

Zhengxu Cai

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

111
papers

3,103
citations

29
h-index

51
g-index

123
ext. papers

4,121
ext. citations

8.6
avg, IF

5.58
L-index

#	Paper	IF	Citations
111	Guest-host doped strategy for constructing ultralong-lifetime near-infrared organic phosphorescence materials for bioimaging.. <i>Nature Communications</i> , 2022 , 13, 186	17.4	21
110	Cross-Linked Polyphosphazene Nanospheres Boosting Long-Lived Organic Room-Temperature Phosphorescence.. <i>Journal of the American Chemical Society</i> , 2022 ,	16.4	11
109	Mitochondrial targeted AIEgen phototheranostics for bypassing immune barrier via encumbering mitochondria functions.. <i>Biomaterials</i> , 2022 , 283, 121409	15.6	2
108	Synthesis of Multi-phenyl-substituted Pyrrole (MPP)-based AIE Materials and Their Applications 2022 , 195-220		0
107	Protic acids as third components improve the phosphorescence properties of the guest-host system through hydrogen bonds. <i>Chemical Engineering Journal</i> , 2021 , 433, 133530	14.7	7
106	Recent Progress in Pure Organic Room Temperature Phosphorescence of Small Molecular Host-Guest Systems 2021 , 3, 379-397		44
105	Coumarin-substituted pyrrole derivatives with aggregation-enhanced emission characteristics for detecting the glass transition temperature of polymers. <i>Dyes and Pigments</i> , 2021 , 188, 109222	4.6	5
104	Sub-5 nm single crystalline organic p-n heterojunctions. <i>Nature Communications</i> , 2021 , 12, 2774	17.4	20
103	Multicomponent Spiropolymerization of Diisocyanides, Diethyl Acetylenedicarboxylate, and Halogenated Quinones. <i>Macromolecular Rapid Communications</i> , 2021 , 42, e2100029	4.8	4
102	Influence of Guest/Host Morphology on Room Temperature Phosphorescence Properties of Pure Organic Doped Systems. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 7357-7364	6.4	13
101	Catalyst-Free Multicomponent Cyclopolymerizations of Diisocyanides, Activated Alkynes, and 1,4-Dibromo-2,3-Butanedione: a Facile Strategy toward Functional Polyiminofurans Containing Bromomethyl Groups. <i>Macromolecular Rapid Communications</i> , 2021 , 42, e2000463	4.8	6
100	Recent progress of aggregation-induced emission luminogens (AIEgens) for bacterial detection and theranostics. <i>Materials Chemistry Frontiers</i> , 2021 , 5, 1164-1184	7.8	13
99	Excitation-Dependent Triplet-Singlet Intensity from Organic Host-Guest Materials: Tunable Color, White-Light Emission, and Room-Temperature Phosphorescence. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 1814-1821	6.4	42
98	Donor strategy for promoting nonradiative decay to achieve an efficient photothermal therapy for treating cancer. <i>Science China Chemistry</i> , 2021 , 64, 1530-1539	7.9	2
97	Rational design of pyrrole derivatives with aggregation-induced phosphorescence characteristics for time-resolved and two-photon luminescence imaging. <i>Nature Communications</i> , 2021 , 12, 4883	17.4	23
96	A Turn-on Fluorescent bioprobe with aggregation-induced emission characteristics for detection of influenza virus-specific hemagglutinin protein. <i>Sensors and Actuators B: Chemical</i> , 2021 , 345, 130392	8.5	0
95	Fluorene-based host-guest phosphorescence materials for information encryption. <i>Chemical Engineering Journal</i> , 2021 , 426, 131607	14.7	13

94	Efficient and organic host-guest room-temperature phosphorescence: tunable triplet-singlet crossing and theoretical calculations for molecular packing. <i>Chemical Science</i> , 2021 , 12, 6518-6525	9.4	34
93	Pure room temperature phosphorescence emission of an organic host-guest doped system with a quantum efficiency of 64%. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 3391-3395	7.1	23
92	Clusterization-Triggered Color-Tunable Room-Temperature Phosphorescence from 1,4-Dihydropyridine-Based Polymers.. <i>Journal of the American Chemical Society</i> , 2021 ,	16.4	8
91	Effects of Intra- and Interchain Interactions on Exciton Dynamics of PTB7 Revealed by Model Oligomers. <i>Molecules</i> , 2020 , 25,	4.8	3
90	Wide-Range Color-Tunable Organic Phosphorescence Materials for Printable and Writable Security Inks. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 16054-16060	16.4	133
89	Wide-Range Color-Tunable Organic Phosphorescence Materials for Printable and Writable Security Inks. <i>Angewandte Chemie</i> , 2020 , 132, 16188-16194	3.6	10
88	Advanced functional polymer materials. <i>Materials Chemistry Frontiers</i> , 2020 , 4, 1803-1915	7.8	70
87	The Aggregation Regularity Effect of Multiarylpyrroles on Their Near-Infrared Aggregation-Enhanced Emission Property. <i>Chemistry - A European Journal</i> , 2020 , 26, 14947-14953	4.8	3
86	Photophysical implications of ring fusion, linker length, and twisting angle in a series of peryleneimide-thienoacene dimers. <i>Chemical Science</i> , 2020 , 11, 7133-7143	9.4	3
85	Turn-on and color-switchable red luminescent liquid crystals based on pyrrolopyrrole derivatives. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 11177-11184	7.1	8
84	MDM2-Associated Clusterization-Triggered Emission and Apoptosis Induction Effectuated by a Theranostic Spiropolymer. <i>Angewandte Chemie</i> , 2020 , 132, 8513-8517	3.6	0
83	MDM2-Associated Clusterization-Triggered Emission and Apoptosis Induction Effectuated by a Theranostic Spiropolymer. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 8435-8439	16.4	26
82	Spontaneous Multicomponent Polymerization of Imidazole, Diacetylenic Esters, and Diisocyanates for the Preparation of Poly(β-aminoacrylate)s with Cluster-Induced Emission Characteristics. <i>Macromolecules</i> , 2020 , 53, 1054-1062	5.5	16
81	UV-detecting dual-responsive strips based on dicyanoacetate-containing hexaphenylbutadiene with aggregation-induced emission characteristic. <i>Dyes and Pigments</i> , 2020 , 175, 108169	4.6	3
80	Molecular Control of Charge Carrier and Seebeck Coefficient in Hybrid Two-Dimensional Nanoparticle Superlattices. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 17-24	3.8	2
79	A supramolecular approach for the synthesis of cross-linked ionic polyacetylene network gels. <i>Materials Chemistry Frontiers</i> , 2020 , 4, 645-650	7.8	2
78	Tunable Phosphorescence/Fluorescence Dual Emissions of Organic Isoquinoline-Benzophenone Doped Systems by Alkoxy Engineering. <i>Chemistry - A European Journal</i> , 2020 , 26, 17376-17380	4.8	17
77	Functional Isocyanide-Based Polymers. <i>Accounts of Chemical Research</i> , 2020 , 53, 2879-2891	24.3	15

76	Activating intramolecular singlet exciton fission by altering bridge flexibility in perylene diimide trimers for organic solar cells. <i>Chemical Science</i> , 2020 , 11, 8757-8770	9.4	8
75	Conformational sensitivity of tetraphenyl-1,3-butadiene derivatives with aggregation-induced emission characteristics. <i>Science China Chemistry</i> , 2019 , 62, 1393-1397	7.9	8
74	Revealing Insight into Long-Lived Room-Temperature Phosphorescence of Host-Guest Systems. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 6019-6025	6.4	61
73	Real time bioimaging for mitochondria by taking the aggregation process of aggregation-induced emission near-infrared dyes with wash-free staining. <i>Materials Chemistry Frontiers</i> , 2019 , 3, 57-63	7.8	29
72	A Freezing-Induced Turn-On Imaging Modality for Real-Time Monitoring of Cancer Cells in Cryosurgery. <i>Angewandte Chemie</i> , 2019 , 131, 3874-3877	3.6	7
71	A novel strategy for realizing dual state fluorescence and low-temperature phosphorescence. <i>Materials Chemistry Frontiers</i> , 2019 , 3, 284-291	7.8	24
70	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. <i>Macromolecules</i> , 2019 , 52, 3319-3326	5.5	17
69	Ionic liquid crystals with aggregation-induced emission properties based on pyrrolo[3,2-b]pyrrole salt compounds. <i>Materials Chemistry Frontiers</i> , 2019 , 3, 1385-1390	7.8	7
68	Improving the Electronic Transporting Property for Flexible Field-Effect Transistors with Naphthalene Diimide-Based Conjugated Polymer through Branching/Linear Side-Chain Engineering Strategy. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 15837-15844	9.5	25
67	A stabilized lamellar liquid crystalline phase with aggregation-induced emission features based on pyrrolopyrrole derivatives. <i>Materials Chemistry Frontiers</i> , 2019 , 3, 1105-1112	7.8	9
66	Dopant-Dependent Increase in Seebeck Coefficient and Electrical Conductivity in Blended Polymers with Offset Carrier Energies. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800618	6.4	22
65	Effects of fused rings linked to the 2,5-position of pyrrole derivatives with near-infrared emission on their aggregation-enhanced emission properties. <i>Materials Chemistry Frontiers</i> , 2019 , 3, 2072-2076	7.8	15
64	Triphenylquinoline (TPQ)-Based Dual-State Emissive Probe for Cell Imaging in Multicellular Tumor Spheroids.. <i>ACS Applied Bio Materials</i> , 2019 , 2, 3686-3692	4.1	10
63	Strong Near-Infrared Solid Emission and Enhanced N-Type Mobility for Poly(naphthalene Diimide) Vinylene by a Random Polymerization Strategy. <i>Macromolecules</i> , 2019 , 52, 8332-8338	5.5	5
62	Synthesis of Heterocyclic Core-Expanded Bis-Naphthalene Tetracarboxylic Diimides. <i>Organic Letters</i> , 2019 , 21, 9734-9737	6.2	8
61	A Freezing-Induced Turn-On Imaging Modality for Real-Time Monitoring of Cancer Cells in Cryosurgery. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 3834-3837	16.4	33
60	Fast Deposition of Aligning Edge-On Polymers for High-Mobility Ambipolar Transistors. <i>Advanced Materials</i> , 2019 , 31, e1805761	24	48
59	Synthesis of Poly(aminefuranarylene)s through a One-Pot Catalyst-Free in Situ Cyclopolymerization of Diisocyanide, Dialkylacetylene Dicarboxylates, and Dialdehyde. <i>Macromolecules</i> , 2019 , 52, 729-737	5.5	18

58	Intra-molecular Charge Transfer and Electron Delocalization in Non-fullerene Organic Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 10043-10052	9.5	20
57	Synthesis of Polyquinolines via One-Pot Polymerization of Alkyne, Aldehyde, and Aniline under Metal-Free Catalysis and Their Properties. <i>Macromolecules</i> , 2018 , 51, 3254-3263	5.5	22
56	Charge Mobility Enhancement for Conjugated DPP-Selenophene Polymer by Simply Replacing One Bulky Branching Alkyl Chain with Linear One at Each DPP Unit. <i>Chemistry of Materials</i> , 2018 , 30, 3090-3100	8.6	80
55	Synthesis of Alternating Donor-Acceptor Ladder-Type Molecules and Investigation of Their Multiple Charge-Transfer Pathways. <i>Angewandte Chemie</i> , 2018 , 130, 6552-6558	3.6	7
54	A Turn-On Fluorescent chemosensor with the aggregation-induced emission characteristic for high-sensitive detection of Ce ion. <i>Sensors and Actuators B: Chemical</i> , 2018 , 267, 351-356	8.5	25
53	A vinyl flanked difluorobenzothiadiazole-thiophene conjugated polymer for high performance organic field-effect transistors. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 1774-1779	7.1	8
52	Synthesis of Alternating Donor-Acceptor Ladder-Type Molecules and Investigation of Their Multiple Charge-Transfer Pathways. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 6442-6448	16.4	32
51	Pechmann Dye-Based Molecules Containing Fluorobenzene Moieties for Ambipolar Organic Semiconductors. <i>Asian Journal of Organic Chemistry</i> , 2018 , 7, 592-597	3	8
50	Enhancement in Open-Circuit Voltage in Organic Solar Cells by Using Ladder-Type Nonfullerene Acceptors. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 13528-13533	9.5	24
49	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. <i>Chemistry - A European Journal</i> , 2018 , 24, 434-442	4.8	20
48	Application of a Novel "Turn-on" Fluorescent Material to the Detection of Aluminum Ion in Blood Serum. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 23667-23673	9.5	25
47	Synthesis and characterization of poly(ethene- <i>b</i> -etone- <i>b</i> -arylene- <i>b</i> -etone)s containing pendant methylthio groups via metal-free catalyzed copolymerization of aryldiynes with DMSO. <i>Polymer Chemistry</i> , 2018 , 9, 4404-4412	4.9	6
46	The Dual-State Luminescent Mechanism of 2,3,4,5-Tetraphenyl-1H-pyrrole. <i>Chemistry - A European Journal</i> , 2018 , 24, 14269-14274	4.8	28
45	High Performance Ternary Organic Solar Cells due to Favored Interfacial Connection by a Non-Fullerene Electron Acceptor with Cross-Like Molecular Geometry. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 11305-11311	3.8	15
44	Vinylene spacer effects of benzothiadiazole-quarterthiophene based conjugated polymers on transistor mobilities. <i>New Journal of Chemistry</i> , 2018 , 42, 15372-15378	3.6	4
43	Molecular Design towards Controlling Charge Transport. <i>Chemistry - A European Journal</i> , 2018 , 24, 17180-17187	4.7	17
42	Metal-Organic Layers Efficiently Catalyze Photoinduced Polymerization under Visible Light. <i>Inorganic Chemistry</i> , 2018 , 57, 10489-10493	5.1	17
41	Turn-on fluorescent probe with aggregation-induced emission characteristics for polyazoles. <i>Materials Chemistry Frontiers</i> , 2018 , 2, 1779-1783	7.8	20

40	Charge Transfer and Aggregation Effects on the Performance of Planar vs Twisted Nonfullerene Acceptor Isomers for Organic Solar Cells. <i>Chemistry of Materials</i> , 2018 , 30, 4263-4276	9.6	29
39	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. <i>Polymer Chemistry</i> , 2018 , 9, 5543-5550	4.9	19
38	Frontispiece: Synthesis of Alternating Donor-Acceptor Ladder-Type Molecules and Investigation of Their Multiple Charge-Transfer Pathways. <i>Angewandte Chemie - International Edition</i> , 2018 , 57,	16.4	1
37	Investigations of Thienoacene Molecules for Classical and Entangled Two-Photon Absorption. <i>Journal of Physical Chemistry A</i> , 2018 , 122, 8167-8182	2.8	14
36	Investigating the Optical Properties of Thiophene Additions to s-Indacene Donors with Diketopyrrolopyrrole, Isoindigo, and Thienothiophene Acceptors. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 27713-27733	3.8	7
35	Frontispiece: Aggregation-Induced Emission of Multiphenyl-Substituted 1,3-Butadiene Derivatives: Synthesis, Properties and Application. <i>Chemistry - A European Journal</i> , 2018 , 24,	4.8	1
34	Exploration of Syntheses and Functions of Higher Ladder-type π -Conjugated Heteroacenes. <i>Chem</i> , 2018 , 4, 2538-2570	16.2	54
33	Inhomogeneity of the Ultrafast Excited State Dynamics in Organic Photovoltaic Materials Measured at Nanoscale. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 22201-22209	3.8	5
32	Aggregation-Induced Emission of Multiphenyl-Substituted 1,3-Butadiene Derivatives: Synthesis, Properties and Application. <i>Chemistry - A European Journal</i> , 2018 , 24, 15965-15977	4.8	22
31	Propeller-Shaped Acceptors for High-Performance Non-Fullerene Solar Cells: Importance of the Rigidity of Molecular Geometry. <i>Chemistry of Materials</i> , 2017 , 29, 1127-1133	9.6	77
30	A Single-Molecular AND Gate Operated with Two Orthogonal Switching Mechanisms. <i>Advanced Materials</i> , 2017 , 29, 1701248	24	33
29	Molecular Rectification Tuned by Through-Space Gating Effect. <i>Nano Letters</i> , 2017 , 17, 308-312	11.5	43
28	Two Photon Absorption Study of Low-Bandgap, Fully Conjugated Perylene Diimide-Thienoacene-Perylene Diimide Ladder-Type Molecules. <i>Chemistry of Materials</i> , 2017 , 29, 6726-6732	9.6	47
27	Multi-vinyl linked benzothiadiazole conjugated polymers: high performance, low crystalline material for transistors. <i>Chemical Communications</i> , 2017 , 53, 8176-8179	5.8	7
26	Beyond Molecular Wires: Design Molecular Electronic Functions Based on Dipolar Effect. <i>Accounts of Chemical Research</i> , 2016 , 49, 1852-63	24.3	47
25	Remarkable enhancement of charge carrier mobility of conjugated polymer field-effect transistors upon incorporating an ionic additive. <i>Science Advances</i> , 2016 , 2, e1600076	14.3	115
24	Donor-Acceptor Porous Conjugated Polymers for Photocatalytic Hydrogen Production: The Importance of Acceptor Comonomer. <i>Macromolecules</i> , 2016 , 49, 6903-6909	5.5	96
23	Rational Design of Porous Conjugated Polymers and Roles of Residual Palladium for Photocatalytic Hydrogen Production. <i>Journal of the American Chemical Society</i> , 2016 , 138, 7681-6	16.4	302

22	Proton-triggered switch based on a molecular transistor with edge-on gate. <i>Chemical Science</i> , 2016 , 7, 3137-3141	9.4	34
21	Electron Acceptors Based on β -Substituted Perylene Diimide (PDI) for Organic Solar Cells. <i>Chemistry of Materials</i> , 2016 , 28, 1139-1146	9.6	165
20	Synthesis of Ladder-Type Thienoacenes and Their Electronic and Optical Properties. <i>Journal of the American Chemical Society</i> , 2016 , 138, 868-75	16.4	68
19	Photocatalysts Based on Cobalt-Chelating Conjugated Polymers for Hydrogen Evolution from Water. <i>Chemistry of Materials</i> , 2016 , 28, 5394-5399	9.6	67
18	Structure control and photocatalytic performance of porous conjugated polymers based on perylene diimide. <i>Polymer Chemistry</i> , 2016 , 7, 4937-4943	4.9	34
17	Controlled Self-Assembly of Cyclophane Amphiphiles: From 1D Nanofibers to Ultrathin 2D Topological Structures. <i>Macromolecules</i> , 2016 , 49, 5172-5178	5.5	7
16	Exceptional Single-Molecule Transport Properties of Ladder-Type Heteroacene Molecular Wires. <i>Journal of the American Chemical Society</i> , 2016 , 138, 10630-5	16.4	63
15	A Cruciform Electron Donor-Acceptor Semiconductor with Solid-State Red Emission: 1D/2D Optical Waveguides and Highly Sensitive/Selective Detection of H ₂ S Gas. <i>Advanced Functional Materials</i> , 2014 , 24, 4250-4258	15.6	77
14	Extended conjugated donor-acceptor molecules with E-(1,2-difluorovinyl) and diketopyrrolopyrrole (DPP) moieties toward high-performance ambipolar organic semiconductors. <i>Chemistry - an Asian Journal</i> , 2014 , 9, 1068-75	4.5	26
13	Alternating Conjugated Electron Donor-Acceptor Polymers Entailing Pechmann Dye Framework as the Electron Acceptor Moieties for High Performance Organic Semiconductors with Tunable Characteristics. <i>Macromolecules</i> , 2014 , 47, 2899-2906	5.5	53
12	Donor-Acceptor Molecules: A Cruciform Electron Donor-Acceptor Semiconductor with Solid-State Red Emission: 1D/2D Optical Waveguides and Highly Sensitive/Selective Detection of H ₂ S Gas (Adv. Funct. Mater. 27/2014). <i>Advanced Functional Materials</i> , 2014 , 24, 4376-4376	15.6	1
11	New dithienyl-diketopyrrolopyrrole-based conjugated molecules entailing electron withdrawing moieties for organic ambipolar semiconductors and photovoltaic materials. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 10101-10109	7.1	25
10	β -Extended Conjugated Polymers Entailing Pechmann Dye Moieties for Solution-Processed Ambipolar Organic Semiconductors. <i>Chinese Journal of Chemistry</i> , 2014 , 32, 788-796	4.9	13
9	Solution-processed core-extended naphthalene diimides toward organic n-type and ambipolar semiconductors. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 2688	7.1	28
8	New Donor-Acceptor-Donor Molecules with Pechmann Dye as the Core Moiety for Solution-Processed Good-Performance Organic Field-Effect Transistors. <i>Chemistry of Materials</i> , 2013 , 25, 471-478	9.6	76
7	New alternating electron donor-Acceptor conjugated polymers entailing (E)-[4,4'-biimidazolylidene]-5,5'-(1H,1'H)-dione moieties. <i>Polymer Chemistry</i> , 2013 , 4, 5283	4.9	19
6	Thiopin-fused heteroacenes: simple synthesis, unusual structure, and semiconductors with less anisotropic behavior. <i>Chemistry - A European Journal</i> , 2013 , 19, 14573-80	4.8	11
5	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. <i>Chinese Journal of Chemistry</i> , 2012 , 30, 1453-1458	4.9	6

4	A facile and convenient fluorescence detection of gamma-ray radiation based on the aggregation-induced emission. <i>Journal of Materials Chemistry</i> , 2011 , 21, 14487	47
3	Excited-State Modulation of Aggregation-Induced Emission Molecules for High-Efficiency Triplet Exciton Generation 1767-1777	7
2	Red-Emissive Organic Room-Temperature Phosphorescence Material for Time-Resolved Luminescence Bioimaging. <i>CCS Chemistry</i> , 1-20	7.2 8
1	Achieving Efficient Phosphorescence and Mechanoluminescence in Organic Host-Guest System by Energy Transfer. <i>Advanced Functional Materials</i> , 2108072	15.6 18