Zhengxu Cai

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Rational Design of Porous Conjugated Polymers and Roles of Residual Palladium for Photocatalytic Hydrogen Production. Journal of the American Chemical Society, 2016, 138, 7681-7686.	6.6	364
2	Wideâ€Range Colorâ€Tunable Organic Phosphorescence Materials for Printable and Writable Security Inks. Angewandte Chemie - International Edition, 2020, 59, 16054-16060.	7.2	340
3	Electron Acceptors Based on α-Substituted Perylene Diimide (PDI) for Organic Solar Cells. Chemistry of Materials, 2016, 28, 1139-1146.	3.2	187
4	Guest-host doped strategy for constructing ultralong-lifetime near-infrared organic phosphorescence materials for bioimaging. Nature Communications, 2022, 13, 186.	5.8	175
5	Recent Progress in Pure Organic Room Temperature Phosphorescence of Small Molecular Host–Guest Systems. , 2021, 3, 379-397.		155
6	Remarkable enhancement of charge carrier mobility of conjugated polymer field-effect transistors upon incorporating an ionic additive. Science Advances, 2016, 2, e1600076.	4.7	139
7	Donor–Acceptor Porous Conjugated Polymers for Photocatalytic Hydrogen Production: The Importance of Acceptor Comonomer. Macromolecules, 2016, 49, 6903-6909.	2.2	129
8	Advanced functional polymer materials. Materials Chemistry Frontiers, 2020, 4, 1803-1915.	3.2	117
9	Halogen Bonding: A New Platform for Achieving Multiâ€Stimuliâ€Responsive Persistent Phosphorescence. Angewandte Chemie - International Edition, 2022, 61, .	7.2	111
10	Charge Mobility Enhancement for Conjugated DPP-Selenophene Polymer by Simply Replacing One Bulky Branching Alkyl Chain with Linear One at Each DPP Unit. Chemistry of Materials, 2018, 30, 3090-3100.	3.2	107
11	Cross-Linked Polyphosphazene Nanospheres Boosting Long-Lived Organic Room-Temperature Phosphorescence. Journal of the American Chemical Society, 2022, 144, 6107-6117.	6.6	105
12	A Cruciform Electron Donor–Acceptor Semiconductor with Solid‣tate Red Emission: 1D/2D Optical Waveguides and Highly Sensitive/Selective Detection of H ₂ S Gas. Advanced Functional Materials, 2014, 24, 4250-4258.	7.8	96
13	Revealing Insight into Long-Lived Room-Temperature Phosphorescence of Host–Guest Systems. Journal of Physical Chemistry Letters, 2019, 10, 6019-6025.	2.1	90
14	Rational design of pyrrole derivatives with aggregation-induced phosphorescence characteristics for time-resolved and two-photon luminescence imaging. Nature Communications, 2021, 12, 4883.	5.8	90
15	Exploration of Syntheses and Functions of Higher Ladder-type π-Conjugated Heteroacenes. CheM, 2018, 4, 2538-2570.	5.8	85
16	Synthesis of Ladder-Type Thienoacenes and Their Electronic and Optical Properties. Journal of the American Chemical Society, 2016, 138, 868-875.	6.6	84
17	Propeller-Shaped Acceptors for High-Performance Non-Fullerene Solar Cells: Importance of the Rigidity of Molecular Geometry. Chemistry of Materials, 2017, 29, 1127-1133.	3.2	83
18	Efficient and organic host–guest room-temperature phosphorescence: tunable triplet–singlet crossing and theoretical calculations for molecular packing. Chemical Science, 2021, 12, 6518-6525.	3.7	83

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19	New Donor–Acceptor–Donor Molecules with Pechmann Dye as the Core Moiety for Solution-Processed Good-Performance Organic Field-Effect Transistors. Chemistry of Materials, 2013, 25, 471-478.	3.2	81
20	Photocatalysts Based on Cobalt-Chelating Conjugated Polymers for Hydrogen Evolution from Water. Chemistry of Materials, 2016, 28, 5394-5399.	3.2	81
21	Excitation-Dependent Triplet–Singlet Intensity from Organic Host–Guest Materials: Tunable Color, White-Light Emission, and Room-Temperature Phosphorescence. Journal of Physical Chemistry Letters, 2021, 12, 1814-1821.	2.1	81
22	Exceptional Single-Molecule Transport Properties of Ladder-Type Heteroacene Molecular Wires. Journal of the American Chemical Society, 2016, 138, 10630-10635.	6.6	76
23	Achieving Efficient Phosphorescence and Mechanoluminescence in Organic Host–Guest System by Energy Transfer. Advanced Functional Materials, 2021, 31, 2108072.	7.8	74
24	Fast Deposition of Aligning Edgeâ€On Polymers for Highâ€Mobility Ambipolar Transistors. Advanced Materials, 2019, 31, e1805761.	11.1	70
25	Clusterization-Triggered Color-Tunable Room-Temperature Phosphorescence from 1,4-Dihydropyridine-Based Polymers. Journal of the American Chemical Society, 2022, 144, 1361-1369.	6.6	70
26	Beyond Molecular Wires: Design Molecular Electronic Functions Based on Dipolar Effect. Accounts of Chemical Research, 2016, 49, 1852-1863.	7.6	60
27	Molecular Rectification Tuned by Through-Space Gating Effect. Nano Letters, 2017, 17, 308-312.	4.5	56
28	A facile and convenient fluorescence detection of gamma-ray radiation based on the aggregation-induced emission. Journal of Materials Chemistry, 2011, 21, 14487.	6.7	55
29	Two Photon Absorption Study of Low-Bandgap, Fully Conjugated Perylene Diimide-Thienoacene-Perylene Diimide Ladder-Type Molecules. Chemistry of Materials, 2017, 29, 6726-6732.	3.2	55
30	Alternating Conjugated Electron Donor–Acceptor Polymers Entailing Pechmann Dye Framework as the Electron Acceptor Moieties for High Performance Organic Semiconductors with Tunable Characteristics. Macromolecules, 2014, 47, 2899-2906.	2.2	54
31	Synthesis of Alternating Donor–Acceptor Ladderâ€Type Molecules and Investigation of Their Multiple Chargeâ€Transfer Pathways. Angewandte Chemie - International Edition, 2018, 57, 6442-6448.	7.2	54
32	Fluorene-based host-guest phosphorescence materials for information encryption. Chemical Engineering Journal, 2021, 426, 131607.	6.6	54
33	Pure room temperature phosphorescence emission of an organic host–guest doped system with a quantum efficiency of 64%. Journal of Materials Chemistry C, 2021, 9, 3391-3395.	2.7	52
34	The Dualâ€State Luminescent Mechanism of 2,3,4,5â€Tetraphenylâ€1 <i>H</i> â€pyrrole. Chemistry - A European Journal, 2018, 24, 14269-14274.	1.7	51
35	Charge Transfer and Aggregation Effects on the Performance of Planar vs Twisted Nonfullerene Acceptor Isomers for Organic Solar Cells. Chemistry of Materials, 2018, 30, 4263-4276.	3.2	49
36	Structure control and photocatalytic performance of porous conjugated polymers based on perylene diimide. Polymer Chemistry, 2016, 7, 4937-4943.	1.9	45

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37	Proton-triggered switch based on a molecular transistor with edge-on gate. Chemical Science, 2016, 7, 3137-3141.	3.7	45
38	A Freezingâ€Induced Turnâ€On Imaging Modality for Realâ€Time Monitoring of Cancer Cells in Cryosurgery. Angewandte Chemie - International Edition, 2019, 58, 3834-3837.	7.2	44
39	Tunable Phosphorescence/Fluorescence Dual Emissions of Organic Isoquinolineâ€Benzophenone Doped Systems by Alkoxy Engineering. Chemistry - A European Journal, 2020, 26, 17376-17380.	1.7	44
40	MDM2â€Associated Clusterizationâ€Triggered Emission and Apoptosis Induction Effectuated by a Theranostic Spiropolymer. Angewandte Chemie - International Edition, 2020, 59, 8435-8439.	7.2	42
41	A Singleâ€Molecular AND Gate Operated with Two Orthogonal Switching Mechanisms. Advanced Materials, 2017, 29, 1701248.	11.1	41
42	Wideâ€Range Colorâ€Tunable Organic Phosphorescence Materials for Printable and Writable Security Inks. Angewandte Chemie, 2020, 132, 16188-16194.	1.6	40
43	A novel strategy for realizing dual state fluorescence and low-temperature phosphorescence. Materials Chemistry Frontiers, 2019, 3, 284-291.	3.2	39
44	Sub-5 nm single crystalline organic p–n heterojunctions. Nature Communications, 2021, 12, 2774.	5.8	39
45	Red-Emissive Organic Room-Temperature Phosphorescence Material for Time-Resolved Luminescence Bioimaging. CCS Chemistry, 2022, 4, 2550-2559.	4.6	39
46	Application of a Novel "Turn-on―Fluorescent Material to the Detection of Aluminum Ion in Blood Serum. ACS Applied Materials & Interfaces, 2018, 10, 23667-23673.	4.0	38
47	A "Turn-On―fluorescent chemosensor with the aggregation-induced emission characteristic for high-sensitive detection of Ce ion. Sensors and Actuators B: Chemical, 2018, 267, 351-356.	4.0	37
48	Functional Isocyanide-Based Polymers. Accounts of Chemical Research, 2020, 53, 2879-2891.	7.6	37
49	Dopantâ€Dependent Increase in Seebeck Coefficient and Electrical Conductivity in Blended Polymers with Offset Carrier Energies. Advanced Electronic Materials, 2019, 5, 1800618.	2.6	34
50	Real time bioimaging for mitochondria by taking the aggregation process of aggregation-induced emission near-infrared dyes with wash-free staining. Materials Chemistry Frontiers, 2019, 3, 57-63.	3.2	33
51	Improving the Electronic Transporting Property for Flexible Field-Effect Transistors with Naphthalene Diimide-Based Conjugated Polymer through Branching/Linear Side-Chain Engineering Strategy. ACS Applied Materials & Interfaces, 2019, 11, 15837-15844.	4.0	32
52	Aggregationâ€Induced Emission of Multiphenylâ€Substituted 1,3â€Butadiene Derivatives: Synthesis, Properties and Application. Chemistry - A European Journal, 2018, 24, 15965-15977.	1.7	30
53	Triphenylquinoline (TPQ)-Based Dual-State Emissive Probe for Cell Imaging in Multicellular Tumor Spheroids. ACS Applied Bio Materials, 2019, 2, 3686-3692.	2.3	30
54	Solution-processed core-extended naphthalene diimides toward organic n-type and ambipolar semiconductors. Journal of Materials Chemistry C, 2013, 1, 2688.	2.7	29

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55	Extended Conjugated Donor–Acceptor Molecules with <i>E</i> â€(1,2â€Difluorovinyl) and Diketopyrrolopyrrole (DPP) Moieties toward Highâ€Performance Ambipolar Organic Semiconductors. Chemistry - an Asian Journal, 2014, 9, 1068-1075.	1.7	29
56	Recent progress of aggregation-induced emission luminogens (AIEgens) for bacterial detection and theranostics. Materials Chemistry Frontiers, 2021, 5, 1164-1184.	3.2	29
57	Enhancement in Open-Circuit Voltage in Organic Solar Cells by Using Ladder-Type Nonfullerene Acceptors. ACS Applied Materials & Interfaces, 2018, 10, 13528-13533.	4.0	28
58	New dithienyl-diketopyrrolopyrrole-based conjugated molecules entailing electron withdrawing moieties for organic ambipolar semiconductors and photovoltaic materials. Journal of Materials Chemistry C, 2014, 2, 10101-10109.	2.7	27
59	Synthesis of Polyquinolines via One-Pot Polymerization of Alkyne, Aldehyde, and Aniline under Metal-Free Catalysis and Their Properties. Macromolecules, 2018, 51, 3254-3263.	2.2	27
60	Spontaneous Multicomponent Polymerization of Imidazole, Diacetylenic Esters, and Diisocyanates for the Preparation of Poly(l²-aminoacrylate)s with Cluster-Induced Emission Characteristics. Macromolecules, 2020, 53, 1054-1062.	2.2	27
61	Multicomponent spiropolymerization of diisocyanides, alkynes and carbon dioxide for constructing 1,6-dioxospiro[4,4]nonane-3,8-diene as structural units under one-pot catalyst-free conditions. Polymer Chemistry, 2018, 9, 5543-5550.	1.9	26
62	Turn-on fluorescent probe with aggregation-induced emission characteristics for polyazoles. Materials Chemistry Frontiers, 2018, 2, 1779-1783.	3.2	26
63	Influence of Guest/Host Morphology on Room Temperature Phosphorescence Properties of Pure Organic Doped Systems. Journal of Physical Chemistry Letters, 2021, 12, 7357-7364.	2.1	26
64	Excited-State Modulation of Aggregation-Induced Emission Molecules for High-Efficiency Triplet Exciton Generation. , 2021, 3, 1767-1777.		26
65	Protic acids as third components improve the phosphorescence properties of the guest-host system through hydrogen bonds. Chemical Engineering Journal, 2022, 433, 133530.	6.6	25
66	Intra-molecular Charge Transfer and Electron Delocalization in Non-fullerene Organic Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 10043-10052.	4.0	24
67	Investigations of Thienoacene Molecules for Classical and Entangled Two-Photon Absorption. Journal of Physical Chemistry A, 2018, 122, 8167-8182.	1.1	24
68	The Synergistic Effect between Triphenylpyrrole Isomers as Donors, Linking Groups, and Acceptors on the Fluorescence Properties of D–π–A Compounds in the Solid State. Chemistry - A European Journal, 2018, 24, 434-442.	1.7	23
69	Synthesis and Characterization of Poly(iminofuran-arylene) Containing Bromomethyl Groups Linked at the 5-Position of a Furan Ring via the Multicomponent Polymerizations of Diisocyanides, Dialkylacetylene Dicarboxylates, and Bis(2-bromoacetyl)biphenyl. Macromolecules, 2019, 52, 3319-3326.	2.2	23
70	Synthesis of Poly(amine–furan–arylene)s through a One-Pot Catalyst-Free in Situ Cyclopolymerization of Diisocyanide, Dialkylacetylene Dicarboxylates, and Dialdehyde. Macromolecules, 2019, 52, 729-737.	2.2	23
71	Activating intramolecular singlet exciton fission by altering ï€-bridge flexibility in perylene diimide trimers for organic solar cells. Chemical Science, 2020, 11, 8757-8770.	3.7	22
72	Effects of fused rings linked to the 2,5-position of pyrrole derivatives with near-infrared emission on their aggregation-enhanced emission properties. Materials Chemistry Frontiers, 2019, 3, 2072-2076.	3.2	21

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73	Metal–Organic Layers Efficiently Catalyze Photoinduced Polymerization under Visible Light. Inorganic Chemistry, 2018, 57, 10489-10493.	1.9	20
74	Halogen Bonding: A New Platform for Achieving Multiâ€Stimuliâ€Responsive Persistent Phosphorescence. Angewandte Chemie, 2022, 134, .	1.6	20
75	New alternating electron donor–acceptor conjugated polymers entailing (E)-[4,4′-biimidazolylidene]-5,5′(1H,1′H)-dione moieties. Polymer Chemistry, 2013, 4, 5283.	1.9	19
76	Mitochondrial targeted AIEgen phototheranostics for bypassing immune barrier via encumbering mitochondria functions. Biomaterials, 2022, 283, 121409.	5.7	18
77	A stabilized lamellar liquid crystalline phase with aggregation-induced emission features based on pyrrolopyrrole derivatives. Materials Chemistry Frontiers, 2019, 3, 1105-1112.	3.2	17
78	Selenium atoms induce organic doped systems to produce pure phosphorescence emission. Chemical Communications, 2022, 58, 1179-1182.	2.2	17
79	High Performance Ternary Organic Solar Cells due to Favored Interfacial Connection by a Non-Fullerene Electron Acceptor with Cross-Like Molecular Geometry. Journal of Physical Chemistry C, 2018, 122, 11305-11311.	1.5	16
80	Conformational sensitivity of tetraphenyl-1,3-butadiene derivatives with aggregation-induced emission characteristics. Science China Chemistry, 2019, 62, 1393-1397.	4.2	16
81	Turn-on and color-switchable red luminescent liquid crystals based on pyrrolopyrrole derivatives. Journal of Materials Chemistry C, 2020, 8, 11177-11184.	2.7	15
82	Thiepinâ€Fused Heteroacenes: Simple Synthesis, Unusual Structure, and Semiconductors with Less Anisotropic Behavior. Chemistry - A European Journal, 2013, 19, 14573-14580.	1.7	14
83	Ï€â€Extented Conjugated Polymers Entailing Pechmann Dye Moieties for Solutionâ€Processed Ambipolar Organic Semiconductors. Chinese Journal of Chemistry, 2014, 32, 788-796.	2.6	14
84	Synthesis of Heterocyclic Core-Expanded Bis-Naphthalene Tetracarboxylic Diimides. Organic Letters, 2019, 21, 9734-9737.	2.4	13
85	Catalystâ€Free Multicomponent Cyclopolymerizations of Diisocyanides, Activated Alkynes, and 1,4â€Dibromoâ€2,3â€Butanedione: a Facile Strategy toward Functional Polyiminofurans Containing Bromomethyl Groups. Macromolecular Rapid Communications, 2021, 42, e2000463.	2.0	13
86	Donor strategy for promoting nonradiative decay to achieve an efficient photothermal therapy for treating cancer. Science China Chemistry, 2021, 64, 1530-1539.	4.2	12
87	Controlled Self-Assembly of Cyclophane Amphiphiles: From 1D Nanofibers to Ultrathin 2D Topological Structures. Macromolecules, 2016, 49, 5172-5178.	2.2	11
88	Investigating the Optical Properties of Thiophene Additions to <i>s</i> -Indacene Donors with Diketopyrrolopyrrole, Isoindigo, and Thienothiophene Acceptors. Journal of Physical Chemistry C, 2018, 122, 27713-27733.	1.5	11
89	The Aggregation Regularity Effect of Multiarylpyrroles on Their Nearâ€Infrared Aggregationâ€Enhanced Emission Property. Chemistry - A European Journal, 2020, 26, 14947-14953.	1.7	10
90	A vinyl flanked difluorobenzothiadiazole–dithiophene conjugated polymer for high performance organic field-effect transistors. Journal of Materials Chemistry C, 2018, 6, 1774-1779.	2.7	9

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91	Pechmann Dyeâ€Based Molecules Containing Fluorobenzene Moieties for Ambipolar Organic Semiconductors. Asian Journal of Organic Chemistry, 2018, 7, 592-597.	1.3	9
92	Synthesis and characterization of poly(ethene–ketone–arylene–ketone)s containing pendant methylthio groups <i>via</i> metal-free catalyzed copolymerization of aryldiynes with DMSO. Polymer Chemistry, 2018, 9, 4404-4412.	1.9	9
93	Ionic liquid crystals with aggregation-induced emission properties based on pyrrolo[3,2- <i>b</i>]pyrrole salt compounds. Materials Chemistry Frontiers, 2019, 3, 1385-1390.	3.2	9
94	Multicomponent Spiropolymerization of Diisocyanides, Diethyl Acetylenedicarboxylate, and Halogenated Quinones. Macromolecular Rapid Communications, 2021, 42, e2100029.	2.0	9
95	Multi-vinyl linked benzothiadiazole conjugated polymers: high performance, low crystalline material for transistors. Chemical Communications, 2017, 53, 8176-8179.	2.2	8
96	Strong Near-Infrared Solid Emission and Enhanced N-Type Mobility for Poly(naphthalene Diimide) Vinylene by a Random Polymerization Strategy. Macromolecules, 2019, 52, 8332-8338.	2.2	8
97	UV-detecting dual-responsive strips based on dicyanoacetate-containing hexaphenylbutadiene with aggregation-induced emission characteristic. Dyes and Pigments, 2020, 175, 108169.	2.0	8
98	Coumarin-substituted pyrrole derivatives with aggregation-enhanced emission characteristics for detecting the glass transition temperature of polymers. Dyes and Pigments, 2021, 188, 109222.	2.0	8
99	Synthesis of Alternating Donor–Acceptor Ladderâ€Type Molecules and Investigation of Their Multiple Chargeâ€Transfer Pathways. Angewandte Chemie, 2018, 130, 6552-6558.	1.6	7
100	A Freezingâ€Induced Turnâ€On Imaging Modality for Realâ€Time Monitoring of Cancer Cells in Cryosurgery. Angewandte Chemie, 2019, 131, 3874-3877.	1.6	7
101	Molecular Control of Charge Carrier and Seebeck Coefficient in Hybrid Two-Dimensional Nanoparticle Superlattices. Journal of Physical Chemistry C, 2020, 124, 17-24.	1.5	7
102	Responsive Gels with the Polymer Containing Alternating Naphthalene Diimide and Fluorinated Alkyl Chains: Gel Formation and Responsiveness as Well as Electrical Conductivity of Polymer Thin Films. Chinese Journal of Chemistry, 2012, 30, 1453-1458.	2.6	6
103	Inhomogeneity of the Ultrafast Excited State Dynamics in Organic Photovoltaic Materials Measured at Nanoscale. Journal of Physical Chemistry C, 2018, 122, 22201-22209.	1.5	6
104	Photophysical implications of ring fusion, linker length, and twisting angle in a series of perylenediimide–thienoacene dimers. Chemical Science, 2020, 11, 7133-7143.	3.7	6
105	MDM2â€Associated Clusterizationâ€Triggered Emission and Apoptosis Induction Effectuated by a Theranostic Spiropolymer. Angewandte Chemie, 2020, 132, 8513-8517.	1.6	6
106	Multicomponent Spiropolymerization of Diisocyanides, Activated Alkynes, and Bis-Anhydrides. Macromolecules, 2022, 55, 6150-6159.	2.2	6
107	Vinylene spacer effects of benzothiadiazole–quarterthiophene based conjugated polymers on transistor mobilities. New Journal of Chemistry, 2018, 42, 15372-15378.	1.4	5
108	Effects of Intra- and Interchain Interactions on Exciton Dynamics of PTB7 Revealed by Model Oligomers. Molecules, 2020, 25, 2441.	1.7	4

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109	A "Turn-on―fluorescent bioprobe with aggregation-induced emission characteristics for detection of influenza virus-specific hemagglutinin protein. Sensors and Actuators B: Chemical, 2021, 345, 130392.	4.0	4
110	Frontispiece: Aggregationâ€Induced Emission of Multiphenylâ€Substituted 1,3â€Butadiene Derivatives: Synthesis, Properties and Application. Chemistry - A European Journal, 2018, 24, .	1.7	2
111	Molecular Design towards Controlling Charge Transport. Chemistry - A European Journal, 2018, 24, 17180-17187.	1.7	2
112	A supramolecular approach for the synthesis of cross-linked ionic polyacetylene network gels. Materials Chemistry Frontiers, 2020, 4, 645-650.	3.2	2
113	Donor–Acceptor Molecules: A Cruciform Electron Donor–Acceptor Semiconductor with Solidâ€State Red Emission: 1D/2D Optical Waveguides and Highly Sensitive/Selective Detection of H ₂ S Gas (Adv. Funct. Mater. 27/2014). Advanced Functional Materials, 2014, 24, 4376-4376.	7.8	1
114	Frontispiece: Synthesis of Alternating Donor–Acceptor Ladderâ€Type Molecules and Investigation of Their Multiple Chargeâ€Transfer Pathways. Angewandte Chemie - International Edition, 2018, 57, .	7.2	1
115	Rücktitelbild: Halogen Bonding: A New Platform for Achieving Multiâ€Stimuliâ€Responsive Persistent Phosphorescence (Angew. Chem. 13/2022). Angewandte Chemie, 2022, 134, .	1.6	1
116	Amphiphilic and Zwitterionic Multi Arylpyrroles with Nearâ€Infrared Aggregationâ€Induced Emission for Cell Membrane Imaging. ChemNanoMat, 2022, 8, .	1.5	1
117	Frontispiz: Synthesis of Alternating Donor–Acceptor Ladderâ€Type Molecules and Investigation of Their Multiple Chargeâ€Transfer Pathways. Angewandte Chemie, 2018, 130, .	1.6	0
118	Frontispiece: Molecular Design towards Controlling Charge Transport. Chemistry - A European Journal, 2018, 24, .	1.7	0