6	37
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225	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
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221	Organic solar cells based on three-dimensionally percolated polythiophene nanowires with enhanced charge transport. *ACS Applied Materials & Interfaces*, **2014**, 6, 5640-50	9.5	34
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218	Self-Assembled, Millimeter-Sized TIPS-Pentacene Spherulites Grown on Partially Crosslinked Polymer Gate Dielectric. *Advanced Functional Materials*, **2015**, 25, 3658-3665	15.6	33
217	User-Interactive Thermotherapeutic Electronic Skin Based on Stretchable Thermochromic Strain Sensor. *Advanced Science*, **2020**, 7, 2001184	13.6	33
216	Doping graphene with an atomically thin two dimensional molecular layer. *Advanced Materials*, **2014**, 26, 8141-6	24	33
215	Positional effects of fluorination in conjugated side chains on photovoltaic properties of donor-acceptor copolymers. *Chemical Communications*, **2017**, 53, 1176-1179	5.8	32
214	Recent Advances in the Bias Stress Stability of Organic Transistors. *Advanced Functional Materials*, **2020**, 30, 1904590	15.6	32
213	Controlling Electrostatic Interaction in PEDOT:PSS to Overcome Thermoelectric Tradeoff Relation. *Advanced Functional Materials*, **2019**, 29, 1905590	15.6	31
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205	Graphene as a metal passivation layer: Corrosion-accelerator and inhibitor. *Carbon*, **2017**, 116, 232-239	10.4	29
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200	Surface-Order Mediated Assembly of π-Conjugated Molecules on Self-Assembled Monolayers with Controlled Grain Structures. *Chemistry of Materials*, **2015**, 27, 4669-4676	9.6	28
199	Tailoring Structure and Field-Effect Characteristics of Ultrathin Conjugated Polymer Films via Phase Separation. *ACS Applied Materials & Interfaces*, **2018**, 10, 9602-9611	9.5	28
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195	Preparation of Calcite and Aragonite Complex Layer Materials Inspired from Biomineralization. *Crystal Growth and Design*, **2009**, 9, 3095-3099	3.5	27
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193	Ternary Blend Strategy for Achieving High-Efficiency Organic Photovoltaic Devices for Indoor Applications. *Chemistry - A European Journal*, **2019**, 25, 6154-6161	4.8	26
192	Heat-Sink-Free Flexible Organic Thermoelectric Generator Vertically Operating with Chevron Structure. *Advanced Materials Technologies*, **2018**, 3, 1700335	6.8	26

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189	Enhancing the Durability and Carrier Selectivity of Perovskite Solar Cells Using a Blend Interlayer. *ACS Applied Materials & Interfaces*, **2017**, 9, 18103-18112	9.5	25
188	Direct CVD Growth of a Graphene/MoS2 Heterostructure with Interfacial Bonding for Two-Dimensional Electronics. *Chemistry of Materials*, **2020**, 32, 4544-4552	9.6	25
187	Organic thin-film transistors with a photo-patternable semiconducting polymer blend. *Journal of Materials Chemistry*, **2011**, 21, 15637		25
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185	Molecular Engineering of Organic Spacer Cations for Efficient and Stable Formamidinium Perovskite Solar Cell. *Advanced Energy Materials*, **2020**, 10, 2001759	21.8	25
184	Enhancement of the Power Conversion Efficiency in Organic Photovoltaics by Unveiling the Appropriate Polymer Backbone Enlargement Approach. *Advanced Functional Materials*, **2016**, 26, 1840-1848	15.6	25
183	Fused Heptacyclic-Based AcceptorDonorAcceptor Small Molecules: N-Substitution toward High-Performance Solution-Processable Field-Effect Transistors. *Chemistry of Materials*, **2019**, 31, 2027-2035	9.6	25
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181	Predicting the Morphology of Perovskite Thin Films Produced by Sequential Deposition Method: A Crystal Growth Dynamics Study. *Chemistry of Materials*, **2017**, 29, 1165-1174	9.6	24
180	Surface-Mediated Solidification of a Semiconducting Polymer during Time-Controlled Spin-Coating. *ACS Applied Materials & Interfaces*, **2017**, 9, 9871-9879	9.5	24
179	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
178	Polarity engineering of conjugated polymers by variation of chemical linkages connecting conjugated backbones. *ACS Applied Materials & Interfaces*, **2015**, 7, 5898-906	9.5	24
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