Huaibin Shen

List of Publications by Year
in descending order

103 papers	5,020 citations	81900 39 h-index	95266 68 g-index
104 all docs	104 docs citations	104 times ranked	4056 citing authors

#	Article	IF	Citations
1	Enhanced Hot Carrier Upâ€Conversion in Graphene By Quantum Dot Coating. Advanced Optical Materials, 2022, 10, 2101563.	7.3	2
2	A CdSe/ZnS core/shell competitive quantum dot-based fluorescence-linked immunosorbent assay for the sensitive and accurate detection of aflatoxin B1 in corn sample. Journal of Food Measurement and Characterization, 2022, 16, 857-866.	3.2	6
3	Evaluating Lead Halide Perovskite Nanocrystals as a Spin Laser Gain Medium. Nano Letters, 2022, 22, 658-664.	9.1	13
4	Generation of Q-switched and mode-locked pulses based on PbS/CdS saturable absorbers in an Er-doped fiber laser. Journal of Materials Chemistry C, 2022, 10, 5956-5961.	5.5	21
5	Synchronous Outcoupling of Triâ€Colored Light for Ultraâ€Bright White Quantum Dot Lightâ€Emitting Diodes by Using External Wrinkle Pattern. Advanced Optical Materials, 2022, 10, .	7.3	6
6	Alleviating Electron Over-Injection for Efficient Cadmium-Free Quantum Dot Light-Emitting Diodes toward Deep-Blue Emission. ACS Photonics, 2022, 9, 1400-1408.	6.6	18
7	Biomolecular Surface Functionalization and Stabilization Method to Fabricate Quantum Dots Nanobeads for Accurate Biosensing Detection. Langmuir, 2022, 38, 4969-4978.	3.5	7
8	A mitochondrial-targetable fluorescent probe based on high-quality InP quantum dots for the imaging of living cells. Materials and Design, 2022, 219, 110736.	7.0	8
9	ZnF₂-Assisted Synthesis of Highly Luminescent InP/ZnSe/ZnS Quantum Dots for Efficient and Stable Electroluminescence. Nano Letters, 2022, 22, 4067-4073.	9.1	62
10	Highâ€Performance Blue Quantumâ€Dot Lightâ€Emitting Diodes by Alleviating Electron Trapping. Advanced Optical Materials, 2022, 10, .	7.3	14
11	Size Engineering of Trap Effects in Oxidized and Hydroxylated ZnSe Quantum Dots. Nano Letters, 2022, 22, 3604-3611.	9.1	13
12	On the accurate characterization of quantum-dot light-emitting diodes for display applications. Npj Flexible Electronics, 2022, 6, .	10.7	8
13	Direct Optical Patterning of Nanocrystal-Based Thin-Film Transistors and Light-Emitting Diodes through Native Ligand Cleavage. ACS Applied Nano Materials, 2022, 5, 8457-8466.	5.0	7
14	Aminophosphate precursors for the synthesis of nearâ€unity emitting InP quantum dots and their application in liver cancer diagnosis. Exploration, 2022, 2, .	11.0	12
15	High Performance InPâ€based Quantum Dot Lightâ€Emitting Diodes via the Suppression of Fieldâ€Enhanced Electron Delocalization. Advanced Functional Materials, 2022, 32, .	14.9	23
16	High performance blue quantum light-emitting diodes by attaching diffraction wrinkle patterns. Nanoscale, 2021, 13, 8498-8505.	5.6	7
17	A CdSe/ZnS Core/Shell Quantum Dot-based Fluorescence-linked Immunosorbent Assay for the Sensitive and Accurate Detection of Procalcitonin. Chemistry Letters, 2021, 50, 235-239.	1.3	4
18	Thick-Shell CdSe/ZnS/CdZnS/ZnS Core/Shell Quantum Dots for Quantitative Immunoassays. ACS Applied Nano Materials, 2021, 4, 2855-2865.	5.0	17

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19	Sensitive Immunoassay Based on Biocompatible and Robust Silica-Coated Cd-Free InP-Based Quantum Dots. Inorganic Chemistry, 2021, 60, 6503-6513.	4.0	17
20	Quantum dot light-emitting diodes with high efficiency at high brightness via shell engineering. Optics Express, 2021, 29, 12169.	3.4	13
21	Giant enhancement of optical nonlinearity in two-dimensional materials by multiphoton-excitation resonance energy transfer from quantum dots. Nature Photonics, 2021, 15, 510-515.	31.4	50
22	Continuously Graded Quantum Dots: Synthesis, Applications in Quantum Dot Light-Emitting Diodes, and Perspectives. Journal of Physical Chemistry Letters, 2021, 12, 5967-5978.	4.6	53
23	Bulk-like ZnSe Quantum Dots Enabling Efficient Ultranarrow Blue Light-Emitting Diodes. Nano Letters, 2021, 21, 7252-7260.	9.1	69
24	30.2: Invited Paper: Electroluminescence lightâ€emitting diodes based on Cd/Pbâ€free QDs. Digest of Technical Papers SID International Symposium, 2021, 52, 408-408.	0.3	0
25	A quantum dot microspheres-based highly specific and sensitive three-dimensional microarray for multiplexed detection of inflammatory factors. Nanotechnology, 2021, 32, 485101.	2.6	5
26	Carrier Dynamics in Alloyed Chalcogenide Quantum Dots and Their Lightâ€Emitting Devices. Advanced Energy Materials, 2021, 11, 2101693.	19.5	29
27	Dual protecting encapsulation synthesis of ultrastable quantum-dot nanobeads for sensitive and accurate detection of cardiac biomarkers. Sensors and Actuators B: Chemical, 2021, 344, 130275.	7.8	20
28	Quantumâ€Dot Lightâ€Emitting Diodes for Outdoor Displays with High Stability at High Brightness. Advanced Optical Materials, 2020, 8, 1901145.	7.3	94
29	Research progress and challenges of blue light-emitting diodes based on IIâ€"VI semiconductor quantum dots. Journal of Materials Chemistry C, 2020, 8, 10160-10173.	5.5	37
30	Sensitive and Quantitative Determination of Cardiac Troponin I Based on Silica-Encapsulated CdSe/ZnS Quantum Dots and a Fluorescence Lateral Flow Immunoassay. Analytical Letters, 2020, 53, 1757-1773.	1.8	11
31	Blue quantum dot-based electroluminescent light-emitting diodes. Materials Chemistry Frontiers, 2020, 4, 1340-1365.	5.9	40
32	High-Brightness Blue InP Quantum Dot-Based Electroluminescent Devices: The Role of Shell Thickness. Journal of Physical Chemistry Letters, 2020, 11, 960-967.	4.6	87
33	Preparation of Highly Stable and Photoluminescent Cadmiumâ€Free InP/GaP/ZnS Core/Shell Quantum Dots and Application to Quantitative Immunoassay. Particle and Particle Systems Characterization, 2020, 37, 1900441.	2.3	13
34	Highly Efficient Near-Infrared Light-Emitting Diodes Based on Chloride Treated CdTe/CdSe Type-II Quantum Dots. Frontiers in Chemistry, 2020, 8, 266.	3.6	10
35	Improved Efficiency of All-Inorganic Quantum-Dot Light-Emitting Diodes via Interface Engineering. Frontiers in Chemistry, 2020, 8, 265.	3.6	12
36	Light extraction from quantum dot light emitting diodes by multiscale nanostructures. Nanoscale Advances, 2020, 2, 1967-1972.	4.6	10

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37	Suppressed efficiency roll-off in blue light-emitting diodes by balancing the spatial charge distribution. Journal of Materials Chemistry C, 2020, 8, 12927-12934.	5.5	10
38	Quantum Dot LEDs: Over 30% External Quantum Efficiency Lightâ€Emitting Diodes by Engineering Quantum Dotâ€Assisted Energy Level Match for Hole Transport Layer (Adv. Funct. Mater. 33/2019). Advanced Functional Materials, 2019, 29, 1970226.	14.9	7
39	44.2: <i>Invited Paper:</i> Quantum Dot Lightâ€Emitting Diodes for Lighting. Digest of Technical Papers SID International Symposium, 2019, 50, 489-489.	0.3	0
40	Pâ€4.2: Reducing Chromaticity Shifts of Light Emitting Diodes using Gradient Alloyed Cd<i>_x</i>Zn_{1â€<i>x</i>}Se_{<i>y</i>}S_{1â€<i>y</i>}@ZnS Core Shell Quantum Dots. Digest of Technical Papers SID International Symposium, 2019, 50, 702-702.	0.3	0
41	General Mild Reaction Creates Highly Luminescent Organic-Ligand-Lacking Halide Perovskite Nanocrystals for Efficient Light-Emitting Diodes. Journal of the American Chemical Society, 2019, 141, 15423-15432.	13.7	121
42	Se/S Ratio-Dependent Properties and Application of Gradient-Alloyed CdSe_{1â€"<i>x</i>}S<i>_x</i> Quantum Dots: Shell-free Structure, Non-blinking Photoluminescence with Single-Exponential Decay, and Efficient QLEDs. ACS Applied Materials & Interfaces, 2019, 11, 6238-6247.	8.0	16
43	Highâ€Efficiency Green InP Quantum Dotâ€Based Electroluminescent Device Comprising Thickâ€Shell Quantum Dots. Advanced Optical Materials, 2019, 7, 1801602.	7.3	137
44	Room-temperature synthesized formamidinium lead halide perovskite quantum dots with bright luminescence and color-tunability for efficient light emitting. Organic Electronics, 2019, 68, 76-84.	2.6	21
45	High-efficiency CdSe/CdS nanorodâ€"based red lightâ€"emitting diodes. Optics Express, 2019, 27, 7935.	3.4	42
46	Over 30% External Quantum Efficiency Lightâ€Emitting Diodes by Engineering Quantum Dotâ€Assisted Energy Level Match for Hole Transport Layer. Advanced Functional Materials, 2019, 29, 1808377.	14.9	240
47	Reducing the Chromaticity Shifts of Lightâ€Emitting Diodes Using Gradientâ€Alloyed Cd<i>_x</i>Zn_{1âˆ’}<i>_x</i>Se<i>_y</i>S_{1âˆ’}<i>_y</i>@ZnS Core Shell Quantum Dots with Enhanced Highâ€Temperature Photoluminescence. Advanced Optical Materials, 2019, 7, 1801687.	7.3	27
48	Visible quantum dot light-emitting diodes with simultaneous high brightness and efficiency. Nature Photonics, 2019, 13, 192-197.	31.4	596
49	Robust synthesis of bright multiple quantum dot-embedded nanobeads and its application to quantitative immunoassay. Chemical Engineering Journal, 2019, 361, 499-507.	12.7	49
50	High-efficiency, deep blue ZnCdS/Cd_xZn_{1âˆ’x}S/ZnS quantum-dot-light-emitting devices with an EQE exceeding 18%. Nanoscale, 2018, 10, 5650-5657.	5.6	103
51	Morphology Evolution of Gradient-Alloyed Cd<i>_x</i>Zn_{1â€"<i>x</i>}Se<i>_y</i>S_{1â€"<i>y</i>}@ZnS Coreâ€"Shell Quantum Dots during Transmission Electron Microscopy Determination: A Route to Illustrate Strain Effects. Journal of Physical Chemistry C, 2018, 122, 4583-4588.	3.1	13
52	Nonblinking Quantum-Dot-Based Blue Light-Emitting Diodes with High Efficiency and a Balanced Charge-Injection Process. ACS Photonics, 2018, 5, 939-946.	6.6	113
53	Quantitative and rapid detection of C-reactive protein using quantum dot-based lateral flow test strip. Analytica Chimica Acta, 2018, 1008, 1-7.	5.4	68
54	Synthesis of highly stable CuInZnS/ZnS//ZnS quantum dots with thick shell and its application to quantitative immunoassay. Chemical Engineering Journal, 2018, 348, 447-454.	12.7	49

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55	Bright alloy type-II quantum dots and their application to light-emitting diodes. Journal of Colloid and Interface Science, 2018, 510, 376-383.	9.4	21
56	Highly Efficient Trilayered White Quantum Dot Light Emitting Diodes Based on Organic Buffer Layers. IEEE Electron Device Letters, 2018, 39, 1692-1695.	3.9	8
57	Shell-dependent blinking behavior and fluorescence dynamics of single ZnSe/CdS core/shell quantum dots. Nanoscale, 2018, 10, 18696-18705.	5.6	16
58	Over 800% efficiency enhancement of all-inorganic quantum-dot light emitting diodes with an ultrathin alumina passivating layer. Nanoscale, 2018, 10, 11103-11109.	5.6	36
59	Enhanced light out-coupling efficiency of quantum dot light emitting diodes by nanoimprint lithography. Nanoscale, 2018, 10, 11651-11656.	5.6	40
60	Silica-encapsulated quantum dots for highly efficient and stable fluorescence immunoassay of C-reactive protein. Biochemical Engineering Journal, 2018, 137, 344-351.	3.6	26
61	Simultaneous Improvement of Efficiency and Lifetime of Quantum Dot Light-Emitting Diodes with a Bilayer Hole Injection Layer Consisting of PEDOT:PSS and Solution-Processed WO₃. ACS Applied Materials & Interfaces, 2018, 10, 24232-24241.	8.0	17
62	Synthesis and Evaluation of Ideal Core/Shell Quantum Dots with Precisely Controlled Shell Growth: Nonblinking, Single Photoluminescence Decay Channel, and Suppressed FRET. Chemistry of Materials, 2018, 30, 3668-3676.	6.7	72
63	Solution-processed quantum dot light-emitting diodes based on NiO nanocrystals hole injection layer. Organic Electronics, 2017, 44, 189-197.	2.6	48
64	Synthesis of Reabsorption-Suppressed Type-II/Type-I ZnSe/CdS/ZnS Core/Shell Quantum Dots and Their Application for Immunosorbent Assay. Nanoscale Research Letters, 2017, 12, 380.	5.7	16
65	Singleâ€Source Precursor Route for Synthesis of Highâ€Quality Greenâ€emitting Quantum Dots and Their Hydrophilic Surface Modification. Bulletin of the Korean Chemical Society, 2017, 38, 700-705.	1.9	1
66	Bandgap tunable Zn_{1âˆ’x}Mg_xO thin films as electron transport layers for high performance quantum dot light-emitting diodes. Journal of Materials Chemistry C, 2017, 5, 4724-4730.	5.5	88
67	Efficient and longâ€life green lightâ€emitting diodes comprising tridentate thiol capped quantum dots. Laser and Photonics Reviews, 2017, 11, 1600227.	8.7	67
68	Solid Ligand-Assisted Storage of Air-Stable Formamidinium Lead Halide Quantum Dots via Restraining the Highly Dynamic Surface toward Brightly Luminescent Light-Emitting Diodes. ACS Photonics, 2017, 4, 2504-2512.	6.6	50
69	Efficient and long-lifetime full-color light-emitting diodes using high luminescence quantum yield thick-shell quantum dots. Nanoscale, 2017, 9, 13583-13591.	5.6	102
70	Highly sensitive and accurate detection of C-reactive protein by CdSe/ZnS quantum dot-based fluorescence-linked immunosorbent assay. Journal of Nanobiotechnology, 2017, 15, 35.	9.1	66
71	Super color purity green quantum dot light-emitting diodes fabricated by using CdSe/CdS nanoplatelets. Nanoscale, 2016, 8, 12182-12188.	5.6	111
72	Influence of Ambient Gas on the Performance of Quantum-Dot Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2016, 8, 11557-11563.	8.0	13

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73	High-performance azure blue quantum dot light-emitting diodes via doping PVK in emitting layer. Organic Electronics, 2016, 37, 280-286.	2.6	55
74	High-efficiency deep-red quantum-dot light-emitting diodes with type-II CdSe/CdTe core/shell quantum dots as emissive layers. Journal of Materials Chemistry C, 2016, 4, 7223-7229.	5.5	33
75	Hydroxyl-Terminated CuInS₂ Based Quantum Dots: Toward Efficient and Bright Light Emitting Diodes. Chemistry of Materials, 2016, 28, 1085-1091.	6.7	155
76	Size-dependent surface photovoltage in CdSe nanocrystal-based thin films. RSC Advances, 2015, 5, 39714-39718.	3.6	4
77	Bright, efficient, and color-stable violet ZnSe-based quantum dot light-emitting diodes. Nanoscale, 2015, 7, 2951-2959.	5.6	163
78	High-Efficiency, Low Turn-on Voltage Blue-Violet Quantum-Dot-Based Light-Emitting Diodes. Nano Letters, 2015, 15, 1211-1216.	9.1	383
79	Quantum-Dot-Based Light-Emitting Diodes With Improved Brightness and Stability by Using Sulfuric Acid-Treated PEDOT:PSS as Efficient Hole Injection Layer. IEEE Nanotechnology Magazine, 2015, 14, 57-61.	2.0	4
80	Layer-by-Layer Assembly of Stable Aqueous Quantum Dots for Luminescent Planar Plate. ACS Applied Materials & Interfaces, 2015, 7, 14770-14777.	8.0	12
81	Preparation of multi-shell structured fluorescent composite nanoparticles for ultrasensitive human procalcitonin detection. RSC Advances, 2015, 5, 5988-5995.	3.6	20
82	The enhanced fluorescence properties & colloid stability of aqueous CdSe/ZnS QDs modified with N-alkylated poly(ethyleneimine). New Journal of Chemistry, 2015, 39, 4334-4342.	2.8	9
83	Inorganic Snâ€“X complex ligands capped CuInS2 nanocrystals with high electron mobility. Journal of Nanoparticle Research, 2014, 16, 1.	1.9	6
84	Highâ€Efficient Deepâ€Blue Lightâ€Emitting Diodes by Using High Quality Zn_{<i>x</i>}Cd_{1â€<i>x</i>}S/ZnS Core/Shell Quantum Dots. Advanced Functional Materials, 2014, 24, 2367-2373.	14.9	151
85	Facile synthesis of AgAu alloy and core/shell nanocrystals by using Ag nanocrystals as seeds. Gold Bulletin, 2013, 46, 19-23.	2.4	6
86	Efficient and Bright Colloidal Quantum Dot Light-Emitting Diodes via Controlling the Shell Thickness of Quantum Dots. ACS Applied Materials & Interfaces, 2013, 5, 12011-12016.	8.0	78
87	Highly Efficient Blueâ€“Green Quantum Dot Light-Emitting Diodes Using Stable Low-Cadmium Quaternary-Alloy ZnCdSSe/ZnS Core/Shell Nanocrystals. ACS Applied Materials & Interfaces, 2013, 5, 4260-4265.	8.0	86
88	Phosphine-Free Synthesis from 1D Pb(OH)Cl Nanowires to 0D and 1D PbSe Nanocrystals. ACS Applied Materials & Interfaces, 2013, 5, 10331-10336.	8.0	5
89	Highly efficient near-infrared light-emitting diodes by using type-II CdTe/CdSe core/shell quantum dots as a phosphor. Nanotechnology, 2013, 24, 475603.	2.6	14
90	Fluorescent QDs-polystyrene composite nanospheres for highly efficient and rapid protein antigen detection. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	18

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91	Facile preparation of metal telluride nanocrystals using di-n-octylphosphine oxide (DOPO) as an air-stable and less toxic alternative to the common tri-alkylphosphines. Journal of Materials Chemistry, 2012, 22, 25050.	6.7	18
92	Facile synthesis and observation of discontinuous red-shift photoluminescence of CdTe/CdS core/shell nanocrystals. CrystEngComm, 2012, 14, 272-277.	2.6	5
93	Synthesis of size-tunable photoluminescent aqueous CdSe/ZnS microspheres via a phase transfer method with amphiphilic oligomer and their application for detection of HCG antigen. Journal of Materials Chemistry, 2011, 21, 7393.	6.7	52
94	Phosphine-free synthesis of Zn1âˆ’xCdxSe/ZnSe/ZnSexS1âˆ’x/ZnS core/multishell structures with bright and stable blueâ€“green photoluminescence. Journal of Materials Chemistry, 2011, 21, 6046.	6.7	52
95	Large scale synthesis of stable tricolor Zn1 âˆ’xCdxSe core/multishell nanocrystals via a facile phosphine-free colloidal method. Dalton Transactions, 2011, 40, 9180.	3.3	18
96	Effect of Shell Thickness on the Optical Properties in CdSe/CdS/Zn_{0.5}Cd_{0.5}S/ZnS and CdSe/CdS/Zn_{<i>x</i>}Cd_{1â€“x}S/ZnS Core/Multishell Nanocrystals. Journal of Physical Chemistry C, 2011, 115, 20876-20881.	3.1	44
97	Shape controlled synthesis of tadpole-like and heliotrope seed-like AgInS2 nanocrystals. CrystEngComm, 2010, 12, 4410.	2.6	42
98	Investigation on type-II Cu₂Sâ€“CdS core/shell nanocrystals: synthesis and characterization. Journal of Materials Chemistry, 2010, 20, 923-928.	6.7	54
99	Size- and Shape-Controlled Synthesis of CdTe and PbTe Nanocrystals Using Tellurium Dioxide as the Tellurium Precursor. Chemistry of Materials, 2010, 22, 4756-4761.	6.7	56
100	Controlled synthesis of monodisperse manganese oxide nanocrystals. CrystEngComm, 2009, 11, 1128.	2.6	19
101	High quality synthesis of monodisperse zinc-blende CdSe and CdSe/ZnS nanocrystals with a phosphine-free method. CrystEngComm, 2009, 11, 1733.	2.6	114
102	Investigation on the phosphine-free synthesis of CdSe nanocrystals by cadmium precursor injection. New Journal of Chemistry, 2009, 33, 2114.	2.8	12
103	Phosphine-free synthesis of high quality ZnSe, ZnSe/ZnS, and Cu-, Mn-doped ZnSe nanocrystals. Dalton Transactions, 2009, , 10534.	3.3	104