Mao Liang

List of Publications by Year
in descending order

99 papers	4,392 citations	159585 30 h-index	110387 64 g-index
101 all docs	101 docs citations	101 times ranked	4218 citing authors

#	Article	IF	Citations
1	Arylamine organic dyes for dye-sensitized solar cells. Chemical Society Reviews, 2013, 42, 3453.	38.1	1,011
2	New Triphenylamine-Based Organic Dyes for Efficient Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2007, 111, 4465-4472.	3.1	366
3	New Triphenylamine-Based Dyes for Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2008, 112, 874-880.	3.1	334
4	Dithieno[3,2-<i>b</i>:2â€²,3â€²-<i>d</i>]pyrrole-based hole transport materials for perovskite solar cells with efficiencies over 18%. Journal of Materials Chemistry A, 2018, 6, 7950-7958.	10.3	122
5	Phenylhydrazinium Iodide for Surface Passivation and Defects Suppression in Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2000778.	14.9	103
6	Tuning Hole Transport Layer Using Urea for Highâ€Performance Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1806740.	14.9	101
7	Kinetics of Iodine-Free Redox Shuttles in Dye-Sensitized Solar Cells: Interfacial Recombination and Dye Regeneration. Accounts of Chemical Research, 2015, 48, 1541-1550.	15.6	98
8	Indeno[1,2â€‹<i>b</i>]carbazole as Methoxyâ€Free Donor Group: Constructing Efficient and Stable Holeâ€Transporting Materials for Perovskite Solar Cells. Angewandte Chemie - International Edition, 2019, 58, 15721-15725.	13.8	94
9	Significant Enhancement of Open-Circuit Voltage in Indoline-Based Dye-Sensitized Solar Cells via Retarding Charge Recombination. Chemistry of Materials, 2013, 25, 1713-1722.	6.7	87
10	Influence of Nonfused Cores on the Photovoltaic Performance of Linear Triphenylamine-Based Hole-Transporting Materials for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 17883-17895.	8.0	83
11	Influence of the Terminal Electron Donor in Dâ€“Dâˆ'Ï€â€“A Organic Dye-Sensitized Solar Cells: Dithieno[3,2-b:2â€²,3â€²-d]pyrrole versus Bis(amine). ACS Applied Materials & Interfaces, 2015, 7, 22436-22447.	8.0	80
12	Design of Truxene-Based Organic Dyes for High-Efficiency Dye-Sensitized Solar Cells Employing Cobalt Redox Shuttle. Journal of Physical Chemistry C, 2012, 116, 11241-11250.	3.1	79
13	Organic Dyes Incorporating Bis-hexapropyltruxeneamino Moiety for Efficient Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2011, 115, 274-281.	3.1	78
14	Nitrogen-doped graphene as a cathode material for dye-sensitized solar cells: effects of hydrothermal reaction and annealing on electrocatalytic performance. RSC Advances, 2015, 5, 10430-10439.	3.6	74
15	New triphenylamine organic dyes containing dithieno[3,2-b:2â€²,3â€²-d]pyrrole (DTP) units for iodine-free dye-sensitized solar cells. Chemical Communications, 2013, 49, 5748.	4.1	71
16	Judicious Design of Indoline Chromophores for High-Efficiency Iodine-Free Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 5768-5778.	8.0	56
17	Organic dyes containing dithieno[2,3-d:2â€²,3â€²-dâ€²]thieno[3,2-b:3â€²,2â€²-bâ€²]dipyrrole core for efficient dye-sensitized solar cells. Journal of Materials Chemistry A, 2015, 3, 4865-4874.	10.3	55
18	Efficient dye-sensitized solar cells with triarylamine organic dyes featuring functionalized-truxene unit. Journal of Power Sources, 2011, 196, 1657-1664.	7.8	49

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19	Organic Dyes Incorporating the Benzo[1,2-<i>b</i>:4,5-<i>b</i>â€²]dithiophene Moiety for Efficient Dye-Sensitized Solar Cells. Organic Letters, 2011, 13, 5424-5427.	4.6	48
20	Efficient iodine-free dye-sensitized solar cells employing truxene-based organic dyes. Chemical Communications, 2012, 48, 6645.	4.1	47
21	Low-Cost Carbazole-Based Hole-Transporting Materials for Perovskite Solar Cells: Influence of S,N-Heterocycle. Journal of Physical Chemistry C, 2018, 122, 24014-24024.	3.1	41
22	Influence of the N-heterocycle substituent of the dithieno[3,2-b:2â€²,3â€²-d]pyrrole (DTP) spacer as well as sensitizer adsorption time on the photovoltaic properties of arylamine organic dyes. Journal of Materials Chemistry A, 2013, 1, 11809.	10.3	40
23	New Ruthenium Sensitizers Featuring Bulky Ancillary Ligands Combined with a Dual Functioned Coadsorbent for High Efficiency Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2013, 5, 144-153.	8.0	39
24	Organic dyes incorporating the cyclopentadithiophene moiety for efficient dye-sensitized solar cells. Dyes and Pigments, 2012, 92, 1292-1299.	3.7	37
25	A new thermal-stable truxene-based hole-transporting material for perovskite solar cells. Dyes and Pigments, 2016, 125, 399-406.	3.7	36
26	Novel Triphenylamine Donors with Carbazole Moieties for Organic Sensitizers toward Cobalt(II/III) Redox Mediators. Organic Letters, 2014, 16, 3978-3981.	4.6	35
27	Molecularly engineering of truxene-based dopant-free hole-transporting materials for efficient inverted planar perovskite solar cells. Dyes and Pigments, 2019, 165, 81-89.	3.7	33
28	New triarylamine sensitizers for high efficiency dye-sensitized solar cells: Recombination kinetics of cobalt(III) complexes at titania/dye interface. Journal of Power Sources, 2015, 283, 260-269.	7.8	32
29	Hydrothermal Syntheses, Crystal Structures, Magnetism and Fluorescence Quenching of Oxamidato-Bridged Pentanuclear CuII4LnIII Complexes Containing Macrocyclic Ligands (Ln = Eu, Tb) and the Crystal Structure of a Hexanuclear NiII5SmIII Complex. European Journal of Inorganic Chemistry, 2004, 2004, 1514-1521.	2.0	31
30	Synthesis and photovoltaic properties of organic sensitizers containing electron-deficient and electron-rich fused thiophene for dye-sensitized solar cells. Tetrahedron, 2012, 68, 5375-5385.	1.9	31
31	Rearâ€Illuminated Perovskite Photorechargeable Lithium Battery. Advanced Functional Materials, 2020, 30, 2001865.	14.9	31
32	Twisted Fused-Ring Thiophene Organic Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2016, 120, 22822-22830.	3.1	30
33	Joint Electrical, Photophysical, and Photovoltaic Studies on Truxene Dyeâ€Sensitized Solar Cells: Impact of Arylamine Electron Donors. ChemSusChem, 2014, 7, 795-803.	6.8	29
34	Asymmetric 8H-Thieno[2â€²,3â€²:4,5]thieno[3,2-<i>b</i>]thieno[2,3-<i>d</i>]pyrrole-Based Sensitizers: Synthesis and Application in Dye-Sensitized Solar Cells. Organic Letters, 2017, 19, 3711-3714.	4.6	29
35	Understanding the Role of Electron Donor in Truxene Dye Sensitized Solar Cells with Cobalt Electrolytes. ACS Sustainable Chemistry and Engineering, 2017, 5, 97-104.	6.7	29
36	Synergistic engineering of hole transport materials in perovskite solar cells. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 928-941.	17.3	29

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37	Synergistic effect of amide and fluorine of polymers assist stable inverted perovskite solar cells with fill factorÂ>Â83%. Chemical Engineering Journal, 2022, 442, 136136.	12.7	29
38	Influence of donor and bridge structure in Dâ€"Aâ€"Ï€â€"A indoline dyes on the photovoltaic properties of dye-sensitized solar cells employing iodine/cobalt electrolyte. Dyes and Pigments, 2014, 101, 270-279.	3.7	28
39	The donor-dependent methoxy effects on the performance of hole-transporting materials for perovskite solar cells. Journal of Energy Chemistry, 2020, 47, 10-17.	12.9	28
40	Organic dyes containing indolodithienopyrrole unit for dye-sensitized solar cells. Dyes and Pigments, 2018, 149, 16-24.	3.7	27
41	Synthesis of sensitizers containing donor cascade of triarylamine and dimethylarylamine moieties for dye-sensitized solar cells. Tetrahedron, 2010, 66, 3318-3325.	1.9	25
42	Nanoscale control of grain boundary potential barrier, dopant density and filled trap state density for higher efficiency perovskite solar cells. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 409-423.	17.3	25
43	Coplanar phenanthro[9,10-d]imidazole based hole-transporting material enabling over 19%/21% efficiency in inverted/regular perovskite solar cells. Chemical Engineering Journal, 2021, 421, 129823.	12.7	25
44	Nonideal Charge Recombination and Conduction Band Edge Shifts in Dye-Sensitized Solar Cells Based on Adsorbent Doped Poly(ethylene oxide) Electrolytes. Journal of Physical Chemistry C, 2013, 117, 4364-4373.	3.1	24
45	New benzothiadiazole-based dyes incorporating dithieno[3,2-b:2â€²,3â€²-d]pyrrole (DTP) Ï€-linker for dye-sensitized solar cells with different electrolytes. Journal of Power Sources, 2016, 332, 345-354.	7.8	24
46	The triple Ï€-bridge strategy for tailoring indeno[2,1-<i>b</i>]carbazole-based HTMs enables perovskite solar cells with efficiency exceeding 21%. Journal of Materials Chemistry A, 2021, 9, 8598-8606.	10.3	24
47	Thieno[3,2-<i>b</i>]indole-based hole transporting materials for perovskite solar cells with photovoltages exceeding 1.11 V. Chemical Communications, 2018, 54, 14025-14028.	4.1	23
48	LiTFSI/TBP-free hole transport materials with nonlinear Ï€-conjugation for efficient inverted perovskite solar cells. Electrochimica Acta, 2019, 296, 283-293.	5.2	21
49	New organic photosensitizers incorporating carbazole and dimethylarylamine moieties for dye-sensitized solar cells. Renewable Energy, 2011, 36, 2711-2716.	8.9	20
50	A Strategy for Enhancing the Performance of Borondipyrromethene Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2016, 120, 25657-25667.	3.1	19
51	Organic sensitizers featuring thiophene derivative based donors with improved stability and photovoltaic performance. Physical Chemistry Chemical Physics, 2017, 19, 1927-1936.	2.8	19
52	Organic sensitizers featuring 9H-thieno[2â€²,3':4,5]thieno[3,2-b]thieno[2â€²,3':4,5]thieno[2,3-d]pyrrole core for high performance dye-sensitized solar cells. Dyes and Pigments, 2019, 162, 126-135.	3.7	19
53	Syntheses and Structures of two 1-D Complexes, [Co(dmf)2(NCNCN)2] and [Cu(bipy)(NCNCN)]ClO4 with Bridging Dicyanamide Ligands. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2003, 629, 2443-2445.	1.2	18
54	A new mixed-ligand copper(II) complex containing azide and 1,10-phenanthroline: crystal structure and properties. Journal of Coordination Chemistry, 2003, 56, 1473-1480.	2.2	18

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55	Effects of different alkyl chains on the performance of dye-sensitized solar cells with different electrolytes. Journal of Power Sources, 2014, 253, 167-176.	7.8	17
56	Noncovalent functionalization of hole-transport materials with multi-walled carbon nanotubes for stable inverted perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 14306-14313.	5.5	17
57	2Dâ€Îâ€A Type Organic Dyes Based on <i>N</i>,<i>N</i>â€Dimethylaryl Amine and Rhodamineâ€3â€acetic Acid for Dyeâ€sensitized Solar Cells. Chinese Journal of Chemistry, 2011, 29, 89-96.	4.9	16
58	Synthesis of triarylamines with secondary electron-donating groups for dye-sensitized solar cells. Solar Energy, 2012, 86, 764-770.	6.1	16
59	3,4-Ethylenedioxythiophene as an electron donor to construct arylamine sensitizers for highly efficient iodine-free dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2013, 15, 15441.	2.8	16
60	Correlating hysteresis phenomena with interfacial charge accumulation in perovskite solar cells. Physical Chemistry Chemical Physics, 2020, 22, 245-251.	2.8	16
61	New Dâ€"Ï€â€"A dyes incorporating dithieno[3,2-b:2â€²,3â€²-d]pyrrole (DTP)-based Ï€-spacers for efficient dye-sensitized solar cells. RSC Advances, 2017, 7, 45807-45817.	3.6	15
62	Indeno[1,2â€<i>b</i>]carbazole as Methoxyâ€Free Donor Group: Constructing Efficient and Stable Holeâ€Transporting Materials for Perovskite Solar Cells. Angewandte Chemie, 2019, 131, 15868-15872.	2.0	15
63	Synthesis of new dithieno[3,2-b:2â€²,3â€²-d]pyrrole (DTP) dyes for dye-sensitized solar cells: effect of substituent on photovoltaic properties. Tetrahedron, 2016, 72, 3204-3212.	1.9	14
64	Synthesis of new dithieno[3,2-b:2â€²,3â€²-d]pyrrole (DTP) units for photovoltaic cells. Dyes and Pigments, 2016, 128, 8-18.	3.7	14
65	New triarylamine organic dyes containing the 9-hexyl-2-(hexyloxy)-9H-carbazole for dye-sensitized solar cells. Electrochimica Acta, 2017, 254, 191-200.	5.2	14
66	A Novel 3-D Heterobimetallic Cyano-bridged Coordination Polymer Incorporating AgÂ·Â·Â·Ag Interaction: [Cu(dien)Ag(CN)2]2[Ag2(CN)3][Ag(CN)2]. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2004, 630, 498-500.	1.2	13
67	Insight into the positional effect of bulky rigid substituents in organic sensitizers on the performance of dye-sensitized solar cells. Dyes and Pigments, 2019, 168, 1-11.	3.7	13
68	PPh3-KOButâ€"Mediated Cyclization Reaction of Î²-Ketoesters with Alkynyl Ketones: Synthesis of Functionalized 2-Pyrones. Synthetic Communications, 2011, 41, 3147-3161.	2.1	12
69	Synthesis of new truxene based organic sensitizers for iodine-free dye-sensitized solar cells. Tetrahedron, 2013, 69, 10573-10580.	1.9	12
70	Facile synthesis of triphenylamine-based hole-transporting materials for planar perovskite solar cells. Journal of Power Sources, 2019, 435, 226767.	7.8	12
71	High performance zinc stannate photoanodes in dye sensitized solar cells with cobalt complex mediators. Chemical Communications, 2020, 56, 5042-5045.	4.1	11
72	Structure and Magnetic Properties of a Novel Two-Dimensional Complex from 1, 3, 5-Benzenetricarboxylate and Neodymium(III)â€" {[Nd(1, 3, 5-benzenetricarboxylate)(H2O)4]Â· H2O}n. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2004, 630, 613-616.	1.2	10

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73	Molecular design of triarylamine dyes incorporating phenylene spacer and the influence of alkoxy substituent on the performance of dye-sensitized solar cells. Journal of Photochemistry and Photobiology A: Chemistry, 2011, 225, 8-16.	3.9	10
74	Arm modulation of triarylamines to fine-tune the properties of linear Dâ€"Ï€â€"D HTMs for robust higher performance perovskite solar cells. Materials Chemistry Frontiers, 2021, 5, 4604-4614.	5.9	10
75	A Novel, three-dimensional, Tetrachlorophthalato-bridged Samarium(III) complex [Sm(tcph)2(H2O)6]HpipÂ·5H2O. Journal of Coordination Chemistry, 2004, 57, 275-280.	2.2	9
76	Charge Transport Limitations of Redox Mediators in Dye-Sensitized Solar Cells: Investigation Based on a Quasi-Linear Model. Journal of Physical Chemistry C, 2014, 118, 60-70.	3.1	9
77	Engineering of the electron donor of triarylamine sensitizers for high-performance dye-sensitized solar cells. Organic Electronics, 2015, 17, 285-294.	2.6	9
78	A new binaphthol based hole-transporting materials for perovskite solar cells. Tetrahedron, 2017, 73, 3398-3405.	1.9	9
79	Judicious design of L(D-Ï€-A)2 type di-anchoring organic sensitizers for highly efficient dye-sensitized solar cells: Effect of the donor-linking bridges on functional properties. Dyes and Pigments, 2021, 187, 109134.	3.7	9
80	An efficient dye-sensitized solar cell based on a functionalized-triarylamine dye. Materials Letters, 2011, 65, 1331-1333.	2.6	8
81	Novel efficient hole-transporting materials based on a 1,1â€²-bi-2-naphthol core for perovskite solar cells. RSC Advances, 2017, 7, 482-492.	3.6	8
82	Redox couple related influences of bulky electron donor as well as spacer in organic dye-sensitized mesoscopic solar cells. Tetrahedron, 2014, 70, 6203-6210.	1.9	7
83	Simple Yet Efficient: Arylamineâ€Terminated Carbazole Donors for Organic Hole Transporting Materials. Solar Rrl, 2021, 5, 2100694.	5.8	7
84	A Multifunctional Fluorinated Polymer Enabling Efficient MAPbI₃-Based Inverted Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 31285-31295.	8.0	7
85	Synthesis of triarylamine dyes containing secondary electron-donating groups and application in the dye-sensitized solar cells. Synthetic Metals, 2011, 161, 496-503.	3.9	6
86	Unveiling the Role of Conjugate Bridge in Triphenylamine Hole-Transporting Materials for Inverted and Direct Perovskite Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 1280-1289.	2.5	6
87	Impact of Interface Energy Alignment on the Dynamic Currentâ€"Voltage Response of Perovskite Solar Cells. Journal of Physical Chemistry C, 2020, 124, 12912-12921.	3.1	6
88	Polymeric hole-transporting material with a flexible backbone for constructing thermally stable inverted perovskite solar cells. Materials Chemistry Frontiers, 2021, 5, 7241-7250.	5.9	6
89	A novel three-dimensional malonate-bridged complex {[Cu4(4,4â€²-) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 102 Td (bpy)8(ma	2.0	5
90	Selective transformation of carbohydrates to hydroxymethyl furfural with polyaniline-based catalysts. Research on Chemical Intermediates, 2016, 42, 8305-8319.	2.7	4

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91	Organic sensitizers featuring tetrathienosilole core for efficient and robust dye-sensitized solar cells. Solar Energy, 2021, 221, 402-411.	6.1	4
92	Synthesis, crystal structure, spectroscopic and magnetic properties of [Cu(dien)2][Ni(CN)4]. Journal of Coordination Chemistry, 2004, 57, 865-870.	2.2	3
93	Influence of Triarylamine and Indoline as Donor on Photovoltaic Performance of Dye-Sensitized Solar Cells Employing Cobalt Redox Shuttle. Chinese Journal of Chemical Physics, 2015, 28, 91-100.	1.3	3
94	Unraveling the Nonideal Recombination Kinetics in Cobalt Complex Based Dye Sensitized Solar Cells: Impacts of Electron Lifetime and the Distribution of Electron Density. Journal of Physical Chemistry C, 2016, 120, 13891-13900.	3.1	3
95	Dopant-free hole-transporting materials based on a simple nonfused core with noncovalent conformational locking for efficient perovskite solar cells. Organic Electronics, 2022, 107, 106566.	2.6	3
96	Probing energy losses from dye desorption in cobalt complex-based dye-sensitized solar cells. Physical Chemistry Chemical Physics, 2018, 20, 6698-6707.	2.8	2
97	The First Hexa-coordinated Tetranuclear Nickel Complex {[Ni(en)2]4[H4L]}(ClO4)4Â·7H2O with Tetrakis-bidentate Oxamato Bridge. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2004, 630, 1655-1658.	1.2	1
98	Photovoltaic Performance of Triphenylamine Dyesâ€sensitized Solar Cells Employing Cobalt Redox Shuttle and Influence of Ï€â€conjugated Spacers. Chinese Journal of Chemical Physics, 2013, 26, 310-320.	1.3	1
99	Correlating Photovoltaic Performance of Dye-Sensitized Solar Cell to the Film Thickness of Titania via Numerical Drift-Diffusion Simulations. Chinese Journal of Chemical Physics, 2016, 29, 735-741.	1.3	0