Cai-Jun Zheng

List of Publications by Citations

118 papers	3,937 citations	32 h-index	60 g-index
125 ext. papers	4,647 ext. citations	8.5 avg, IF	5.56 L-index

#	Paper	IF	Citations
118	Prediction and design of efficient exciplex emitters for high-efficiency, thermally activated delayed-fluorescence organic light-emitting diodes. *Advanced Materials*, **2015**, 27, 2378-83	24	250
117	Management of singlet and triplet excitons in a single emission layer: a simple approach for a high-efficiency fluorescence/phosphorescence hybrid white organic light-emitting device. *Advanced Materials*, **2012**, 24, 3410-4	24	215
116	Novel efficient blue fluorophors with small singlet-triplet splitting: hosts for highly efficient fluorescence and phosphorescence hybrid WOLEDs with simplified structure. *Advanced Materials*, **2013**, 25, 2205-11	24	197
115	Nearly 100% triplet harvesting in conventional fluorescent dopant-based organic light-emitting devices through energy transfer from exciplex. *Advanced Materials*, **2015**, 27, 2025-30	24	189
114	Carbazole/Sulfone Hybrid D-□A-Structured Bipolar Fluorophores for High-Efficiency Blue-Violet Electroluminescence. *Chemistry of Materials*, **2013**, 25, 2630-2637	9.6	167
113	Novel Strategy to Develop Exciplex Emitters for High-Performance OLEDs by Employing Thermally Activated Delayed Fluorescence Materials. *Advanced Functional Materials*, **2016**, 26, 2002-2008	15.6	149
112	Multifunctional electron-transporting indolizine derivatives for highly efficient blue fluorescence, orange phosphorescence host and two-color based white OLEDs. *Journal of Materials Chemistry*, **2012**, 22, 4502		147
111	Avoiding Energy Loss on TADF Emitters: Controlling the Dual Conformations of D-A Structure Molecules Based on the Pseudoplanar Segments. *Advanced Materials*, **2017**, 29, 1701476	24	142
110	Red Organic Light-Emitting Diode with External Quantum Efficiency beyond 20% Based on a Novel Thermally Activated Delayed Fluorescence Emitter. *Advanced Science*, **2018**, 5, 1800436	13.6	126
109	Highly efficient non-doped deep-blue organic light-emitting diodes based on anthracene derivatives. *Journal of Materials Chemistry*, **2010**, 20, 1560		108
108	Intermolecular Charge-Transfer Transition Emitter Showing Thermally Activated Delayed Fluorescence for Efficient Non-Doped OLEDs. *Angewandte Chemie - International Edition*, **2018**, 57, 9480-9484	16.1	98
107	Novel Carbazol-Pyridine-Carbonitrile Derivative as Excellent Blue Thermally Activated Delayed Fluorescence Emitter for Highly Efficient Organic Light-Emitting Devices. *ACS Applied Materials & Interfaces*, **2015**, 7, 18930-6	9.5	97
106	Thermally Activated Delayed Fluorescence Carbonyl Derivatives for Organic Light-Emitting Diodes with Extremely Narrow Full Width at Half-Maximum. *ACS Applied Materials & Interfaces*, **2019**, 11, 13472-13480	9.5	90
105	New Ambipolar Hosts Based on Carbazole and 4,5-Diazafluorene Units for Highly Efficient Blue Phosphorescent OLEDs with Low Efficiency Roll-Off. *Chemistry of Materials*, **2012**, 24, 643-650	9.6	85
104	High Performance Exciplex-Based Fluorescence□Phosphorescence White Organic Light-Emitting Device with Highly Simplified Structure. *Chemistry of Materials*, **2015**, 27, 5206-5211	9.6	76
103	Delayed Fluorescence Emitter Enables Near 17% Efficiency Ternary Organic Solar Cells with Enhanced Storage Stability and Reduced Recombination Energy Loss. *Advanced Functional Materials*, **2020**, 30, 1909837	15.6	75
102	Control of Dual Conformations: Developing Thermally Activated Delayed Fluorescence Emitters for Highly Efficient Single-Emitter White Organic Light-Emitting Diodes. *ACS Applied Materials & Interfaces*, **2018**, 10, 31515-31525	9.5	60

101	Novel Blue Fluorophor with High Triplet Energy Level for High Performance Single-Emitting-Layer Fluorescence and Phosphorescence Hybrid White Organic Light-Emitting Diodes. *Chemistry of Materials*, **2013**, 25, 4454-4459	9.6	58
100	Synthesis, Structure, and Photophysical Properties of Two Four-Coordinate Cu(I)-NHC Complexes with Efficient Delayed Fluorescence. *Inorganic Chemistry*, **2016**, 55, 2157-64	5.1	54
99	Coumarin-Based Thermally Activated Delayed Fluorescence Emitters with High External Quantum Efficiency and Low Efficiency Roll-off in the Devices. *ACS Applied Materials & Interfaces*, **2017**, 9, 8848-8854	9.5	53
98	Isomeric Thermally Activated Delayed Fluorescence Emitters for Color Purity-Improved Emission in Organic Light-Emitting Devices. *ACS Applied Materials & Interfaces*, **2016**, 8, 16791-8	9.5	51
97	High Performance All Fluorescence White Organic Light Emitting Devices with a Highly Simplified Structure Based on Thermally Activated Delayed Fluorescence Dopants and Host. *ACS Applied Materials & Interfaces*, **2016**, 8, 32984-32991	9.5	48
96	Novel bipolar host materials based on 1,3,5-triazine derivatives for highly efficient phosphorescent OLEDs with extremely low efficiency roll-off. *Physical Chemistry Chemical Physics*, **2012**, 14, 14255-61	3.6	48
95	EQE Climbing Over 6% at High Brightness of 14350 cd/m in Deep-Blue OLEDs Based on Hybridized Local and Charge-Transfer Fluorescence. *ACS Applied Materials & Interfaces*, **2018**, 10, 9629-9637	9.5	44
94	Aggregation-induced near-infrared absorption of squaraine dye in an albumin nanocomplex for photoacoustic tomography in vivo. *ACS Applied Materials & Interfaces*, **2014**, 6, 17985-92	9.5	44
93	Novel small-molecule electron donor for solution-processed ternary exciplex with 24% external quantum efficiency in organic light-emitting diode. *Materials Horizons*, **2019**, 6, 1425-1432	14.4	42
92	Efficient solution-processed blue and white OLEDs based on a high-triplet bipolar host and a blue TADF emitter. *Organic Electronics*, **2018**, 58, 276-282	3.5	41
91	Hydrogen Bond Induced Green Solvent Processed High Performance Ternary Organic Solar Cells with Good Tolerance on Film Thickness and Blend Ratios. *Advanced Functional Materials*, **2019**, 29, 1902078	15.6	40
90	Theoretical investigation of the singlet-triplet splittings for carbazole-based thermally activated delayed fluorescence emitters. *Physical Chemistry Chemical Physics*, **2016**, 18, 26623-26629	3.6	36
89	Multifunctional terpyridine/diphenylamine derivatives as highly efficient blue fluorescent emitters and red phosphorescent hosts. *Journal of Materials Chemistry C*, **2015**, 3, 1068-1076	7.1	33
88	High-performance fluorescent/phosphorescent (F/P) hybrid white OLEDs consisting of a yellowish-green phosphorescent emitter. *Journal of Materials Chemistry C*, **2016**, 4, 5907-5913	7.1	33
87	Thermally activated delayed fluorescence exciplex emitters for high-performance organic light-emitting diodes. *Materials Horizons*, **2021**, 8, 401-425	14.4	33
86	A comparative study of carbazole-based thermally activated delayed fluorescence emitters with different steric hindrance. *Journal of Materials Chemistry C*, **2017**, 5, 4797-4803	7.1	31
85	Blue and white solution-processed TADF-OLEDs with over 20% EQE, low driving voltages and moderate efficiency decrease based on interfacial exciplex hosts. *Journal of Materials Chemistry C*, **2019**, 7, 11806-11812	7.1	31
84	High efficiency non-doped deep-blue and fluorescent/phosphorescent white organic light-emitting diodes based on an anthracene derivative. *Synthetic Metals*, **2015**, 203, 49-53	3.6	31

83	Multifunctional Phenanthroimidazole Derivatives to Realize High-Performance Deep-Blue and White Organic Light-Emitting Diodes. *Advanced Optical Materials*, **2017**, 5, 1700498	8.1	31
82	Modulating the molecular packing and distribution enables fullerene-free ternary organic solar cells with high efficiency and long shelf-life. *Journal of Materials Chemistry A*, **2019**, 7, 20139-20150	13	30
81	A high-efficiency hybrid white organic light-emitting diode enabled by a new blue fluorophor. *Journal of Materials Chemistry C*, **2015**, 3, 4283-4289	7.1	30
80	Ternary Organic Solar Cells with Coumarin7 as the Donor Exhibiting Greater Than 10% Power Conversion Efficiency and a High Fill Factor of 75. *ACS Applied Materials & Interfaces*, **2017**, 9, 29907-29916	9.5	29
79	Tricomponent Exciplex Emitter Realizing over 20% External Quantum Efficiency in Organic Light-Emitting Diode with Multiple Reverse Intersystem Crossing Channels. *Advanced Science*, **2019**, 6, 1801938	13.6	27
78	Efficient violet non-doped organic light-emitting device based on a pyrene derivative with novel molecular structure. *Organic Electronics*, **2015**, 23, 179-185	3.5	25
77	Efficient, color-stable and high color-rendering-index white organic light-emitting diodes employing full thermally activated delayed fluorescence system. *Organic Electronics*, **2017**, 50, 466-472	3.5	25
76	Excimer emission induced intra-system self-absorption enhancement – a novel strategy to realize high efficiency and excellent stability ternary organic solar cells processed in green solvents. *Journal of Materials Chemistry A*, **2018**, 6, 23840-23855	13	25
75	Hydrogen bond induced high performance ternary fullerene-free organic solar cells with increased current density and enhanced stability. *Journal of Materials Chemistry C*, **2018**, 6, 9691-9702	7.1	24
74	Non-blinking, highly luminescent, pH- and heavy-metal-ion-stable organic nanodots for bio-imaging. *Journal of Materials Chemistry B*, **2013**, 1, 3144-3151	7.3	24
73	White OLEDs with an EQE of 21% at 5000 cd m⁻² and Ultra High Color Stability Based on Exciplex Host. *Advanced Optical Materials*, **2018**, 6, 1800825	8.1	24
72	Centimeter-Long Single-Crystalline Si Nanowires. *Nano Letters*, **2017**, 17, 7323-7329	11.5	23
71	Efficient solution-processed orange-red organic light-emitting diodes based on a novel thermally activated delayed fluorescence emitter. *Journal of Materials Chemistry C*, **2018**, 6, 9152-9157	7.1	21
70	Hydrogen bond-modulated molecular packing and its applications in high-performance non-doped organic electroluminescence. *Materials Horizons*, **2020**, 7, 2734-2740	14.4	21
69	Highly efficient green and red OLEDs based on a new exciplex system with simple structures. *Organic Electronics*, **2017**, 43, 136-141	3.5	20
68	High performance opaque and semi-transparent organic solar cells with good tolerance to film thickness realized by a unique solid additive. *Journal of Materials Chemistry A*, **2019**, 7, 7437-7450	13	20
67	Hydrogen-Bonding Strategy to Optimize Charge Distribution of PC71BM and Enable a High Efficiency of 12.45% for Organic Solar Cells. *Solar Rrl*, **2018**, 2, 1800038	7.1	20
66	High-performance red organic light-emitting devices based on an exciplex system with thermally activated delayed fluorescence characteristic. *Organic Electronics*, **2016**, 39, 10-15	3.5	20

65	Using fluorene to lock electronically active moieties in thermally activated delayed fluorescence emitters for high-performance non-doped organic light-emitting diodes with suppressed roll-off. *Chemical Science*, **2020**, 12, 1495-1502	9.4	20
64	Layer-by-Layer Solution Processing Method for Organic Solar Cells. *Solar Rrl*, **2021**, 5, 2000592	7.1	19
63	Optimization on Molecular Restriction for Highly Efficient Thermally Activated Delayed Fluorescence Emitters. *Advanced Optical Materials*, **2018**, 6, 1800935	8.1	19
62	A novel nicotinonitrile derivative as an excellent multifunctional blue fluorophore for highly efficient hybrid white organic light-emitting devices. *Journal of Materials Chemistry C*, **2015**, 3, 8817-8823	7.1	18
61	Bromine-substituted triphenylamine derivatives with improved hole-mobility for highly efficient green phosphorescent OLEDs with a low operating voltage. *Journal of Materials Chemistry C*, **2016**, 4, 10301-10308	7.1	17
60	Efficient solution-processed red organic light-emitting diode based on an electron-donating building block of pyrrolo[3,2-b]pyrrole. *Organic Electronics*, **2019**, 65, 110-115	3.5	17
59	Excellent deep-blue emitting materials based on anthracene derivatives for non-doped organic light-emitting diodes. *Optical Materials*, **2016**, 58, 260-267	3.3	16
58	Intermolecular Charge-Transfer Transition Emitter Showing Thermally Activated Delayed Fluorescence for Efficient Non-Doped OLEDs. *Angewandte Chemie*, **2018**, 130, 9624-9628	3.6	16
57	Development of Red Exciplex for Efficient OLEDs by Employing a Phosphor as a Component. *Frontiers in Chemistry*, **2019**, 7, 16	5	15
56	Ternary System with Intermolecular Hydrogen Bond: Efficient Strategy to High-Performance Nonfullerene Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 15598-15606	9.5	14
55	A reticuloendothelial system-stealthy dye–albumin nanocomplex as a highly biocompatible and highly luminescent nanoprobe for targeted in vivo tumor imaging. *RSC Advances*, **2014**, 4, 6120	3.7	14
54	Highly efficient ternary polymer-based solution-processable exciplex with over 20% external quantum efficiency in organic light-emitting diode. *Organic Electronics*, **2020**, 76, 105449	3.5	14
53	Highly efficient thermally activated delayed fluorescence emitters based on novel Indolo[2,3-b]acridine electron-donor. *Organic Electronics*, **2018**, 57, 327-334	3.5	12
52	Ternary organic solar cells with a phase-modulated surface distribution via the addition of a small molecular luminescent dye to obtain a high efficiency over 10.5. *Nanoscale*, **2018**, 10, 16455-16467	7.7	12
51	Dibenzofuran/dibenzothiophene as the secondary electron-donors for highly efficient blue thermally activated delayed fluorescence emitters. *Journal of Materials Chemistry C*, **2019**, 7, 4475-4483	7.1	11
50	π-stacking induced high current density and improved efficiency in ternary organic solar cells. *Nanoscale*, **2018**, 10, 9971-9980	7.7	11
49	Characterizing the Conformational Distribution in an Amorphous Film of an Organic Emitter and Its Application in a "Self-Doping" Organic Light-Emitting Diode. *Angewandte Chemie - International Edition*, **2021**, 60, 25878-25883	16.4	11
48	Highly efficient solution-processed small-molecule white organic light-emitting diodes. *Organic Electronics*, **2016**, 38, 344-349	3.5	10

47	Hydrogen bond induced high-performance quaternary organic solar cells with efficiency up to 17.48% and superior thermal stability. *Materials Chemistry Frontiers*, **2021**, 5, 3850-3858	7.8	10
46	Photomemory and Pulse Monitoring Featured Solution-Processed Near-Infrared Graphene/Organic Phototransistor with Detectivity of 2.4 □1013 Jones. *Advanced Functional Materials*, **2021**, 31, 2103988	15.6	9
45	Efficient non-doped deep-blue electroluminescence devices based on unsymmetrical and highly twisted pyrene derivatives. *New Journal of Chemistry*, **2017**, 41, 14152-14160	3.6	8
44	Thermally activated delayed fluorescence emitters with low concentration sensitivity for highly efficient organic light emitting devices. *Journal of Materials Chemistry C*, **2019**, 7, 8923-8928	7.1	8
43	Green solution-processed thermally activated delayed fluorescence OLEDs with improved performance by using interfacial exciplex host. *Organic Electronics*, **2019**, 73, 36-42	3.5	8
42	Optical absorption and photoelectrochemical performance enhancement in Si tube array for solar energy harvesting application. *Applied Physics Letters*, **2013**, 102, 163906	3.4	8
41	Novel brominated compounds using in binary additives based organic solar cells to achieve high efficiency over 10.3%. *Organic Electronics*, **2017**, 50, 507-514	3.5	8
40	Hydrogen-Bond-Induced High Performance Semitransparent Ternary Organic Solar Cells with 14% Efficiency and Enhanced Stability. *Advanced Optical Materials*, **2021**, 9, 2100064	8.1	8
39	Hydrogen-Bond-Assisted Exciplex Emitters Realizing Improved Efficiencies and Stabilities in Organic Light Emitting Diodes. *Advanced Functional Materials*, **2021**, 31, 2010100	15.6	8
38	Chiral thermally activated delayed fluorescence emitters with dual conformations based on a pair of enantiomeric donors containing asymmetric carbons. *Dyes and Pigments*, **2020**, 178, 108336	4.6	7
37	Fullerene□ ring: A new strategy to improve the performance of fullerene organic solar cells. *Organic Electronics*, **2020**, 83, 105747	3.5	7
36	Efficient and stable non-doped deep-blue organic light emitting diode based on an anthracene derivative. *Science China Chemistry*, **2011**, 54, 666-670	7.9	7
35	Highly Efficient Thermally Activated Delayed Fluorescence Emitter Developed by Replacing Carbazole With 1,3,6,8-Tetramethyl-Carbazole. *Frontiers in Chemistry*, **2019**, 7, 17	5	7
34	Fine-tuning the emissions of highly efficient thermally activated delayed fluorescence emitters with different linking positions of electron-deficient substituent groups. *Dyes and Pigments*, **2017**, 143, 62-70	4.6	6
33	Tailoring electronic structure of organic host for high-performance phosphorescent organic light-emitting diodes. *Organic Electronics*, **2014**, 15, 2763-2768	3.5	6
32	6,12-Dihydro-6,12-diboradibenzo[def,mno]chrysene: A Doubly Boron-Doped Polycyclic Aromatic Hydrocarbon for Organic Light Emitting Diodes by a One-Pot Synthesis. *Organic Letters*, **2020**, 22, 7942-7946	6.2	6
31	Delayed fluorescence material-assisted high performance ternary organic solar cells realized by prolonged exciton lifetime and diffusion length. *Journal of Materials Chemistry C*, **2020**, 8, 17429-17439	7.1	6
30	An universal morphology regulator for efficient and stable nonfullerene organic solar cells by □ interaction. *Organic Electronics*, **2020**, 86, 105827	3.5	6

29	Nonconjugated Triptycene-Spaced Donor-Acceptor-Type Emitters Showing Thermally Activated Delayed Fluorescence via Both Intra- and Intermolecular Charge-Transfer Transitions. *ACS Applied Materials & Interfaces*, **2021**, 13, 25193-25201	9.5	6
28	Introducing Trifluoromethyl to Strengthen Hydrogen Bond for High Efficiency Organic Solar Cells. *Frontiers in Chemistry*, **2020**, 8, 190	5	5
27	Non-ionic surfactant-novel agents to realize high efficiency non-fullerene opaque and semitransparent organic solar cells with Enhanced Stability. *Organic Electronics*, **2018**, 62, 195-202	3.5	5
26	Efficient Exciplex-based Green and Near-Infrared Organic Light-Emitting Diodes Employing a Novel Donor-Acceptor Type Donor. *Chemistry - an Asian Journal*, **2020**, 15, 4093-4097	4.5	5
25	Improving the efficiency of exciplex based OLEDs by controlling the different configurations of the donor. *Journal of Materials Chemistry C*, **2021**, 9, 600-608	7.1	5
24	Novel star-shaped yellow thermally activated delayed fluorescence emitter realizing over 10% external quantum efficiency at high luminance of 30000 cd m⁻² in OLED. *Organic Electronics*, **2018**, 62, 220-226	3.5	4
23	Single-Crystalline Silicon Frameworks: A New Platform for Transparent Flexible Optoelectronics. *Advanced Materials*, **2021**, 33, e2008171	24	4
22	Improving the performance of solution-processed small molecule OLEDs via micro-aggregation formed by an alcohol additive incorporation. *Organic Electronics*, **2019**, 64, 252-258	3.5	4
21	A New Multifunctional Triazine?Carbazole Compound with High Triplet Energy for High-Performance Blue Fluorescence, Green and Red Phosphorescent Host, and Hybrid White Organic Light-Emitting Diodes. *Israel Journal of Chemistry*, **2014**, 54, 952-957	3.4	3
20	Non-fullerene acceptor alloy strategy enabling stable ternary polymer solar cells with efficiency of 17.74%. *Journal of Materials Chemistry C*,	7.1	3
19	Novel triazine derivatives with deep LUMO energy levels as the electron-accepting components of exciplexes. *Journal of Materials Chemistry C*, **2021**, 9, 939-946	7.1	3
18	Ternary organic solar cells with enhanced charge transfer and stability combining the advantages of polymer acceptors and fullerene acceptors. *Organic Electronics*, **2022**, 104, 106471	3.5	3
17	Energy Transfer: Nearly 100% Triplet Harvesting in Conventional Fluorescent Dopant-Based Organic Light-Emitting Devices Through Energy Transfer from Exciplex (Adv. Mater. 12/2015). *Advanced Materials*, **2015**, 27, 2024-2024	24	2
16	Forcing dimethylacridine crooking to improve the efficiency of orange-red thermally activated delayed fluorescent emitters. *Journal of Materials Chemistry C*, **2020**, 8, 10416-10421	7.1	2
15	OLEDs: Novel Strategy to Develop Exciplex Emitters for High-Performance OLEDs by Employing Thermally Activated Delayed Fluorescence Materials (Adv. Funct. Mater. 12/2016). *Advanced Functional Materials*, **2016**, 26, 2036-2036	15.6	2
14	Quantum chemical calculation study on terphenyl arylamines hole transport materials. *Journal of the Society for Information Display*, **2015**, 23, 182-185	2.1	2
13	Reducing efficiency roll-off of phosphorescent organic light emitting diodes by using phosphor assisted energy funneling. *Organic Electronics*, **2020**, 87, 105985	3.5	2
12	Improving performance of thermally activated delayed fluorescence emitter by extending its LUMO distribution. *Science China Materials*, **2019**, 62, 719-728	7.1	2

11	Pyrene-Imidazole Based Aggregation Modifier Leads to Enhancement in Efficiency and Environmental Stability for Ternary Organic Solar Cells. *Frontiers in Chemistry*, **2018**, 6, 578	5	2
10	High-Efficiency Sequential-Cast Organic Solar Cells Enabled by Dual Solvent-Controlled Polymer Aggregation. *Solar Rrl*,2200076	7.1	2
9	High-performance organic upconversion device with 12% photon to photon conversion efficiency at 980 nm and bio-imaging application in near-infrared region. *Optics Express*, **2022**, 30, 16644	3.3	2
8	White OLEDs: Management of Singlet and Triplet Excitons in a Single Emission Layer: A Simple Approach for a High-Efficiency Fluorescence/Phosphorescence Hybrid White Organic Light-Emitting Device (Adv. Mater. 25/2012). *Advanced Materials*, **2012**, 24, 3290-3290	24	1
7	Thermally activated delayed fluorescence exciplexes in organic light-emitting diodes **2022**, 353-426		1
6	Efficient and stable single-emitting-layer white organic light-emitting diodes by employing all thermally activated delayed fluorescence emitters. *Organic Electronics*, **2022**, 101, 106415	3.5	1
5	Achieving efficient and stable organic solar cells by using polyethylene glycol to modulate the crystallization and distribution of the active layer. *Journal Physics D: Applied Physics*, **2020**, 53, 065502	3	0
4	Novel donor-spacer-acceptor compound as the multifunctional component of exciplexes for efficient organic light-emitting diodes. *Science China Materials*,1	7.1	0
3	Novel D-D?-A structure thermally activated delayed fluorescence emitters realizing over 20% external quantum efficiencies in both evaporation- and solution-processed organic light-emitting diodes. *Organic Electronics*, **2021**, 99, 106312	3.5	0
2	Exciplex Emitters: Prediction and Design of Efficient Exciplex Emitters for High-Efficiency, Thermally Activated Delayed-Fluorescence Organic Light-Emitting Diodes (Adv. Mater. 14/2015). *Advanced Materials*, **2015**, 27, 2377-2377	24	
1	Blocking Energy-Loss Pathways for Efficient All-Fluorescent Solution-processed Organic Light-emitting Diodes by Introducing Polymer Additive. *Journal of Physics: Conference Series*, **2022**, 2174, 012030	0.3	