Maryna I Bodnarchuk

List of Publications by Year
in descending order

106 papers	21,468 citations	36271 51 h-index	43868 91 g-index
110 all docs	110 docs citations	110 times ranked	17292 citing authors

#	Article	IF	Citations
1	Nanocrystals of Cesium Lead Halide Perovskites (CsPbX₃, X = Cl, Br, and I): Novel Optoelectronic Materials Showing Bright Emission with Wide Color Gamut. Nano Letters, 2015, 15, 3692-3696.	4.5	6,814
2	Fast Anion-Exchange in Highly Luminescent Nanocrystals of Cesium Lead Halide Perovskites (CsPbX₃, X = Cl, Br, I). Nano Letters, 2015, 15, 5635-5640.	4.5	1,938
3	Properties and potential optoelectronic applications of lead halide perovskite nanocrystals. Science, 2017, 358, 745-750.	6.0	1,755
4	Low-threshold amplified spontaneous emission and lasing from colloidal nanocrystals of caesium lead halide perovskites. Nature Communications, 2015, 6, 8056.	5.8	1,278
5	Lead Halide Perovskite Nanocrystals in the Research Spotlight: Stability and Defect Tolerance. ACS Energy Letters, 2017, 2, 2071-2083.	8.8	888
6	State of the Art and Prospects for Halide Perovskite Nanocrystals. ACS Nano, 2021, 15, 10775-10981.	7.3	705
7	Quasicrystalline order in self-assembled binary nanoparticle superlattices. Nature, 2009, 461, 964-967.	13.7	551
8	Superfluorescence from lead halide perovskite quantum dot superlattices. Nature, 2018, 563, 671-675.	13.7	416
9	Dismantling the â€œRed Wallâ€•of Colloidal Perovskites: Highly Luminescent Formamidinium and Formamidiniumâ€“Cesium Lead Iodide Nanocrystals. ACS Nano, 2017, 11, 3119-3134.	7.3	414
10	Monodisperse Formamidinium Lead Bromide Nanocrystals with Bright and Stable Green Photoluminescence. Journal of the American Chemical Society, 2016, 138, 14202-14205.	6.6	385
11	Fatty Acid Salts as Stabilizers in Size- and Shape-Controlled Nanocrystal Synthesis:â€‰ The Case of Inverse Spinel Iron Oxide. Journal of the American Chemical Society, 2007, 129, 6352-6353.	6.6	380
12	Monodisperse and Inorganically Capped Sn and Sn/SnO₂ Nanocrystals for High-Performance Li-Ion Battery Anodes. Journal of the American Chemical Society, 2013, 135, 4199-4202.	6.6	346
13	Gold/Iron Oxide Core/Hollowâ€Shell Nanoparticles. Advanced Materials, 2008, 20, 4323-4329.	11.1	308
14	Rationalizing and Controlling the Surface Structure and Electronic Passivation of Cesium Lead Halide Nanocrystals. ACS Energy Letters, 2019, 4, 63-74.	8.8	308
15	Single Cesium Lead Halide Perovskite Nanocrystals at Low Temperature: Fast Single-Photon Emission, Reduced Blinking, and Exciton Fine Structure. ACS Nano, 2016, 10, 2485-2490.	7.3	299
16	Expanding the Chemical Versatility of Colloidal Nanocrystals Capped with Molecular Metal Chalcogenide Ligands. Journal of the American Chemical Society, 2010, 132, 10085-10092.	6.6	263
17	High-resolution remote thermometry and thermography using luminescent low-dimensional tin-halide perovskites. Nature Materials, 2019, 18, 846-852.	13.3	246
18	Lead Halide Perovskites and Other Metal Halide Complexes As Inorganic Capping Ligands for Colloidal Nanocrystals. Journal of the American Chemical Society, 2014, 136, 6550-6553.	6.6	241

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19	Energetic and Entropic Contributions to Self-Assembly of Binary Nanocrystal Superlattices: Temperature as the Structure-Directing Factor. Journal of the American Chemical Society, 2010, 132, 11967-11977.	6.6	210
20	The ground exciton state of formamidinium lead bromide perovskite nanocrystals is a singlet dark state. Nature Materials, 2019, 18, 717-724.	13.3	189
21	Rashba Effect in a Single Colloidal CsPbBr₃ Perovskite Nanocrystal Detected by Magneto-Optical Measurements. Nano Letters, 2017, 17, 5020-5026.	4.5	180
22	Direct Synthesis of Quaternary Alkylammonium-Capped Perovskite Nanocrystals for Efficient Blue and Green Light-Emitting Diodes. ACS Energy Letters, 2019, 4, 2703-2711.	8.8	161
23	Perovskite-type superlattices from lead halide perovskite nanocubes. Nature, 2021, 593, 535-542.	13.7	152
24	Stable Ultraconcentrated and Ultradilute Colloids of CsPbX₃ (X = Cl, Br) Nanocrystals Using Natural Lecithin as a Capping Ligand. Journal of the American Chemical Society, 2019, 141, 19839-19849.	6.6	141
25	Exploration of Near-Infrared-Emissive Colloidal Multinary Lead Halide Perovskite Nanocrystals Using an Automated Microfluidic Platform. ACS Nano, 2018, 12, 5504-5517.	7.3	138
26	Size-Dependent Multiple Twinning in Nanocrystal Superlattices. Journal of the American Chemical Society, 2010, 132, 289-296.	6.6	134
27	Unraveling excitonâ€“phonon coupling in individual FAPbI3 nanocrystals emitting near-infrared single photons. Nature Communications, 2018, 9, 3318.	5.8	117
28	Quasiâ€Seeded Growth of Ligandâ€Tailored PbSe Nanocrystals through Cationâ€Exchangeâ€Mediated Nucleation. Angewandte Chemie - International Edition, 2008, 47, 3029-3033.	7.2	103
29	Tuning the Magnetic Properties of Metal Oxide Nanocrystal Heterostructures by Cation Exchange. Nano Letters, 2013, 13, 586-593.	4.5	91
30	Reconfigurable halide perovskite nanocrystal memristors for neuromorphic computing. Nature Communications, 2022, 13, 2074.	5.8	89
31	Underestimated Effect of a Polymer Matrix on the Light Emission of Single CsPbBr₃ Nanocrystals. Nano Letters, 2019, 19, 3648-3653.	4.5	88
32	Large-Area Ordered Superlattices from Magnetic WÃ¼stite/Cobalt Ferrite Core/Shell Nanocrystals by Doctor Blade Casting. ACS Nano, 2010, 4, 423-431.	7.3	83
33	â€œMagnet-in-the-Semiconductorâ€• FePtâˆ'PbS and FePtâˆ'PbSe Nanostructures: Magnetic Properties, Charge Transport, and Magnetoresistance. Journal of the American Chemical Society, 2010, 132, 6382-6391.	6.6	80
34	Exchangeâ€Coupled Bimagnetic WÃ¼stite/Metal Ferrite Core/Shell Nanocrystals: Size, Shape, and Compositional Control. Small, 2009, 5, 2247-2252.	5.2	78
35	Aluminum Chlorideâ€Graphite Batteries with Flexible Current Collectors Prepared from Earthâ€Abundant Elements. Advanced Science, 2018, 5, 1700712.	5.6	77
36	Nanocrystal Superlattices with Thermally Degradable Hybrid Inorganicâˆ'Organic Capping Ligands. Journal of the American Chemical Society, 2010, 132, 15124-15126.	6.6	75

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37	Monodisperse Long-Chain Sulfobetaine-Capped CsPbBr₃ Nanocrystals and Their Superfluorescent Assemblies. ACS Central Science, 2021, 7, 135-144.	5.3	75
38	Precisely Engineered Colloidal Nanoparticles and Nanocrystals for Li-Ion and Na-Ion Batteries: Model Systems or Practical Solutions?. Chemistry of Materials, 2014, 26, 5422-5432.	3.2	69
39	The dark exciton ground state promotes photon-pair emission in individual perovskite nanocrystals. Nature Communications, 2020, 11, 6001.	5.8	67
40	Radiative lifetime-encoded unicolour security tags using perovskite nanocrystals. Nature Communications, 2021, 12, 981.	5.8	67
41	Three-Dimensional Nanocrystal Superlattices Grown in Nanoliter Microfluidic Plugs. Journal of the American Chemical Society, 2011, 133, 8956-8960.	6.6	66
42	Colloidal Tinâ€“Germanium Nanorods and Their Li-Ion Storage Properties. ACS Nano, 2014, 8, 2360-2368.	7.3	66
43	Copper sulfide nanoparticles as high-performance cathode materials for Mg-ion batteries. Scientific Reports, 2019, 9, 7988.	1.6	64
44	High Infrared Photoconductivity in Films of Arsenic-Sulfide-Encapsulated Lead-Sulfide Nanocrystals. ACS Nano, 2014, 8, 12883-12894.	7.3	62
45	Lead Halide Perovskite Nanocrystals: From Discovery to Self-assembly and Applications. Chimia, 2017, 71, 461.	0.3	62
46	Colloidal Bismuth Nanocrystals as a Model Anode Material for Rechargeable Mg-Ion Batteries: Atomistic and Mesoscale Insights. ACS Nano, 2018, 12, 8297-8307.	7.3	61
47	Nanocrystalline FeF₃ and MF₂ (M = Fe, Co, and Mn) from metal trifluoroacetates and their Li(Na)-ion storage properties. Journal of Materials Chemistry A, 2017, 5, 7383-7393.	5.2	59
48	Phonon Interaction and Phase Transition in Single Formamidinium Lead Bromide Quantum Dots. Nano Letters, 2018, 18, 4440-4446.	4.5	57
49	Langmuirâˆ’Schaefer Deposition of Quantum Dot Multilayers. Langmuir, 2010, 26, 7732-7736.	1.6	54
50	Structural Defects in Periodic and Quasicrystalline Binary Nanocrystal Superlattices. Journal of the American Chemical Society, 2011, 133, 20837-20849.	6.6	53
51	Binary Superlattices from Colloidal Nanocrystals and Giant Polyoxometalate Clusters. Nano Letters, 2013, 13, 1699-1705.	4.5	46
52	Anatase TiO₂ Nanorods as Cathode Materials for Aluminum-Ion Batteries. ACS Applied Nano Materials, 2019, 2, 6428-6435.	2.4	40
53	Hot Carrier Dynamics in Perovskite Nanocrystal Solids: Role of the Cold Carriers, Nanoconfinement, and the Surface. Nano Letters, 2020, 20, 2271-2278.	4.5	40
54	Evaluation of Metal Phosphide Nanocrystals as Anode Materials for Na-ion Batteries. Chimia, 2015, 69, 724.	0.3	38

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55	NaFeF₃ Nanoplates as Low-Cost Sodium and Lithium Cathode Materials for Stationary Energy Storage. Chemistry of Materials, 2018, 30, 1825-1829.	3.2	36
56	Fast Neutron Imaging with Semiconductor Nanocrystal Scintillators. ACS Nano, 2020, 14, 14686-14697.	7.3	34
57	Room-Temperature, Highly Pure Single-Photon Sources from All-Inorganic Lead Halide Perovskite Quantum Dots. Nano Letters, 2022, 22, 3751-3760.	4.5	34
58	Surface-Engineered Cationic Nanocrystals Stable in Biological Buffers and High Ionic Strength Solutions. Chemistry of Materials, 2017, 29, 9416-9428.	3.2	31
59	Evaluation of Ordering in Single-Component and Binary Nanocrystal Superlattices by Analysis of Their Autocorrelation Functions. ACS Nano, 2011, 5, 1703-1712.	7.3	30
60	Efficient Optical Amplification in the Nanosecond Regime from Formamidinium Lead Iodide Nanocrystals. ACS Photonics, 2018, 5, 907-917.	3.2	30
61	Highly Concentrated, Zwitterionic Ligand-Capped Mn²⁺:CsPb(Br_{<i>x</i>}Cl_{1â€“<i>x</i>})₃ Nanocrystals as Bright Scintillators for Fast Neutron Imaging. ACS Energy Letters, 2021, 6, 4365-4373.	8.8	30
62	Shape-Directed Co-Assembly of Lead Halide Perovskite Nanocubes with Dielectric Nanodisks into Binary Nanocrystal Superlattices. ACS Nano, 2021, 15, 16488-16500.	7.3	25
63	Polaron and Spin Dynamics in Organicâ€“Inorganic Lead Halide Perovskite Nanocrystals. Advanced Optical Materials, 2020, 8, 2001016.	3.6	23
64	Colloidal Antimony Sulfide Nanoparticles as a High-Performance Anode Material for Li-ion and Na-ion Batteries. Scientific Reports, 2020, 10, 2554.	1.6	23
65	Unraveling the Origin of the Long Fluorescence Decay Component of Cesium Lead Halide Perovskite Nanocrystals. ACS Nano, 2020, 14, 14939-14946.	7.3	22
66	Colloidal BiF₃ nanocrystals: a bottom-up approach to conversion-type Li-ion cathodes. Nanoscale, 2015, 7, 16601-16605.	2.8	21
67	Energy Transfer from Perovskite Nanocrystals to Dye Molecules Does Not Occur by FRET. Nano Letters, 2019, 19, 8896-8902.	4.5	21
68	Robust Hydrophobic and Hydrophilic Polymer Fibers Sensitized by Inorganic and Hybrid Lead Halide Perovskite Nanocrystal Emitters. Frontiers in Chemistry, 2019, 7, 87.	1.8	21
69	Efficient Amplified Spontaneous Emission from Solution-Processed CsPbBr₃ Nanocrystal Microcavities under Continuous Wave Excitation. ACS Photonics, 2021, 8, 2120-2129.	3.2	21
70	Hostâ€“guest chemistry for tuning colloidal solubility, self-organization and photoconductivity of inorganic-capped nanocrystals. Nature Communications, 2015, 6, 10142.	5.8	20
71	Enhanced Reducibility of the Ceriaâ€“Tin Oxide Solid Solution Modifies the CO Oxidation Mechanism at the Platinumâ€“Oxide Interface. ACS Catalysis, 2021, 11, 9435-9449.	5.5	19
72	Structural Diversity in Multicomponent Nanocrystal Superlattices Comprising Lead Halide Perovskite Nanocubes. ACS Nano, 2022, 16, 7210-7232.	7.3	18

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73	Overcoming the High-Voltage Limitations of Li-Ion Batteries Using a Titanium Nitride Current Collector. ACS Applied Energy Materials, 2019, 2, 974-978.	2.5	17
74	Airâ€•Stable, Nearâ€•to Midâ€•Infrared Emitting Solids of PbTe/CdTe Coreâ€“Shell Colloidal quantum dots. ChemPhysChem, 2016, 17, 670-674.	1.0	15
75	Unraveling the Radiative Pathways of Hot Carriers upon Intense Photoexcitation of Lead Halide Perovskite Nanocrystals. ACS Nano, 2019, 13, 5799-5809.	7.3	15
76	Spectral, Optical, and Photocatalytic Characteristics of Quantum-Sized Particles of CdTe. Theoretical and Experimental Chemistry, 2004, 40, 220-225.	0.2	14
77	Spontaneous emission enhancement of colloidal perovskite nanocrystals by a photonic crystal cavity. Applied Physics Letters, 2017, 111, .	1.5	14
78	Exciton Gating and Triplet Deshelving in Single Dye Molecules Excited by Perovskite Nanocrystal FRET Antennae. Journal of Physical Chemistry Letters, 2019, 10, 1055-1062.	2.1	14
79	Surface Functionalization of CsPbBr₃ Î•anocrystals for Photonic Applications. ACS Applied Nano Materials, 2021, 4, 5084-5097.	2.4	14
80	Size Segregation and Atomic Structural Coherence in Spontaneous Assemblies of Colloidal Cesium Lead Halide Nanocrystals. Chemistry of Materials, 2022, 34, 594-608.	3.2	14
81	Amphiphilic Polymer Coâ€•Network: A Versatile Matrix for Tailoring the Photonic Energy Transfer in Wearable Energy Harvesting Devices. Advanced Energy Materials, 2022, 12, .	10.2	10
82	Photoinduced Electron Transfer between CdS and CdTe Nanoparticles in Colloidal Solutions. Theoretical and Experimental Chemistry, 2004, 40, 287-292.	0.2	9
83	InGaN Nanohole Arrays Coated by Lead Halide Perovskite Nanocrystals for Solid-State Lighting. ACS Applied Nano Materials, 2020, 3, 2167-2175.	2.4	9
84	Damascene Process for Controlled Positioning of Magnetic Colloidal Nanocrystals. Advanced Materials, 2010, 22, 1364-1368.	11.1	8
85	Flexible, Free-Standing Polymer Membranes Sensitized by CsPbX3 Nanocrystals as Gain Media for Low Threshold, Multicolor Light Amplification. ACS Photonics, 2022, 9, 2385-2397.	3.2	7
86	Carbon nanotube growth from Langmuirâ€“Blodgett deposited Fe3O4nanocrystals. Nanotechnology, 2012, 23, 405604.	1.3	6
87	Kinetic modelling of intraband carrier relaxation in bulk and nanocrystalline lead-halide perovskites. Physical Chemistry Chemical Physics, 2020, 22, 17605-17611.	1.3	5
88	Polarized emission in IIâ€“VI and perovskite colloidal quantum dots. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 214001.	0.6	4
89	Unraveling the shell growth pathways of Pd-Pt core-shell nanocubes at atomic level by in situ liquid cell electron microscopy. Applied Physics Reviews, 2021, 8, 041407.	5.5	4
90	Engineering colloidal quantum dots. , 2013, , 1-29.		2

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91	Superfluorescence from Nanocrystal Superlattices. Chimia, 2019, 73, 92.	0.3	1
92	Perovskite-type nanocrystal superlattices from lead halide perovskite nanocubes. , 0, , .		0
93	All-Optical Coherent Lifting of Spin-Degeneracy in CsPbBr3 Nanocrystals. , 2021, , .		0
94	Purcell enhanced Spontaneous Emission of Colloidal Perovskite Nanocrystals. , 2017, , .		0
95	Exciton gating and triplet deshelving in single dye molecules excited by perovskite nanocrystal FRET antennae. , 0, , .		0
96	Bright Triplet Emission from Lead Halide Perovskite Nanocrystals. , 0, , .		0
97	Trap-states in monodisperse formamidinium tin iodide nanocrystals. , 0, , .		0
98	Continuous Wave Excitation of Amplified Spontaneous Emission in Solution-Processed Perovskite Nanocrystal Microcavities. , 0, , .		0
99	Highly luminescent lead halide perovskite nanocrystals: from synthesis advancements to multicomponent superlattices. , 0, , .		0
100	Lattice Softening Effects in Perovskite Nanocrystals: a Strategy for Lifetime-Encoded Unicolour Security Tags. , 0, , .		0
101	Bright Triplet Emission from Lead Halide Perovskite Nanocrystals. , 0, , .		0
102	Exciton Gating and Triplet Deshelving in Single Dye Molecules Excited by Perovskite Nanocrystal FRET Antennae. , 0, , .		0
103	Stimulated Emission in Formamidinium Lead Iodide Perovskite Nanocrystals. , 0, , .		0
104	Structural Diversity in Multicomponent Nanocrystal Superlattices Comprising Lead Halide Perovskite Nanocubes. , 0, , .		0
105	Characterizing Structure, Microstructure, Morphology and Self-Assembly of LHP nanocrystals through Reciprocal Space Total Scattering Methods. , 0, , .		0
106	Hot Carrier Cooling Dynamics in Lead Halide Perovskite Nanomaterials. , 0, , .		0