

Iwan Moreels

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109
papers

7,023
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44
h-index

82
g-index

131
ext. papers

7,967
ext. citations

10.9
avg, IF

5.88
L-index

#	Paper	IF	Citations
109	Size-dependent optical properties of colloidal PbS quantum dots. <i>ACS Nano</i> , 2009 , 3, 3023-30	16.7	847
108	Composition and Size-Dependent Extinction Coefficient of Colloidal PbSe Quantum Dots. <i>Chemistry of Materials</i> , 2007 , 19, 6101-6106	9.6	434
107	Size-tunable, bright, and stable PbS quantum dots: a surface chemistry study. <i>ACS Nano</i> , 2011 , 5, 2004-2012	16.7	364
106	Continuous-wave biexciton lasing at room temperature using solution-processed quantum wells. <i>Nature Nanotechnology</i> , 2014 , 9, 891-5	28.7	359
105	Surface chemistry of colloidal PbSe nanocrystals. <i>Journal of the American Chemical Society</i> , 2008 , 130, 15081-6	16.4	318
104	Role of Acid-Base Equilibria in the Size, Shape, and Phase Control of Cesium Lead Bromide Nanocrystals. <i>ACS Nano</i> , 2018 , 12, 1704-1711	16.7	259
103	Luminescence in Sulfides: A Rich History and a Bright Future. <i>Materials</i> , 2010 , 3, 2834-2883	3.5	195
102	Short-chain alcohols strip X-type ligands and quench the luminescence of PbSe and CdSe quantum dots, acetonitrile does not. <i>Journal of the American Chemical Society</i> , 2012 , 134, 20705-12	16.4	189
101	In situ observation of rapid ligand exchange in colloidal nanocrystal suspensions using transfer NOE nuclear magnetic resonance spectroscopy. <i>Journal of the American Chemical Society</i> , 2009 , 131, 3024-32	16.4	164
100	From Binary Cu ₂ S to ternary Cu-In-S and quaternary Cu-In-Zn-S nanocrystals with tunable composition via partial cation exchange. <i>ACS Nano</i> , 2015 , 9, 521-31	16.7	155
99	Probing the wave function delocalization in CdSe/CdS dot-in-rod nanocrystals by time- and temperature-resolved spectroscopy. <i>ACS Nano</i> , 2011 , 5, 4031-6	16.7	135
98	Synthesis of uniform disk-shaped copper telluride nanocrystals and cation exchange to cadmium telluride quantum disks with stable red emission. <i>Journal of the American Chemical Society</i> , 2013 , 135, 12270-8	16.4	124
97	Optical Properties of Zincblende Cadmium Selenide Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 6371-6376	3.8	118
96	Light absorption by colloidal semiconductor quantum dots. <i>Journal of Materials Chemistry</i> , 2012 , 22, 10406		117
95	PbTe CdTe Core Shell Particles by Cation Exchange, a HR-TEM study. <i>Chemistry of Materials</i> , 2009 , 21, 778-780	9.6	116
94	Giant exciton oscillator strength and radiatively limited dephasing in two-dimensional platelets. <i>Physical Review B</i> , 2015 , 91,	3.3	103
93	Chloride-Induced Thickness Control in CdSe Nanoplatelets. <i>Nano Letters</i> , 2018 , 18, 6248-6254	11.5	100

92	A sustainable future for photonic colloidal nanocrystals. <i>Chemical Society Reviews</i> , 2015 , 44, 5897-914	58.5	99
91	Epitaxially connected PbSe quantum-dot films: controlled neck formation and optoelectronic properties. <i>ACS Nano</i> , 2014 , 8, 11499-511	16.7	98
90	Two Photon Absorption in II-VI Semiconductors: The Influence of Dimensionality and Size. <i>Nano Letters</i> , 2015 , 15, 4985-92	11.5	97
89	Nuclear Magnetic Resonance Spectroscopy Demonstrating Dynamic Stabilization of CdSe Quantum Dots by Alkylamines. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 2577-2581	6.4	88
88	Two-Dimensional Material Interface Engineering for Efficient Perovskite Large-Area Modules. <i>ACS Energy Letters</i> , 2019 , 4, 1862-1871	20.1	84
87	Synthesis of Air-Stable CdSe/ZnS Core/Shell Nanoplatelets with Tunable Emission Wavelength. <i>Chemistry of Materials</i> , 2017 , 29, 5671-5680	9.6	78
86	The different nature of band edge absorption and emission in colloidal PbSe/CdSe core/shell quantum dots. <i>ACS Nano</i> , 2011 , 5, 58-66	16.7	78
85	In situ ¹ H NMR study on the trioctylphosphine oxide capping of colloidal InP nanocrystals. <i>ChemPhysChem</i> , 2005 , 6, 2578-84	3.2	76
84	Synthesis of highly luminescent wurtzite CdSe/CdS giant-shell nanocrystals using a fast continuous injection route. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 3439	7.1	75
83	Ligand adsorption/desorption on sterically stabilized InP colloidal nanocrystals: observation and thermodynamic analysis. <i>ChemPhysChem</i> , 2006 , 7, 1028-31	3.2	71
82	Shape control of zincblende CdSe nanoplatelets. <i>Chemical Communications</i> , 2016 , 52, 11975-11978	5.8	68
81	Solution-Processed Hybrid Graphene Flake/2H-MoS ₂ Quantum Dot Heterostructures for Efficient Electrochemical Hydrogen Evolution. <i>Chemistry of Materials</i> , 2017 , 29, 5782-5786	9.6	66
80	Graphene-based technologies for energy applications, challenges and perspectives. <i>2D Materials</i> , 2015 , 2, 030204	5.9	62
79	High-Efficiency All-Solution-Processed Light-Emitting Diodes Based on Anisotropic Colloidal Heterostructures with Polar Polymer Injecting Layers. <i>Nano Letters</i> , 2015 , 15, 5455-64	11.5	61
78	Single-mode lasing from colloidal water-soluble CdSe/CdS quantum dot-in-rods. <i>Small</i> , 2015 , 11, 1328-34	11.1	61
77	p-State Luminescence in CdSe Nanoplatelets: Role of Lateral Confinement and a Longitudinal Optical Phonon Bottleneck. <i>Physical Review Letters</i> , 2016 , 116, 116802	7.4	60
76	Nearly temperature-independent threshold for amplified spontaneous emission in colloidal CdSe/CdS quantum dot-in-rods. <i>Advanced Materials</i> , 2012 , 24, OP231-5	24	60
75	CuIn _x Ga _{1-x} S ₂ Nanocrystals with Tunable Composition and Band Gap Synthesized via a Phosphine-Free and Scalable Procedure. <i>Chemistry of Materials</i> , 2013 , 25, 3180-3187	9.6	59

74	Reversed oxygen sensing using colloidal quantum wells towards highly emissive photoresponsive varnishes. <i>Nature Communications</i> , 2015 , 6, 6434	17.4	55
73	Reduction of moisture sensitivity of PbS quantum dot solar cells by incorporation of reduced graphene oxide. <i>Solar Energy Materials and Solar Cells</i> , 2018 , 183, 1-7	6.4	55
72	Dielectric function of colloidal lead chalcogenide quantum dots obtained by a Kramers-Krönig analysis of the absorbance spectrum. <i>Physical Review B</i> , 2010 , 81,	3.3	55
71	Band-edge exciton fine structure of small, nearly spherical colloidal CdSe/ZnS quantum dots. <i>ACS Nano</i> , 2011 , 5, 8033-9	16.7	52
70	Band structure engineering via piezoelectric fields in strained anisotropic CdSe/CdS nanocrystals. <i>Nature Communications</i> , 2015 , 6, 7905	17.4	48
69	Synthesis of Highly Fluorescent Copper Clusters Using Living Polymer Chains as Combined Reducing Agents and Ligands. <i>ACS Nano</i> , 2015 , 9, 11886-97	16.7	48
68	PbSe quantum dots: Finite, off-stoichiometric, and structurally distorted. <i>Physical Review B</i> , 2010 , 81,	3.3	48
67	Effect of Core/Shell Interface on Carrier Dynamics and Optical Gain Properties of Dual-Color Emitting CdSe/CdS Nanocrystals. <i>ACS Nano</i> , 2016 , 10, 6877-87	16.7	47
66	Controlling the exciton fine structure splitting in CdSe/CdS dot-in-rod nanojunctions. <i>ACS Nano</i> , 2012 , 6, 1979-87	16.7	46
65	Langmuir-Blodgett monolayers of colloidal lead chalcogenide quantum dots: morphology and photoluminescence. <i>Nanotechnology</i> , 2010 , 21, 295606	3.4	44
64	Colloidal CsX (X = Cl, Br, I) Nanocrystals and Their Transformation to CsPbX Nanocrystals by Cation Exchange. <i>Chemistry of Materials</i> , 2018 , 30, 79-83	9.6	43
63	Tunable and Efficient Red to Near-Infrared Photoluminescence by Synergistic Exploitation of Core and Surface Silver Doping of CdSe Nanoplatelets. <i>Chemistry of Materials</i> , 2019 , 31, 1450-1459	9.6	42
62	The dielectric function of PbS quantum dots in a glass matrix. <i>Optical Materials Express</i> , 2012 , 2, 496	2.6	40
61	Solution NMR techniques for investigating colloidal nanocrystal ligands: A case study on trioctylphosphine oxide at InP quantum dots. <i>Sensors and Actuators B: Chemical</i> , 2007 , 126, 283-288	8.5	40
60	Two-photon-induced blue shift of core and shell optical transitions in colloidal CdSe/CdS quasi-type II quantum rods. <i>ACS Nano</i> , 2013 , 7, 2443-52	16.7	38
59	Near-Infrared CuInSe-Based Colloidal Nanocrystals via Cation Exchange. <i>Chemistry of Materials</i> , 2018 , 30, 2607-2617	9.6	36
58	Strong Exciton-Photon Coupling with Colloidal Nanoplatelets in an Open Microcavity. <i>Nano Letters</i> , 2016 , 16, 7137-7141	11.5	35
57	Efficient charge transfer in solution-processed PbS quantum dot/reduced graphene oxide hybrid materials. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 7088-7095	7.1	34

56	Engineering the spin-flip limited exciton dephasing in colloidal CdSe/CdS quantum dots. <i>ACS Nano</i> , 2012 , 6, 5227-33	16.7	32
55	Near-Infrared Emitting Colloidal PbS Nanoplatelets: Lateral Size Control and Optical Spectroscopy. <i>Chemistry of Materials</i> , 2017 , 29, 2883-2889	9.6	31
54	Spectroscopy of the nonlinear refractive index of colloidal PbSe nanocrystals. <i>Applied Physics Letters</i> , 2006 , 89, 193106	3.4	29
53	On the use of CdSe scintillating nanoplatelets as time taggers for high-energy gamma detection. <i>Npj 2D Materials and Applications</i> , 2019 , 3,	8.8	28
52	Extending the Colloidal Transition Metal Dichalcogenide Library to ReS Nanosheets for Application in Gas Sensing and Electrocatalysis. <i>Small</i> , 2019 , 15, e1904670	11	28
51	Ultrafast emission from colloidal nanocrystals under pulsed X-ray excitation. <i>Journal of Instrumentation</i> , 2016 , 11, P10015-P10015	1	27
50	Broadband Amplified Spontaneous Emission and Random Lasing from Wurtzite CdSe/CdS Giant-Shell Nanocrystals. <i>ACS Photonics</i> , 2016 , 3, 2083-2088	6.3	27
49	Disentangling the Role of Shape, Ligands, and Dielectric Constants in the Absorption Properties of Colloidal CdSe/CdS Nanocrystals. <i>ACS Photonics</i> , 2016 , 3, 58-67	6.3	26
48	Composition-, Size-, and Surface Functionalization-Dependent Optical Properties of Lead Bromide Perovskite Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 2079-2085	6.4	25
47	Exciton dynamics within the band-edge manifold states: the onset of an acoustic phonon bottleneck. <i>Nano Letters</i> , 2012 , 12, 5224-9	11.5	23
46	Graphene-Based Hole-Selective Layers for High-Efficiency, Solution-Processed, Large-Area, Flexible, Hydrogen-Evolving Organic Photocathodes. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 21887-21903	3.8	22
45	On the interpretation of colloidal quantum-dot absorption spectra. <i>Small</i> , 2008 , 4, 1866-8; author reply 1869-70	11	22
44	Surface spin magnetism controls the polarized exciton emission from CdSe nanoplatelets. <i>Nature Nanotechnology</i> , 2020 , 15, 277-282	28.7	21
43	Quantum dot micropatterning on si. <i>Langmuir</i> , 2008 , 24, 5961-6	4	21
42	Tuning trion binding energy and oscillator strength in a laterally finite 2D system: CdSe nanoplatelets as a model system for trion properties. <i>Nanoscale</i> , 2020 , 12, 14448-14458	7.7	19
41	Piezoelectric Control of the Exciton Wave Function in Colloidal CdSe/CdS Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 2182-8	6.4	19
40	Langmuir-Blodgett monolayers of InP quantum dots with short chain ligands. <i>Journal of Colloid and Interface Science</i> , 2006 , 300, 597-602	9.3	19
39	Self-Assembled Dense Colloidal Cu ₂ Te Nanodisk Networks in P3HT Thin Films with Enhanced Photocurrent. <i>Advanced Functional Materials</i> , 2016 , 26, 4535-4542	15.6	18

38	Exciton dephasing in lead sulfide quantum dots by X-point phonons. <i>Physical Review B</i> , 2011 , 83,	3.3	18
37	Colloidal nanoplatelets: Energy transfer is speeded up in 2D. <i>Nature Materials</i> , 2015 , 14, 464-5	27	16
36	Polymer assisted deposition of high-quality CsPbI ₂ Br film with enhanced film thickness and stability. <i>Nano Research</i> , 2020 , 13, 684-690	10	16
35	A comparative study demonstrates strong size tunability of carrier-phonon coupling in CdSe-based 2D and 0D nanocrystals. <i>Nanoscale</i> , 2019 , 11, 3958-3967	7.7	16
34	Oxygen sensitivity of atomically passivated CdS nanocrystal films. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 9517-23	9.5	15
33	Near-Edge Ligand Stripping and Robust Radiative Exciton Recombination in CdSe/CdS Core/Crown Nanoplatelets. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 3339-3344	6.4	15
32	Rapid and robust control of single quantum dots. <i>Light: Science and Applications</i> , 2017 , 6, e16239	16.7	14
31	Colloidal Synthesis of Laterally Confined Blue-Emitting 3.5 Monolayer CdSe Nanoplatelets. <i>Chemistry of Materials</i> , 2020 , 32, 9260-9267	9.6	14
30	Revisiting the Anion Framework Conservation in Cation Exchange Processes. <i>Chemistry of Materials</i> , 2016 , 28, 7872-7877	9.6	14
29	Size-dependent exciton substructure in CdSe nanoplatelets and its relation to photoluminescence dynamics. <i>Nanoscale</i> , 2019 , 11, 12230-12241	7.7	13
28	Role of interband and photoinduced absorption in the nonlinear refraction and absorption of resonantly excited PbS quantum dots around 1550 nm. <i>Physical Review B</i> , 2012 , 85,	3.3	13
27	CdSe/CdS/CdTe Core/Barrier/Crown Nanoplatelets: Synthesis, Optoelectronic Properties, and Multiphoton Fluorescence Upconversion. <i>ACS Nano</i> , 2020 , 14, 4206-4215	16.7	13
26	Increasing responsivity and air stability of PbS colloidal quantum dot photoconductors with iodine surface ligands. <i>Nanotechnology</i> , 2019 , 30, 405204	3.4	11
25	Impact of the Band-Edge Fine Structure on the Energy Transfer between Colloidal Quantum Dots. <i>Advanced Optical Materials</i> , 2014 , 2, 126-130	8.1	11
24	The non-linear refractive index of colloidal PbSe nanocrystals: Spectroscopy and saturation behaviour. <i>Journal of Luminescence</i> , 2006 , 121, 369-374	3.8	11
23	Preferred Growth Direction by PbS Nanoplatelets Preserves Perovskite Infrared Light Harvesting for Stable, Reproducible, and Efficient Solar Cells. <i>Advanced Energy Materials</i> , 2020 , 10, 2002422	21.8	11
22	Localization-limited exciton oscillator strength in colloidal CdSe nanoplatelets revealed by the optically induced stark effect. <i>Light: Science and Applications</i> , 2021 , 10, 112	16.7	10
21	Solution-processed silver sulphide nanocrystal film for resistive switching memories. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 13128-13135	7.1	10

20	Band-edge oscillator strength of colloidal CdSe/CdS dot-in-rods: comparison of absorption and time-resolved fluorescence spectroscopy. <i>Nanoscale</i> , 2017 , 9, 4730-4738	7.7	9
19	Four-wave-mixing imaging and carrier dynamics of PbS colloidal quantum dots. <i>Physical Review B</i> , 2010 , 82,	3.3	9
18	Electrical control of single-photon emission in highly charged individual colloidal quantum dots. <i>Science Advances</i> , 2020 , 6,	14.3	9
17	Mechanically flexible and optically transparent three-dimensional nanofibrous amorphous aerocellulose. <i>Carbohydrate Polymers</i> , 2016 , 149, 217-23	10.3	8
16	Dye-Sensitized Ternary Copper Chalcogenide Nanocrystals: Optoelectronic Properties, Air Stability, and Photosensitivity. <i>Chemistry of Materials</i> , 2019 , 31, 2443-2449	9.6	7
15	Ligands for Nanoparticles 2011 , 21-49		7
14	Core/Shell CdSe/CdS Bone-Shaped Nanocrystals with a Thick and Anisotropic Shell as Optical Emitters. <i>Advanced Optical Materials</i> , 2020 , 8, 1901463	8.1	7
13	Two-photon based pulse autocorrelation with CdSe nanoplatelets. <i>Nanoscale</i> , 2019 , 11, 17293-17300	7.7	6
12	Transmission of a quantum-dot-silicon-on-insulator hybrid notch filter. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2009 , 26, 1243	1.7	6
11	Giant-Shell CdSe/CdS Nanocrystals: Exciton Coupling to Shell Phonons Investigated by Resonant Raman Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 399-405	6.4	6
10	Ultrafast stimulated emission microscopy of single nanocrystals. <i>Science</i> , 2019 , 366, 1240-1243	33.3	5
9	Comment on "Size-dependent composition and molar extinction coefficient of PbSe semiconductor nanocrystals". <i>ACS Nano</i> , 2009 , 3, 2053; author reply 2054	16.7	4
8	Synthesis of Anisotropic CdSe/CdS Dot-in-Giant-Rod Nanocrystals with Persistent Blue-Shifted Biexciton Emission. <i>ACS Photonics</i> , 2018 , 5, 4561-4568	6.3	4
7	Van Hove Singularities and Trap States in Two-Dimensional CdSe Nanoplatelets. <i>Nano Letters</i> , 2021 , 21, 1702-1708	11.5	3
6	Objective-free excitation of quantum emitters with a laser-written micro parabolic mirror. <i>APL Photonics</i> , 2020 , 5, 071302	5.2	1
5	Let There Be Order, in Films of Colloidal CdSe 2D Nanocrystals. <i>Nano Letters</i> , 2020 , 20, 2941-2942	11.5	1
4	Electrically Pumped QD Light Emission from LEDs to Lasers. <i>Information Display</i> , 2021 , 37, 6-17	0.8	1
3	Stimulated Emission through an Electron-Hole Plasma in Colloidal CdSe Quantum Rings. <i>Nano Letters</i> , 2021 , 21, 10062-10069	11.5	0

2 Solution NMR Spectroscopy as a Useful Tool to Investigate Colloidal Nanocrystal Dispersions from the Capping Ligand Point of View. *Materials Research Society Symposia Proceedings*, **2006**, 984, 1

1 Ligands for Nanoparticles **2016**, 171-200