Pieter Geiregat

List of Publications by Year in descending order

72 papers	3,124 citations	218677 26 h-index	197818 49 g-index
73 all docs	73 docs citations	73 times ranked	4589 citing authors

#	Article	IF	Citations
1	Highly Dynamic Ligand Binding and Light Absorption Coefficient of Cesium Lead Bromide Perovskite Nanocrystals. ACS Nano, 2016, 10, 2071-2081.	14.6	1,448
2	Light Absorption Coefficient of CsPbBr₃ Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2018, 9, 3093-3097.	4.6	219
3	Colloidal CdSe Nanoplatelets, A Model for Surface Chemistry/Optoelectronic Property Relations in Semiconductor Nanocrystals. Journal of the American Chemical Society, 2018, 140, 13292-13300.	13.7	126
4	Continuous-wave infrared optical gain and amplified spontaneous emission at ultralow threshold by colloidal HgTe quantum dots. Nature Materials, 2018, 17, 35-42.	27.5	99
5	Nearly Blinking-Free, High-Purity Single-Photon Emission by Colloidal InP/ZnSe Quantum Dots. Nano Letters, 2017, 17, 6104-6109.	9.1	85
6	Onâ€Chip Integrated Quantumâ€Dotâ€“Siliconâ€Nitride Microdisk Lasers. Advanced Materials, 2017, 29, 1604866.	21.0	77
7	Optical Properties of PbS/CdS Core/Shell Quantum Dots. Journal of Physical Chemistry C, 2013, 117, 20171-20177.	3.1	68
8	A bright future for colloidal quantum dot lasers. NPG Asia Materials, 2019, 11, .	7.9	65
9	Tunable and Efficient Red to Near-Infrared Photoluminescence by Synergistic Exploitation of Core and Surface Silver Doping of CdSe Nanoplatelets. Chemistry of Materials, 2019, 31, 1450-1459.	6.7	64
10	The Impact of Core/Shell Sizes on the Optical Gain Characteristics of CdSe/CdS Quantum Dots. ACS Nano, 2018, 12, 9011-9021.	14.6	56
11	Using Bulk-like Nanocrystals To Probe Intrinsic Optical Gain Characteristics of Inorganic Lead Halide Perovskites. ACS Nano, 2018, 12, 10178-10188.	14.6	56
12	Multiple Dot-in-Rod PbS/CdS Heterostructures with High Photoluminescence Quantum Yield in the Near-Infrared. Journal of the American Chemical Society, 2012, 134, 5484-5487.	13.7	44
13	Phonon-Mediated and Weakly Size-Dependent Electron and Hole Cooling in CsPbBr₃ Nanocrystals Revealed by Atomistic Simulations and Ultrafast Spectroscopy. Nano Letters, 2020, 20, 1819-1829.	9.1	41
14	Giant and Broad-Band Absorption Enhancement in Colloidal Quantum Dot Monolayers through Dipolar Coupling. ACS Nano, 2013, 7, 987-993.	14.6	39
15	Revisited Wurtzite CdSe Synthesis: A Gateway for the Versatile Flash Synthesis of Multishell Quantum Dots and Rods. Chemistry of Materials, 2016, 28, 7311-7323.	6.7	39
16	Thermodynamic Equilibrium between Excitons and Excitonic Molecules Dictates Optical Gain in Colloidal CdSe Quantum Wells. Journal of Physical Chemistry Letters, 2019, 10, 3637-3644.	4.6	39
17	Charge Carrier Cooling Bottleneck Opens Up Nonexcitonic Gain Mechanisms in Colloidal CdSe Quantum Wells. Journal of Physical Chemistry C, 2019, 123, 9640-9650.	3.1	39
18	PbS/CdS Core/Shell Quantum Dots by Additive, Layer-by-Layer Shell Growth. Chemistry of Materials, 2016, 28, 6953-6959.	6.7	35

#	Article	IF	Citations
19	Ultrafast Carrier Dynamics in Few-Layer Colloidal Molybdenum Disulfide Probed by Broadband Transient Absorption Spectroscopy. Journal of Physical Chemistry C, 2019, 123, 10571-10577.	3.1	35
20	Coulomb Shifts upon Exciton Addition to Photoexcited PbS Colloidal Quantum Dots. Journal of Physical Chemistry C, 2014, 118, 22284-22290.	3.1	34
21	A Case Study of ALD Encapsulation of Quantum Dots: Embedding Supported CdSe/CdS/ZnS Quantum Dots in a ZnO Matrix. Journal of Physical Chemistry C, 2016, 120, 18039-18045.	3.1	33
22	HgSe/CdE (E = S, Se) Core/Shell Nanocrystals by Colloidal Atomic Layer Deposition. Journal of Physical Chemistry C, 2017, 121, 13816-13822.	3.1	33
23	On-Chip Single-Mode Distributed Feedback Colloidal Quantum Dot Laser under Nanosecond Pumping. ACS Photonics, 2017, 4, 2446-2452.	6.6	33
24	Broadband and Picosecond Intraband Absorption in Lead-Based Colloidal Quantum Dots. ACS Nano, 2012, 6, 6067-6074.	14.6	31
25	Localization-limited exciton oscillator strength in colloidal CdSe nanoplatelets revealed by the optically induced stark effect. Light: Science and Applications, 2021, 10, 112.	16.6	30
26	A Phonon Scattering Bottleneck for Carrier Cooling in Lead Chalcogenide Nanocrystals. ACS Nano, 2015, 9, 778-788.	14.6	29
27	From fabrication to mode mapping in silicon nitride microdisks with embedded colloidal quantum dots. Applied Physics Letters, 2012, 101, .	3.3	19
28	Ultrafast carrier dynamics in colloidal WS2 nanosheets obtained through a hot injection synthesis. Journal of Chemical Physics, 2019, 151, 164701.	3.0	19
29	Colloidal Quantum Dots Enabling Coherent Light Sources for Integrated Silicon-Nitride Photonics. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-13.	2.9	17
30	Liquid-Phase Exfoliation of Rhenium Disulfide by Solubility Parameter Matching. Langmuir, 2020, 36, 15493-15500.	3.5	17
31	Generating Triplets in Organic Semiconductor Tetracene upon Photoexcitation of Transition Metal Dichalcogenide ReS₂. Journal of Physical Chemistry Letters, 2021, 12, 5256-5260.	4.6	17
32	Asymmetric Optical Transitions Determine the Onset of Carrier Multiplication in Lead Chalcogenide Quantum Confined and Bulk Crystals. ACS Nano, 2018, 12, 4796-4802.	14.6	16
33	Waveguideâ€Coupled Colloidal Quantum Dot Light Emitting Diodes and Detectors on a Silicon Nitride Platform. Laser and Photonics Reviews, 2021, 15, 2000230.	8.7	16
34	State Filling and Stimulated Emission by Colloidal InP/ZnSe Core/Shell Quantum Dots. Advanced Optical Materials, 2022, 10, .	7.3	13
35	Unraveling the Photophysics of Liquid-Phase Exfoliated Two-Dimensional ReS₂ Nanoflakes. Journal of Physical Chemistry C, 2021, 125, 20993-21002.	3.1	11
36	Single-exciton optical gain in semiconductor nanocrystals: Positive role of electron-phonon coupling. Physical Review B, 2016, 93, .	3.2	10

#	Article	IF	Citations
37	Dye-sensitized Er³⁺-doped CaF₂ nanoparticles for enhanced near-infrared emission at 1.5â€‰â€‰Î¼m. Photonics Research, 2021, 9, 2037.	7.0	9
38	Sideband pump-probe technique resolves nonlinear modulation response of PbS/CdS quantum dots on a silicon nitride waveguide. APL Photonics, 2018, 3, 016101.	5.7	8
39	Carrier scattering induced linewidth broadening in in situ P-doped Ge layers on Si. Applied Physics Letters, 2018, 113, .	3.3	8
40	Broadband Optical Phase Modulation by Colloidal CdSe Quantum Wells. Nano Letters, 2022, 22, 58-64.	9.1	8
41	Light absorption in hybrid silicon-on-insulator/quantum dot waveguides. Optics Express, 2013, 21, 23272.	3.4	7
42	Molecular Size Matters: Ultrafast Dye Singlet Sensitization Pathways to Bright Nanoparticle Emission. Advanced Optical Materials, 2021, 9, 2001678.	7.3	7
43	Modeling the Optical Properties of Low-Cost Colloidal Quantum Dot Functionalized Strip SOI Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 71-76.	2.9	6
44	Intraband dynamics of mid-infrared HgTe quantum dots. Nanoscale, 2022, 14, 4123-4130.	5.6	6
45	Stimulated Emission through an Electronâ€“Hole Plasma in Colloidal CdSe Quantum Rings. Nano Letters, 2021, 21, 10062-10069.	9.1	3
46	A Phonon Scattering Bottleneck for Carrier Cooling in Lead-Chalcogenide Nanocrystals. Materials Research Society Symposia Proceedings, 2015, 1787, 1-5.	0.1	2
47	Hybrid Colloidal Quantum Dot Silicon Nitride Waveguide Gain Measurement Based on Variable Stripe Length Method. , 2016, , .		2
48	All-Optical Wavelength Conversion by Picosecond Burst Absorption in Colloidal PbS Quantum Dots. ACS Nano, 2016, 10, 1265-1272.	14.6	2
49	Electrically Pumped QD Light Emission from LEDs to Lasers. Information Display, 2021, 37, 6-17.	0.2	2
50	Absorption Enhancement in 2D Nanocrystal Superlattices through Near-Field Dipolar Coupling: A Novel Optical Phenomenon at the Nanoscale. , 2013, , .		1
51	The Fine-Structure Constant as a Ruler for the Band-Edge Light Absorption Strength of Bulk and Quantum-Confined Semiconductors. Nano Letters, 2021, 21, 9426-9432.	9.1	1
52	Design of integrated nanocrystal light sources. , 2011, , .		0
53	Broadband and picosecond intraband absorption in lead based colloidal quantum dots. , 2012, , .		0
54	Optical properties of SOI waveguides functionalized with close-packed quantum dot films. , 2013, , .		0

#	Article	IF	Citations
55	Single photon sources from InP based colloidal quantum dots. , 2017, , .		0
56	Fabrication and characterization of SiNx/Au cavities with colloidal nanocrystals. Optics Express, 2018, 26, 6046.	3.4	0
57	A Hybrid SiN-QDOT Platform for Visible Photonics. , 2018, , .		0
58	Thresholdless Optical Gain using Colloidal HgTe Nanocrystals. , 2014, , .		0
59	Fabrication and Characterization of SiNx/Au Nanopatch Cavities with Colloidal Nanocrystals. , 2016, , .		0
60	On-chip Low-threshold Silicon Nitride Distributed Feedback Colloidal Quantum Dot Laser. , 2017, , .		0
61	The Surface Chemistry of Colloidal II-VI Two-Dimensional Nanoplatelets. , 0, , .		0
62	Doping InP Quantum Dots with Cu+ slows down Hot Electron Cooling. , 0, , .		0
63	Spectral Dynamics of Linearly Polarized Bright Exciton in InP/ZnSe Colloidal Quantum Dots. , 0, , .		0
64	Silver Doping in Cadmium Chalcogenide Colloidal Nanoplatelets. , 0, , .		0
65	Synthesis and Size-Control of Colloidal and Luminescent InAs Quantum Dots. , 0, , .		0
66	Stimulated Emission from Stable Multiexciton-Polaron States in Fully Inorganic Perovskite Quantum Wells. , 0, , .		0
67	Broadband Optical Phase Modulation by Colloidal CdSe Quantum Wells. , 0, , .		0
68	Phonon-Mediated and Weakly Size-Dependent Electron and Hole Cooling in CsPbBr3 Nanocrystals Revealed by Atomistic Simulations and Ultrafast Spectroscopy. , 0, , .		0
69	Broadband and Ultrafast Infrared Spectroscopy of n-doped HgSe Quantum Dots. , 0, , .		0
70	Disruptive Full Spectrum Optical Gain in Bulk-Like CdS/Se Quantum Dots through Strong Band Gap Renormalization. , 0, , .		0
71	Stimulated Emission from Stable Multiexciton-Polaron States in Fully Inorganic Perovskite Quantum Wells. , 0, , .		0
72	Enhanced Carrier-Carrier and Carrier-Phonon Coupling in Strongly Confined Perovskite Quantum Dots enable Low Threshold Optical Gain. , 0, , .		0