Philippe Guyot-Sionnest

List of Publications by Year
in descending order

86	10,996	36691 53	64407 83
papers	citations	h-index	g-index

86	86	86	10846
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thermodynamic Limits to HgTe Quantum Dot Infrared Detector Performance. Journal of Electronic Materials, 2022, 51, 1428-1435.	1.0	7
2	Magnetoresistance of high mobility HgTe quantum dot films with controlled charging. Journal of Materials Chemistry C, 2022, 10, 13771-13777.	2.7	6
3	Mid-infrared HgTe Colloidal Quantum Dot LEDs. ACS Nano, 2022, 16, 7301-7308.	7.3	24
4	Multicarrier Dynamics in Quantum Dots. Chemical Reviews, 2021, 121, 2325-2372.	23.0	77
5	Toward Bright Mid-Infrared Emitters: Thick-Shell n-Type HgSe/CdS Nanocrystals. Journal of the American Chemical Society, 2021, 143, 19567-19575.	6.6	15
6	Shape-Controlled HgTe Colloidal Quantum Dots and Reduced Spinâ€“Orbit Splitting in the Tetrahedral Shape. Journal of Physical Chemistry Letters, 2020, 11, 6860-6866.	2.1	22
7	Extrinsic voltage control of effective carrier lifetime in polycrystalline PbSe mid-wave IR photodetectors for increased detectivity. AIP Advances, 2020, 10, 095117.	0.6	10
8	Colloidal Quantum-Dots/Graphene/Silicon Dual-Channel Detection of Visible Light and Short-Wave Infrared. ACS Photonics, 2020, 7, 1117-1121.	3.2	37
9	Size Distribution Effects on Mobility and Intraband Gap of HgSe Quantum Dots. Journal of Physical Chemistry C, 2020, 124, 16216-16221.	1.5	24
10	State-Resolved Mobility of 1 cm2/(Vs) with HgSe Quantum Dot Films. Journal of Physical Chemistry Letters, 2020, 11, 2303-2307.	2.1	16
11	HgTe colloidal quantum dot photodiodes for extended short-wave infrared detection. Applied Physics Letters, 2020, 116, .	1.5	49
12	Quantum dot solids showing state-resolved band-like transport. Nature Materials, 2020, 19, 323-329.	13.3	136
13	Direct Imprinting of Quasiâ€3D Nanophotonic Structures into Colloidal Quantumâ€Đot Devices. Advanced Materials, 2020, 32, e1906590.	11.1	27
14	Colloidal quantum dots for infrared detection beyond silicon. Journal of Chemical Physics, 2019, 151, .	1.2	63
15	Auger Suppression in n-Type HgSe Colloidal Quantum Dots. ACS Nano, 2019, 13, 10512-10519.	7.3	38
16	Acquisition of Hyperspectral Data with Colloidal Quantum Dots. Laser and Photonics Reviews, 2019, 13, 1900165.	4.4	40
17	High Carrier Mobility in HgTe Quantum Dot Solids Improves Mid-IR Photodetectors. ACS Photonics, 2019, 6, 2358-2365.	3.2	77
18	Narrow-Gap HgTe Colloidal Quantum Dot Infrared Photodetectors. , 2019, , .		0

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19	Polarized near-infrared intersubband absorptions in CdSe colloidal quantum wells. Nature Communications, 2019, 10, 4511.	5.8	34
20	Nanoprinted Quantum Dotâ€“Graphene Photodetectors. Advanced Optical Materials, 2019, 7, 1900019.	3.6	53
21	Dual-band infrared imaging using stacked colloidal quantum dot photodiodes. Nature Photonics, 2019, 13, 277-282.	15.6	303
22	Towards Infrared Electronic Eyes: Flexible Colloidal Quantum Dot Photovoltaic Detectors Enhanced by Resonant Cavity. Small, 2019, 15, e1804920.	5.2	73
23	HgTe/CdTe and HgSe/CdX (X = S, Se, and Te) Core/Shell Mid-Infrared Quantum Dots. Chemistry of Materials, 2019, 31, 286-293.	3.2	38
24	Carrier dynamics in small-gap mercury chalcogenide colloidal quantum dots. , 2019, , .		0
25	Colloidal quantum dots based infrared electronic eyes for multispectral imaging. , 2019, , .		3
26	Slow Auger Relaxation in HgTe Colloidal Quantum Dots. Journal of Physical Chemistry Letters, 2018, 9, 2208-2211.	2.1	32
27	Enhanced Corrugation and Chemical Contrast of Diblock Copolymer Films by Sequential Solvent Exposures. Journal of Physical Chemistry C, 2018, 122, 23117-23122.	1.5	3
28	Fast and Sensitive Colloidal Quantum Dot Mid-Wave Infrared Photodetectors. ACS Nano, 2018, 12, 7264-7271.	7.3	182
29	Thermal Imaging with Plasmon Resonance Enhanced HgTe Colloidal Quantum Dot Photovoltaic Devices. ACS Nano, 2018, 12, 7362-7370.	7.3	134
30	Conduction Band Fine Structure in Colloidal HgTe Quantum Dots. ACS Nano, 2018, 12, 9397-9404.	7.3	56
31	Scalable Ligand-Mediated Transport Synthesis of Organicâ€“Inorganic Hybrid Perovskite Nanocrystals with Resolved Electronic Structure and Ultrafast Dynamics. ACS Nano, 2017, 11, 2689-2696.	7.3	62
32	Mid-IR colloidal quantum dot detectors enhanced by optical nano-antennas. Applied Physics Letters, 2017, 110, .	1.5	54
33	Recent Progresses in Mid Infrared Nanocrystal Optoelectronics. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-8.	1.9	83
34	Synthesis of Nonaggregating HgTe Colloidal Quantum Dots and the Emergence of Air-Stable n-Doping. Journal of Physical Chemistry Letters, 2017, 8, 2224-2228.	2.1	66
35	Reversible Electrochemistry of Mercury Chalcogenide Colloidal Quantum Dot Films. ACS Nano, 2017, 11, 4165-4173.	7.3	81
36	Reply to â€œComment on â€˜HgS and HgS/CdS Colloidal Quantum Dots with Infrared Intraband Transitions and Emergence of a Surface Plasmonâ€™â€• Journal of Physical Chemistry C, 2016, 120, 28903-28904.	1.5	2

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37	HgS and HgS/CdS Colloidal Quantum Dots with Infrared Intraband Transitions and Emergence of a Surface Plasmon. Journal of Physical Chemistry C, 2016, 120, 11744-11753.	1.5	68
38	MWIR imaging with low cost colloidal quantum dot films. Proceedings of SPIE, 2016, , .	0.8	30
39	Mid-Infrared Photoluminescence of CdS and CdSe Colloidal Quantum Dots. ACS Nano, 2016, 10, 2225-2231.	7.3	45
40	Intraband Luminescence from HgSe/CdS Core/Shell Quantum Dots. ACS Nano, 2016, 10, 2121-2127.	7.3	43
41	Background limited mid-infrared photodetection with photovoltaic HgTe colloidal quantum dots. Applied Physics Letters, 2015, 107, .	1.5	87
42	1/f noise in semiconductor and metal nanocrystal solids. Journal of Applied Physics, 2014, 115, .	1.1	72
43	Photoluminescence of Mid-Infrared HgTe Colloidal Quantum Dots. Journal of Physical Chemistry C, 2014, 118, 2749-2753.	1.5	76
44	Small Bright Charged Colloidal Quantum Dots. ACS Nano, 2014, 8, 283-291.	7.3	41
45	Colloidal Quantum Dots Intraband Photodetectors. ACS Nano, 2014, 8, 11707-11714.	7.3	169
46	Mercury Telluride Colloidal Quantum Dots: Electronic Structure, Size-Dependent Spectra, and Photocurrent Detection up to 12 Î¼m. ACS Nano, 2014, 8, 8676-8682.	7.3	130
47	End-to-End Alignment of Gold Nanorods on Topographically Enhanced, Cylinder Forming Diblock Copolymer Templates and Their Surface Enhanced Raman Scattering Properties. Journal of Physical Chemistry C, 2014, 118, 19259-19265.	1.5	19
48	Air-Stable n-Doped Colloidal HgS Quantum Dots. Journal of Physical Chemistry Letters, 2014, 5, 1139-1143.	2.1	110
49	Colloidal quantum dots for mid-IR applications. Infrared Physics and Technology, 2013, 59, 133-136.	1.3	18
50	Midâ€Infrared HgTe/As₂S₃ Field Effect Transistors and Photodetectors. Advanced Materials, 2013, 25, 137-141.	11.1	108
51	Optical properties of HgTe colloidal quantum dots. Nanotechnology, 2012, 23, 175705.	1.3	87
52	Electrical Transport in Colloidal Quantum Dot Films. Journal of Physical Chemistry Letters, 2012, 3, 1169-1175.	2.1	288
53	Evidence for the Role of Holes in Blinking: Negative and Oxidized CdSe/CdS Dots. ACS Nano, 2012, 6, 9125-9132.	7.3	92
54	n- and p-Type HgTe Quantum Dot Films. Journal of Physical Chemistry C, 2012, 116, 1344-1349.	1.5	53

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55	CdSeS/ZnS Alloyed Nanocrystal Lifetime and Blinking Studies under Electrochemical Control. ACS Nano, 2012, 6, 912-918.	7.3	69
56	Synthesis of Colloidal HgTe Quantum Dots for Narrow Mid-IR Emission and Detection. Journal of the American Chemical Society, 2011, 133, 16422-16424.	6.6	248
57	Mid-infrared HgTe colloidal quantum dot photodetectors. Nature Photonics, 2011, 5, 489-493.	15.6	389
58	Electrochemical Switching of the Photoluminescence of Single Quantum Dots. Journal of Physical Chemistry C, 2010, 114, 21138-21141.	1.5	70
59	Hot Electron Extraction From Colloidal Quantum Dots. Journal of Physical Chemistry Letters, 2010, 1, 45-47.	2.1	126
60	Photoluminescence Lifetime of Lead Selenide Colloidal Quantum Dots. Journal of Physical Chemistry C, 2010, 114, 14860-14863.	1.5	70
61	Trion Decay in Colloidal Quantum Dots. ACS Nano, 2009, 3, 1011-1015.	7.3	261
62	Charging colloidal quantum dots by electrochemistry. Mikrochimica Acta, 2008, 160, 309-314.	2.5	65
63	Slow Electron Cooling in Colloidal Quantum Dots. Science, 2008, 322, 929-932.	6.0	472
64	Intraband spectroscopy and band offsets of colloidal II-VI core/shell structures. Journal of Chemical Physics, 2007, 127, 104710.	1.2	74
65	Multicarrier recombination in colloidal quantum dots. Journal of Chemical Physics, 2007, 127, 111104.	1.2	76
66	Photoluminescence Switching of Charged Quantum Dot Films. Journal of Physical Chemistry C, 2007, 111, 15440-15445.	1.5	60
67	Ultrafast Resonant Dynamics of Surface Plasmons in Gold Nanorods. Journal of Physical Chemistry C, 2007, 111, 116-123.	1.5	81
68	Mechanism of Silver(I)-Assisted Growth of Gold Nanorods and Bipyramids. Journal of Physical Chemistry B, 2005, 109, 22192-22200.	1.2	922
69	Intraband relaxation in CdSe nanocrystals and the strong influence of the surface ligands. Journal of Chemical Physics, 2005, 123, 074709.	1.2	323
70	Light Emission and Amplification in Charged CdSe Quantum Dots. Journal of Physical Chemistry B, 2004, 108, 9027-9031.	1.2	124
71	Variable Range Hopping Conduction in Semiconductor Nanocrystal Solids. Physical Review Letters, 2004, 92, 216802.	2.9	341
72	n-Type Conducting CdSe Nanocrystal Solids. Science, 2003, 300, 1277-1280.	6.0	502

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73	Electron and Hole Injection in PbSe Quantum Dot Films. Journal of the American Chemical Society, 2003, 125, 7806-7807.	6.6	184
74	Fast Voltammetric and Electrochromic Response of Semiconductor Nanocrystal Thin Filmsâ€. Journal of Physical Chemistry B, 2003, 107, 7355-7359.	1.2	115
75	Electrochromic semiconductor nanocrystal films. Applied Physics Letters, 2002, 80, 4-6.	1.5	104
76	Interband and Intraband Optical Studies of PbSe Colloidal Quantum Dots. Journal of Physical Chemistry B, 2002, 106, 10634-10640.	1.2	617
77	Organic-Capped ZnO Nanocrystals:Â Synthesis and n-Type Character. Journal of the American Chemical Society, 2001, 123, 11651-11654.	6.6	245
78	Intraband hole burning of colloidal quantum dots. Physical Review B, 2001, 64, .	1.1	48
79	Electrochromic Nanocrystal Quantum Dots. Science, 2001, 291, 2390-2392.	6.0	447
80	n-type colloidal semiconductor nanocrystals. Nature, 2000, 407, 981-983.	13.7	452
81	Long-Lived Delocalized Electron States in Quantum Dots:â€‰ A Step-Scan Fourier Transform Infrared Study. Journal of Physical Chemistry B, 2000, 104, 1494-1496.	1.2	51
82	Intraband relaxation in CdSe quantum dots. Physical Review B, 1999, 60, R2181-R2184.	1.1	351
83	Permanent dipole moment and charges in colloidal semiconductor quantum dots. Journal of Chemical Physics, 1999, 111, 6955-6964.	1.2	340
84	Polar CdSe nanocrystals: Implications for electronic structure. Journal of Chemical Physics, 1997, 106, 5254-5259.	1.2	51
85	Dielectric Dispersion Measurements of CdSe Nanocrystal Colloids: Observation of a Permanent Dipole Moment. Physical Review Letters, 1997, 79, 865-868.	2.9	164
86	Size-dependent two-photon excitation spectroscopy of CdSe nanocrystals. Physical Review B, 1996, 53, 12629-12632.	1.1	91