Masaru K Kuno

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/9197369/publications.pdf

Version: 2024-02-01

146 papers	20,858 citations	28190 55 h-index	12910 131 g-index
151 all docs	151 docs citations	151 times ranked	23387 citing authors

#	Article	IF	Citations
1	Progress, Challenges, and Opportunities in Two-Dimensional Materials Beyond Graphene. ACS Nano, 2013, 7, 2898-2926.	7.3	4,062
2	Quantum Dot Solar Cells. Harvesting Light Energy with CdSe Nanocrystals Molecularly Linked to Mesoscopic TiO2Films. Journal of the American Chemical Society, 2006, 128, 2385-2393.	6.6	1,724
3	Quantum Dot Solar Cells. Tuning Photoresponse through Size and Shape Control of CdSeâ˜TiO₂ Architecture. Journal of the American Chemical Society, 2008, 130, 4007-4015.	6.6	1,567
4	Band-edge exciton in quantum dots of semiconductors with a degenerate valence band: Dark and bright exciton states. Physical Review B, 1996, 54, 4843-4856.	1.1	1,197
5	Size-Dependent Electron Injection from Excited CdSe Quantum Dots into TiO2Nanoparticles. Journal of the American Chemical Society, 2007, 129, 4136-4137.	6.6	816
6	Observation of the "Dark Exciton" in CdSe Quantum Dots. Physical Review Letters, 1995, 75, 3728-3731.	2.9	759
7	Nonexponential â€œblinkingâ€•kinetics of single CdSe quantum dots: A universal power law behavior. Journal of Chemical Physics, 2000, 112, 3117-3120.	1.2	669
8	The band edge luminescence of surface modified CdSe nanocrystallites: Probing the luminescing state. Journal of Chemical Physics, 1997, 106, 9869-9882.	1.2	580
9	Avidin:â€‰ A Natural Bridge for Quantum Dot-Antibody Conjugates. Journal of the American Chemical Society, 2002, 124, 6378-6382.	6.6	518
10	â€œOnâ€/â€œoffâ€•fluorescence intermittency of single semiconductor quantum dots. Journal of Chemical Physics, 2001, 115, 1028-1040.	1.2	504
11	Organometallic Synthesis and Spectroscopic Characterization of Manganese-Doped CdSe Nanocrystals. Journal of the American Chemical Society, 2000, 122, 2532-2540.	6.6	454
12	Universal emission intermittency in quantum dots, nanorods and nanowires. Nature Physics, 2008, 4, 519-522.	6.5	453
13	Light-Induced Anion Phase Segregation in Mixed Halide Perovskites. ACS Energy Letters, 2018, 3, 204-213.	8.8	444
14	Rationalizing the light-induced phase separation of mixed halide organicâ€“inorganic perovskites. Nature Communications, 2017, 8, 200.	5.8	399
15	Tracking Iodide and Bromide Ion Segregation in Mixed Halide Lead Perovskites during Photoirradiation. ACS Energy Letters, 2016, 1, 290-296.	8.8	321
16	Shift Happens. How Halide Ion Defects Influence Photoinduced Segregation in Mixed Halide Perovskites. ACS Energy Letters, 2017, 2, 1507-1514.	8.8	282
17	Modeling distributed kinetics in isolated semiconductor quantum dots. Physical Review B, 2003, 67, .	1.1	264
18	Storable, thermally activated, near-infrared chemiluminescent dyes and dye-stained microparticles for optical imaging. Nature Chemistry, 2010, 2, 1025-1030.	6.6	247

#	Article	IF	Citations
19	Origin of the Size-Dependent Stokes Shift in CsPbBr₃ Perovskite Nanocrystals. Journal of the American Chemical Society, 2017, 139, 12201-12208.	6.6	240
20	Solution-Based Straight and Branched CdSe Nanowires. Chemistry of Materials, 2004, 16, 5260-5272.	3.2	214
21	Spatially Non-uniform Trap State Densities in Solution-Processed Hybrid Perovskite Thin Films. Journal of Physical Chemistry Letters, 2016, 7, 715-721.	2.1	160
22	An overview of solution-based semiconductor nanowires: synthesis and optical studies. Physical Chemistry Chemical Physics, 2008, 10, 620-639.	1.3	150
23	Efficient Photocatalytic Hydrogen Generation from Ni Nanoparticle Decorated CdS Nanosheets. ACS Catalysis, 2015, 5, 6615-6623.	5.5	144
24	Photoinduced Anion Segregation in Mixed Halide Perovskites. Trends in Chemistry, 2020, 2, 282-301.	4.4	141
25	Solution-Based Straight and Branched CdTe Nanowires. Chemistry of Materials, 2006, 18, 5722-5732.	3.2	140
26	Exciton Recombination Dynamics in CdSe Nanowires:Â Bimolecular to Three-Carrier Auger Kinetics. Nano Letters, 2006, 6, 1344-1349.	4.5	129
27	Super-Resolution Far-Field Infrared Imaging by Photothermal Heterodyne Imaging. Journal of Physical Chemistry B, 2017, 121, 8838-8846.	1.2	123
28	How Interplay between Photo and Thermal Activation Dictates Halide Ion Segregation in Mixed Halide Perovskites. ACS Energy Letters, 2020, 5, 56-63.	8.8	123
29	To Exchange or Not to Exchange. Suppressing Anion Exchange in Cesium Lead Halide Perovskites with PbSO₄â€“Oleate Capping. ACS Energy Letters, 2018, 3, 1049-1055.	8.8	119
30	Vacancy-Mediated Anion Photosegregation Kinetics in Mixed Halide Hybrid Perovskites: Coupled Kinetic Monte Carlo and Optical Measurements. ACS Energy Letters, 2018, 3, 2321-2328.	8.8	119
31	Polarization-Sensitive Nanowire Photodetectors Based on Solution-Synthesized CdSe Quantum-Wire Solids. Nano Letters, 2007, 7, 2999-3006.	4.5	108
32	A CdSe Nanowire/Quantum Dot Hybrid Architecture for Improving Solar Cell Performance. Advanced Functional Materials, 2010, 20, 1464-1472.	7.8	100
33	Fluorescence Intermittency in Single InP Quantum Dots. Nano Letters, 2001, 1, 557-564.	4.5	99
34	Halide Ion Migration in Perovskite Nanocrystals and Nanostructures. Accounts of Chemical Research, 2021, 54, 520-531.	7.6	98
35	Induced Branching in Confined PbSe Nanowires. Chemistry of Materials, 2005, 17, 4416-4425.	3.2	96
36	Band-Filling of Solution-Synthesized CdS Nanowires. ACS Nano, 2008, 2, 357-367.	7.3	96

#	Article	IF	Citations
37	Solution-Based IIâˆ’VI Core/Shell Nanowire Heterostructures. Journal of the American Chemical Society, 2008, 130, 14822-14833.	6.6	93
38	Experimental Determination of the Absorption Cross-Section and Molar Extinction Coefficient of CdSe and CdTe Nanowiresâ€. Journal of Physical Chemistry B, 2006, 110, 25322-25331.	1.2	89
39	Existence of a Size-Dependent Stokes Shift in CsPbBr₃ Perovskite Nanocrystals. ACS Energy Letters, 2017, 2, 1487-1488.	8.8	86
40	Magnetic circular dichroism study of CdSe quantum dots. Journal of Chemical Physics, 1998, 108, 4242-4247.	1.2	85
41	Disorder-Induced Optical Heterogeneity in Single CdSe Nanowires. Advanced Materials, 2005, 17, 2942-2949.	11.1	85
42	Photocatalytic Hydrogen Generation Efficiencies in One-Dimensional CdSe Heterostructures. Journal of Physical Chemistry Letters, 2012, 3, 3234-3240.	2.1	83
43	Optical constants and dynamic conductivities of single layer MoS2, MoSe2, and WSe2. Applied Physics Letters, 2015, 107, .	1.5	82
44	Synthesis and Characterization of Au/Bi Core/Shell Nanocrystals:â€‰ A Precursor toward IIâˆ’VI Nanowires. Journal of Physical Chemistry B, 2004, 108, 9745-9751.	1.2	75
45	Molecular Clusters of Binary and Ternary Mercury Chalcogenides:Â Colloidal Synthesis, Characterization, and Optical Spectra. Journal of Physical Chemistry B, 2003, 107, 5758-5767.	1.2	73
46	Nanostructure Absorption: A Comparative Study of Nanowire and Colloidal Quantum Dot Absorption Cross Sections. Journal of Physical Chemistry Letters, 2010, 1, 3340-3348.	2.1	67
47	Synthesis and Characterization of Colloidal Î²-HgS Quantum Dots. Journal of Physical Chemistry B, 2002, 106, 9982-9985.	1.2	65
48	Luminescent Quantum Dot-Adaptor Protein-Antibody Conjugates for Use in Fluoroimmunoassays. Physica Status Solidi (B): Basic Research, 2002, 229, 407-414.	0.7	65
49	Photon Counting Statistics for Blinking CdSeâˆ’ZnS Quantum Dots:Â A LÃ©vy Walk Processâ€. Journal of Physical Chemistry B, 2006, 110, 19053-19060.	1.2	63
50	Evidence of photo- and electrodarkening of (CdSe)ZnS quantum dot composites. Journal of Applied Physics, 2000, 87, 8526-8534.	1.1	62
51	Facile Synthesis and Size Control of IIâ€“VI Nanowires Using Bismuth Salts. Small, 2009, 5, 1112-1116.	5.2	62
52	Carrier recombination dynamics in individual CdSe nanowires. Physical Review B, 2011, 83, .	1.1	61
53	Crystal Structure of Individual CsPbBr₃ Perovskite Nanocubes. Inorganic Chemistry, 2019, 58, 1555-1560.	1.9	61
54	Ultrafast Transient Absorption Measurements of Charge Carrier Dynamics in Single IIâˆ’VI Nanowires. Journal of Physical Chemistry C, 2009, 113, 19077-19081.	1.5	58

#	Article	IF	Citations
55	Molecular fluorescence in the vicinity of a nanoscopic probe. Journal of Chemical Physics, 2001, 114, 8596-8609.	1.2	57
56	Single Nanowire Extinction Spectroscopy. Nano Letters, 2011, 11, 3307-3311.	4.5	57
57	Synthesis of Ultrathin and Thickness-Controlled Cu_{2â€“x}Se Nanosheets via Cation Exchange. Journal of Physical Chemistry Letters, 2014, 5, 3608-3613.	2.1	54
58	Subdiffraction Infrared Imaging of Mixed Cation Perovskites: Probing Local Cation Heterogeneities. ACS Energy Letters, 2018, 3, 469-475.	8.8	54
59	CdSe nanowires with illumination-enhanced conductivity: Induced dipoles, dielectrophoretic assembly, and field-sensitive emission. Journal of Applied Physics, 2007, 101, 073704.	1.1	52
60	Experimental Determination of Single CdSe Nanowire Absorption Cross Sections through Photothermal Imaging. ACS Nano, 2010, 4, 358-364.	7.3	52
61	Wavelength Sensitivity of Single Nanowire Excitation Polarization Anisotropies Explained through a Generalized Treatment of Their Linear Absorption. ACS Nano, 2009, 3, 1979-1987.	7.3	51
62	Suppressing Cation Migration in Triple-Cation Lead Halide Perovskites. ACS Energy Letters, 2020, 5, 2802-2810.	8.8	51
63	Infrared photothermal heterodyne imaging: Contrast mechanism and detection limits. Journal of Applied Physics, 2020, 127, .	1.1	49
64	Controlled Synthesis of Compositionally Tunable Ternary PbSe_xS_{1â€“x} as Well as Binary PbSe and PbS Nanowires. ACS Nano, 2012, 6, 2833-2843.	7.3	48
65	Spatial and Intensity Modulation of Nanowire Emission Induced by Mobile Charges. Journal of the American Chemical Society, 2007, 129, 13160-13171.	6.6	47
66	Superlattices are Greener on the Other Side: How Light Transforms Self-Assembled Mixed Halide Perovskite Nanocrystals. ACS Energy Letters, 2020, 5, 1465-1473.	8.8	46
67	Synthetic Strategy and Structural and Optical Characterization of Thin Highly Crystalline Titanium Disulfide Nanosheets. Journal of Physical Chemistry Letters, 2012, 3, 1554-1558.	2.1	44
68	Universal Size-Dependent Stokes Shifts in Lead Halide Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2020, 11, 4937-4944.	2.1	44
69	Approaches to mid-infrared, super-resolution imaging and spectroscopy. Physical Chemistry Chemical Physics, 2020, 22, 4313-4325.	1.3	44
70	Excitation and photoluminescence polarization anisotropy of single CdSe nanowires. Applied Physics Letters, 2008, 92, 183110.	1.5	42
71	Double heterojunction nanowire photocatalysts for hydrogen generation. Nanoscale, 2014, 6, 4117-4124.	2.8	41
72	Direct Observation of Spatially Heterogeneous Single-Layer Graphene Oxide Reduction Kinetics. Nano Letters, 2013, 13, 5777-5784.	4.5	40

#	Article	IF	Citations
73	A quantitative and spatially resolved analysis of the performance-bottleneck in high efficiency, planar hybrid perovskite solar cells. Energy and Environmental Science, 2018, 11, 960-969.	15.6	40
74	Charge Carrier Trapping and Acoustic Phonon Modes in Single CdTe Nanowires. ACS Nano, 2012, 6, 5274-5282.	7.3	38
75	Photoluminescence Up-Conversion in CsPbBr₃ Nanocrystals. ACS Energy Letters, 2017, 2, 2514-2515.	8.8	38
76	Single Nanowire Microscopy and Spectroscopy. Journal of Physical Chemistry C, 2012, 116, 12379-12396.	1.5	36
77	Direct Observation of Single Layer Graphene Oxide Reduction through Spatially Resolved, Single Sheet Absorption/Emission Microscopy. Nano Letters, 2014, 14, 3172-3179.	4.5	36
78	Photocurrent Polarization Anisotropy of Randomly Oriented Nanowire Networks. Nano Letters, 2008, 8, 1352-1357.	4.5	33
79	Bismuth-Assisted CdSe and CdTe Nanowire Growth on Plastics. Chemistry of Materials, 2010, 22, 77-84.	3.2	32
80	Nanowire-Functionalized Cotton Textiles. ACS Applied Materials & Interfaces, 2014, 6, 2262-2269.	4.0	32
81	CdSe nanowire solar cells using carbazole as a surface modifier. Journal of Materials Chemistry A, 2013, 1, 5487.	5.2	31
82	Imaging and Absolute Extinction Cross-Section Measurements of Nanorods and Nanowires through Polarization Modulation Microscopy. Journal of Physical Chemistry C, 2010, 114, 16029-16036.	1.5	30
83	Progress in laser cooling semiconductor nanocrystals and nanostructures. NPG Asia Materials, 2019, 11, .	3.8	30
84	Ultrathin CdSe nanowire field-effect transistors. Journal of Electronic Materials, 2006, 35, 170-172.	1.0	29
85	Thermal Decoherence of Superradiance in Lead Halide Perovskite Nanocrystal Superlattices. Nano Letters, 2020, 20, 7382-7388.	4.5	29
86	Defect-Mediated CdS Nanobelt Photoluminescence Up-Conversion. Journal of Physical Chemistry C, 2017, 121, 16607-16616.	1.5	28
87	Far-field midinfrared superresolution imaging and spectroscopy of single high aspect ratio gold nanowires. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 2288-2293.	3.3	28
88	Spectroscopic signatures of ligand field states in {Ru^{II}(imine)} complexes. Dalton Transactions, 2016, 45, 5464-5475.	1.6	27
89	What Exactly Causes Light-Induced Halide Segregation in Mixed-Halide Perovskites?. Matter, 2020, 2, 21-23.	5.0	27
90	Electric Field-Induced Emission Enhancement and Modulation in Individual CdSe Nanowires. ACS Nano, 2012, 6, 9133-9140.	7.3	26

#	Article	IF	Citations
91	Low temperature solution-phase growth of ZnSe and ZnSe/CdSe core/shell nanowires. Nanoscale, 2011, 3, 3145.	2.8	25
92	Colloidal Semiconductor Quantum Dot Conjugates in Biosensing. , 2002, , 537-569.		24
93	High temperature structural studies of HgS and HgSe quantum dots. Applied Physics Letters, 2003, 83, 4011-4013.	1.5	23
94	Direct Measurement of Single CdSe Nanowire Extinction Polarization Anisotropies. Journal of Physical Chemistry Letters, 2012, 3, 2215-2220.	2.1	22
95	Supercontinuum spatial modulation spectroscopy: Detection and noise limitations. Review of Scientific Instruments, 2013, 84, 113104.	0.6	22
96	Distinguishing Models for Mixed Halide Lead Perovskite Photosegregation via Terminal Halide Stoichiometry. ACS Energy Letters, 2021, 6, 2064-2071.	8.8	22
97	Fluorescence of single ZnS overcoated CdSe quantum dots studied by apertureless near-field scanning optical microscopy. Optics Communications, 2002, 210, 11-23.	1.0	21
98	Using Infrared Photothermal Heterodyne Imaging to Characterize Micro- and Nanoplastics in Complex Environmental Matrices. Environmental Science & Technology, 2021, 55, 15891-15899.	4.6	20
99	Transforming Layered to Nonlayered Two-Dimensional Materials: Cation Exchange of SnS₂ to Cu₂SnS₃. ACS Energy Letters, 2016, 1, 175-181.	8.8	19
100	Can lasers really refrigerate CdS nanobelts?. Nature, 2019, 570, E60-E61.	13.7	19
101	Dimensional crossover in semiconductor nanostructures. Nature Communications, 2016, 7, 12726.	5.8	17
102	Light Induced Nanowire Assembly: The Electrostatic Alignment of Semiconductor Nanowires into Functional Macroscopic Yarns. Advanced Materials, 2013, 25, 601-605.	11.1	16
103	Single Semiconductor Nanostructure Extinction Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 16443-16463.	1.5	15
104	Modulation of Photoinduced Iodine Expulsion in Mixed Halide Perovskites with Electrochemical Bias. Journal of Physical Chemistry Letters, 2021, 12, 2615-2621.	2.1	14
105	Heterogeneous Fluorescence Intermittency in Single Layer Reduced Graphene Oxide. Nano Letters, 2015, 15, 4317-4321.	4.5	12
106	Introductory Nanoscience. , 0, , .		11
107	Deep image restoration for infrared photothermal heterodyne imaging. Journal of Chemical Physics, 2021, 155, 214202.	1.2	11
108	Nearâ€field scanning optical microscopy of colloidal CdSe nanowires. Physica Status Solidi (B): Basic Research, 2010, 247, 1416-1419.	0.7	9

#	Article	IF	Citations
109	Spectroscopy and Microscopy of Graphene Oxide and Reduced Graphene Oxide. , 2015, , 29-60.		8
110	Concerted single-nanowire absorption and emission spectroscopy: Explaining the origin of the size-dependent Stokes shift in single cadmium selenide nanowires. Physical Review B, 2015, 91, .	1.1	8
111	Excitation Energy Dependence of Semiconductor Nanocrystal Emission Quantum Yields. Journal of Physical Chemistry Letters, 2021, 12, 4024-4031.	2.1	8
112	Colloidal Quantum Dots: A Model Nanoscience System. Journal of Physical Chemistry Letters, 2013, 4, 680-680.	2.1	6
113	Super-resolution imaging with mid-IR photothermal microscopy on the single particle level. Proceedings of SPIE, 2015, , .	0.8	6
114	Quantitative infrared photothermal microscopy. , 2020, , .		6
115	Tailoring the Inherent Optical and Electrical Properties of Nanostructures. Journal of Physical Chemistry Letters, 2014, 5, 3817-3818.	2.1	5
116	Fluorescence intermittency originates from reclustering in two-dimensional organic semiconductors. Nature Communications, 2017, 8, 14521.	5.8	5
117	Surface Derivatization of Nanocrystalline CdSe Semiconductors. Materials Research Society Symposia Proceedings, 1996, 452, 323.	0.1	4
118	Synthesis and characterization of colloidal mercury chalcogenide quantum dots. , 2002, , .		4
119	Photoluminescent Mn-Doped ZNS Nanoclusters Synthesized within Block Copolymer Nanoreactors. Materials Research Society Symposia Proceedings, 1997, 471, 313.	0.1	3
120	II-VI heterostructures obtained by encapsulation of colloidal CdSe nanowires by molecular beam epitaxy deposition of ZnSe. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, .	0.6	3
121	Molybdenum Carbamate Nanosheets as a New Class of Potential Phase Change Materials. Nano Letters, 2017, 17, 3902-3906.	4.5	3
122	Energy Spotlight: New Inroads in Metal Halide Perovskite Research. ACS Energy Letters, 2019, 4, 3036-3038.	8.8	3
123	Up-conversion emission thermometry for semiconductor laser cooling. Journal of Luminescence, 2020, 222, 117088.	1.5	3
124	Super-resolution Mid-infrared Imaging using Photothermal Microscopy. , 2016, , .		3
125	No One Size Fits All: Semiconductor Nanocrystal Sizing Curves. Journal of Physical Chemistry C, 2022, 126, 11867-11874.	1.5	3
126	The Band Edge Luminescence of Surface Modified CdSe Nanocrystallites. Materials Research Society Symposia Proceedings, 1996, 452, 347.	0.1	2

#	Article	IF	Citations
127	Charge and thermal modeling of a semiconductor-based optical refrigerator. Applied Physics Letters, 2018, 113, 181105.	1.5	2
128	Shining more light on photoinduced segregation. Nature Materials, 2021, 20, 6-7.	13.3	2
129	Deciphering the US News and World Report Ranking of US Chemistry Graduate Programs. Scientometrics, 0, , 1.	1.6	2
130	Organometallic Synthesis and Spectroscopic Characterization of Manganese Doped CdSe Nanocrystals. Materials Research Society Symposia Proceedings, 1999, 582, 56.	0.1	1
131	Molecular Clusters of Binary and Ternary Mercury Chalcogenides: Colloidal Synthesis, Characterization, and Optical Spectra.. ChemInform, 2003, 34, no.	0.1	1
132	Intrawire absorption and emission spectroscopies of individual CdSe nanowires. Applied Physics Letters, 2015, 107, 083106.	1.5	1
133	Synthesis and Application of Solution-Based IIâ€“VI and IVâ€“VI Semiconductor Nanowires. Nanoscience and Technology, 2015, , 119-156.	1.5	1
134	Energy Selects. ACS Energy Letters, 2019, 4, 2351-2352.	8.8	1
135	Photothermal infrared imaging: identification and visualization of micro- and nanoplastics in environmental matrices. , 2021, , .		1
136	Binary and Ternary Mercury Chalcogenide Quantum Dots and Clusters. Materials Research Society Symposia Proceedings, 2002, 737, 206.	0.1	0
137	Solution Phase Synthesis of Semiconductor Nanowires. Materials Research Society Symposia Proceedings, 2004, 848, 394.	0.1	0
138	Seeded solution synthesis of straight and branched CdSe nanowires. , 2004, 5513, 116.		0
139	Field-effect transistors and photodetectors based on solution-synthesized nanowires. , 2006, , .		0
140	CdSe Heterostructures for Photocatalytic Hydrogen Generation. Microscopy and Microanalysis, 2013, 19, 328-329.	0.2	0
141	Beyond Conventional Quantum Dots. ChemPhysChem, 2016, 17, 553-554.	1.0	0
142	TEM Analysis of CsPbBr3 Nanocrystals: Challenges and Perspectives.. Microscopy and Microanalysis, 2017, 23, 2096-2097.	0.2	0
143	Defect-mediated photoluminescence up-conversion in cadmium sulfide nanobelts (Conference) Tj ETQq1 1 0.784314 rgBT /Overlock 10 0		0
144	Advanced control of nanowire growth. SPIE Newsroom, 2006, , .	0.1	0

#	Article	IF	Citations
145	Microscopic Measurements of Hybrid Perovskite Solar Cells. , 0, , .		0
146	Evaluation of CsPbBr3 nanocrystals for laser cooling. , 2019, , .		0