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	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
2	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
3	Structural Diversity in Multicomponent Nanocrystal Superlattices Comprising Lead Halide Perovskite Nanocubes. ACS Nano, 2022, 16, 7210-7232.	7.3	18
4	Reconfigurable halide perovskite nanocrystal memristors for neuromorphic computing. Nature Communications, 2022, 13, 2074.	5.8	89
5	Room-Temperature, Highly Pure Single-Photon Sources from All-Inorganic Lead Halide Perovskite Quantum Dots. Nano Letters, 2022, 22, 3751-3760.	4.5	34
6	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
7	Radiative lifetime-encoded unicolour security tags using perovskite nanocrystals. Nature Communications, 2021, 12, 981.	5.8	67
8	Perovskite-type superlattices from lead halide perovskite nanocubes. Nature, 2021, 593, 535-542.	13.7	152
9	Surface Functionalization of CsPbBr₃ Îanocrystals for Photonic Applications. ACS Applied Nano Materials, 2021, 4, 5084-5097.	2.4	14
10	State of the Art and Prospects for Halide Perovskite Nanocrystals. ACS Nano, 2021, 15, 10775-10981.	7.3	705
11	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
12	Efficient Amplified Spontaneous Emission from Solution-Processed CsPbBr₃ Nanocrystal Microcavities under Continuous Wave Excitation. ACS Photonics, 2021, 8, 2120-2129.	3.2	21
13	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
14	All-Optical Coherent Lifting of Spin-Degeneracy in CsPbBr3 Nanocrystals. , 2021, , .		0
15	Monodisperse Long-Chain Sulfobetaine-Capped CsPbBr₃ Nanocrystals and Their Superfluorescent Assemblies. ACS Central Science, 2021, 7, 135-144.	5.3	75
16	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
17	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
18	Polaron and Spin Dynamics in Organicâ€“Inorganic Lead Halide Perovskite Nanocrystals. Advanced Optical Materials, 2020, 8, 2001016.	3.6	23

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19	The dark exciton ground state promotes photon-pair emission in individual perovskite nanocrystals. Nature Communications, 2020, 11, 6001.	5.8	67
20	Unraveling the Origin of the Long Fluorescence Decay Component of Cesium Lead Halide Perovskite Nanocrystals. ACS Nano, 2020, 14, 14939-14946.	7.3	22
21	Kinetic modelling of intraband carrier relaxation in bulk and nanocrystalline lead-halide perovskites. Physical Chemistry Chemical Physics, 2020, 22, 17605-17611.	1.3	5
22	Fast Neutron Imaging with Semiconductor Nanocrystal Scintillators. ACS Nano, 2020, 14, 14686-14697.	7.3	34
23	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
24	InGaN Nanohole Arrays Coated by Lead Halide Perovskite Nanocrystals for Solid-State Lighting. ACS Applied Nano Materials, 2020, 3, 2167-2175.	2.4	9
25	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
26	High-resolution remote thermometry and thermography using luminescent low-dimensional tin-halide perovskites. Nature Materials, 2019, 18, 846-852.	13.3	246
27	Energy Transfer from Perovskite Nanocrystals to Dye Molecules Does Not Occur by FRET. Nano Letters, 2019, 19, 8896-8902.	4.5	21
28	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
29	Anatase TiO₂ Nanorods as Cathode Materials for Aluminum-Ion Batteries. ACS Applied Nano Materials, 2019, 2, 6428-6435.	2.4	40
30	Underestimated Effect of a Polymer Matrix on the Light Emission of Single CsPbBr₃ Nanocrystals. Nano Letters, 2019, 19, 3648-3653.	4.5	88
31	Copper sulfide nanoparticles as high-performance cathode materials for Mg-ion batteries. Scientific Reports, 2019, 9, 7988.	1.6	64
32	Unraveling the Radiative Pathways of Hot Carriers upon Intense Photoexcitation of Lead Halide Perovskite Nanocrystals. ACS Nano, 2019, 13, 5799-5809.	7.3	15
33	The ground exciton state of formamidinium lead bromide perovskite nanocrystals is a singlet dark state. Nature Materials, 2019, 18, 717-724.	13.3	189
34	Superfluorescence from Nanocrystal Superlattices. Chimia, 2019, 73, 92.	0.3	1
35	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
36	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

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37	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
38	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
39	Rationalizing and Controlling the Surface Structure and Electronic Passivation of Cesium Lead Halide Nanocrystals. ACS Energy Letters, 2019, 4, 63-74.	8.8	308
40	Aluminum Chlorideâ€Graphite Batteries with Flexible Current Collectors Prepared from Earthâ€Abundant Elements. Advanced Science, 2018, 5, 1700712.	5.6	77
41	Efficient Optical Amplification in the Nanosecond Regime from Formamidinium Lead Iodide Nanocrystals. ACS Photonics, 2018, 5, 907-917.	3.2	30
42	NaFeF₃ Nanoplates as Low-Cost Sodium and Lithium Cathode Materials for Stationary Energy Storage. Chemistry of Materials, 2018, 30, 1825-1829.	3.2	36
43	Superfluorescence from lead halide perovskite quantum dot superlattices. Nature, 2018, 563, 671-675.	13.7	416
44	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
45	Unraveling excitonâ€"phonon coupling in individual FAPbI3 nanocrystals emitting near-infrared single photons. Nature Communications, 2018, 9, 3318.	5.8	117
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	Phonon Interaction and Phase Transition in Single Formamidinium Lead Bromide Quantum Dots. Nano Letters, 2018, 18, 4440-4446.	4.5	57
48	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
49	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
50	Surface-Engineered Cationic Nanocrystals Stable in Biological Buffers and High Ionic Strength Solutions. Chemistry of Materials, 2017, 29, 9416-9428.	3.2	31
51	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
52	Lead Halide Perovskite Nanocrystals in the Research Spotlight: Stability and Defect Tolerance. ACS Energy Letters, 2017, 2, 2071-2083.	8.8	888
53	Spontaneous emission enhancement of colloidal perovskite nanocrystals by a photonic crystal cavity. Applied Physics Letters, 2017, 111, .	1.5	14
54	Properties and potential optoelectronic applications of lead halide perovskite nanocrystals. Science, 2017, 358, 745-750.	6.0	1,755

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55	Rashba Effect in a Single Colloidal CsPbBr₃ Perovskite Nanocrystal Detected by Magneto-Optical Measurements. Nano Letters, 2017, 17, 5020-5026.	4.5	180
56	Lead Halide Perovskite Nanocrystals: From Discovery to Self-assembly and Applications. Chimia, 2017, 71, 461.	0.3	62
57	Purcell enhanced Spontaneous Emission of Colloidal Perovskite Nanocrystals. , 2017, , .		0
58	Airâ€Stable, Nearâ€•to Midâ€Infrared Emitting Solids of PbTe/CdTe Coreâ€“Shell Colloidal quantum dots. ChemPhysChem, 2016, 17, 670-674.	1.0	15
59	Monodisperse Formamidinium Lead Bromide Nanocrystals with Bright and Stable Green Photoluminescence. Journal of the American Chemical Society, 2016, 138, 14202-14205.	6.6	385
60	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
61	Hostâ€“guest chemistry for tuning colloidal solubility, self-organization and photoconductivity of inorganic-capped nanocrystals. Nature Communications, 2015, 6, 10142.	5.8	20
62	Evaluation of Metal Phosphide Nanocrystals as Anode Materials for Na-ion Batteries. Chimia, 2015, 69, 724.	0.3	38
63	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
64	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
65	Low-threshold amplified spontaneous emission and lasing from colloidal nanocrystals of caesium lead halide perovskites. Nature Communications, 2015, 6, 8056.	5.8	1,278
66	Colloidal BiF₃ nanocrystals: a bottom-up approach to conversion-type Li-ion cathodes. Nanoscale, 2015, 7, 16601-16605.	2.8	21
67	High Infrared Photoconductivity in Films of Arsenic-Sulfide-Encapsulated Lead-Sulfide Nanocrystals. ACS Nano, 2014, 8, 12883-12894.	7.3	62
68	Colloidal Tinâ€“Germanium Nanorods and Their Li-Ion Storage Properties. ACS Nano, 2014, 8, 2360-2368.	7.3	66
69	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
70	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
71	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
72	Tuning the Magnetic Properties of Metal Oxide Nanocrystal Heterostructures by Cation Exchange. Nano Letters, 2013, 13, 586-593.	4.5	91

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73	Binary Superlattices from Colloidal Nanocrystals and Giant Polyoxometalate Clusters. Nano Letters, 2013, 13, 1699-1705.	4.5	46
74	Engineering colloidal quantum dots. , 2013, , 1-29.		2
75	Carbon nanotube growth from Langmuirâ€"Blodgett deposited Fe3O4nanocrystals. Nanotechnology, 2012, 23, 405604.	1.3	6
76	Three-Dimensional Nanocrystal Superlattices Grown in Nanoliter Microfluidic Plugs. Journal of the American Chemical Society, 2011, 133, 8956-8960.	6.6	66
77	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
78	Structural Defects in Periodic and Quasicrystalline Binary Nanocrystal Superlattices. Journal of the American Chemical Society, 2011, 133, 20837-20849.	6.6	53
79	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
80	Damascene Process for Controlled Positioning of Magnetic Colloidal Nanocrystals. Advanced Materials, 2010, 22, 1364-1368.	11.1	8
81	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
82	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
83	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
84	Size-Dependent Multiple Twinning in Nanocrystal Superlattices. Journal of the American Chemical Society, 2010, 132, 289-296.	6.6	134
85	Nanocrystal Superlattices with Thermally Degradable Hybrid Inorganicâˆ'Organic Capping Ligands. Journal of the American Chemical Society, 2010, 132, 15124-15126.	6.6	75
86	Langmuirâˆ'Schaefer Deposition of Quantum Dot Multilayers. Langmuir, 2010, 26, 7732-7736.	1.6	54
87	Exchangeâ€Coupled Bimagnetic WÃ¼stite/Metal Ferrite Core/Shell Nanocrystals: Size, Shape, and Compositional Control. Small, 2009, 5, 2247-2252.	5.2	78
88	Quasicrystalline order in self-assembled binary nanoparticle superlattices. Nature, 2009, 461, 964-967.	13.7	551
89	Quasiâ€Seeded Growth of Ligandâ€Tailored PbSe Nanocrystals through Cationâ€Exchangeâ€Mediated Nucleation. Angewandte Chemie - International Edition, 2008, 47, 3029-3033.	7.2	103
90	Gold/Iron Oxide Core/Hollowâ€Shell Nanoparticles. Advanced Materials, 2008, 20, 4323-4329.	11.1	308

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91	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
92	Spectral, Optical, and Photocatalytic Characteristics of Quantum-Sized Particles of CdTe. Theoretical and Experimental Chemistry, 2004, 40, 220-225.	0.2	14
93	Photoinduced Electron Transfer between CdS and CdTe Nanoparticles in Colloidal Solutions. Theoretical and Experimental Chemistry, 2004, 40, 287-292.	0.2	9
94	Perovskite-type nanocrystal superlattices from lead halide perovskite nanocubes. , 0, , .		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