Emory M Chan

List of Publications by Year
in descending order

62 papers	6,328 citations	126907 33 h-index	123424 61 g-index
65 all docs	65 docs citations	65 times ranked	7463 citing authors

#	Article	IF	Citations
1	Engineering bright sub-10-nm upconverting nanocrystals for single-molecule imaging. Nature Nanotechnology, 2014, 9, 300-305.	31.5	499
2	Direct Evidence for Coupled Surface and Concentration Quenching Dynamics in Lanthanide-Doped Nanocrystals. Journal of the American Chemical Society, 2017, 139, 3275-3282.	13.7	420
3	Dye-Sensitized Core/Active Shell Upconversion Nanoparticles for Optogenetics and Bioimaging Applications. ACS Nano, 2016, 10, 1060-1066.	14.6	395
4	High-Temperature Microfluidic Synthesis of CdSe Nanocrystals in Nanoliter Droplets. Journal of the American Chemical Society, 2005, 127, 13854-13861.	13.7	347
5	Size-Controlled Growth of CdSe Nanocrystals in Microfluidic Reactors. Nano Letters, 2003, 3, 199-201.	9.1	330
6	Controlled Synthesis and Single-Particle Imaging of Bright, Sub-10 nm Lanthanide-Doped Upconverting Nanocrystals. ACS Nano, 2012, 6, 2686-2692.	14.6	296
7	Precise Tuning of Surface Quenching for Luminescence Enhancement in Coreâ€"Shell Lanthanide-Doped Nanocrystals. Nano Letters, 2016, 16, 7241-7247.	9.1	279
8	The Making and Breaking of Lead-Free Double Perovskite Nanocrystals of Cesium Silverâ€"Bismuth Halide Compositions. Nano Letters, 2018, 18, 3502-3508.	9.1	265
9	Amplifying the Red-Emission of Upconverting Nanoparticles for Biocompatible Clinically Used Prodrug-Induced Photodynamic Therapy. ACS Nano, 2014, 8, 10621-10630.	14.6	263
10	Combinatorial Discovery of Lanthanide-Doped Nanocrystals with Spectrally Pure Upconverted Emission. Nano Letters, 2012, 12, 3839-3845.	9.1	256
11	Precursor Conversion Kinetics and the Nucleation of Cadmium Selenide Nanocrystals. Journal of the American Chemical Society, 2010, 132, 18206-18213.	13.7	230
12	Reproducible, High-Throughput Synthesis of Colloidal Nanocrystals for Optimization in Multidimensional Parameter Space. Nano Letters, 2010, 10, 1874-1885.	9.1	201
13	Enrichment of molecular antenna triplets amplifies upconverting nanoparticle emission. Nature Photonics, 2018, 12, 402-407.	31.4	200
14	Continuous-wave upconverting nanoparticle microlasers. Nature Nanotechnology, 2018, 13, 572-577.	31.5	188
15	Combinatorial approaches for developing upconverting nanomaterials: high-throughput screening, modeling, and applications. Chemical Society Reviews, 2015, 44, 1653-1679.	38.1	167
16	Giant nonlinear optical responses from photon-avalanching nanoparticles. Nature, 2021, 589, 230-235.	27.8	167
17	Ultralow-threshold, continuous-wave upconverting lasing from subwavelength plasmons. Nature Materials, 2019, 18, 1172-1176.	27.5	160
18	Probing the Stability and Band Gaps of Cs₂AgInCl₆ and Cs₂AgSbCl₆ Lead-Free Double Perovskite Nanocrystals. Chemistry of Materials, 2019, 31, 3134-3143.	6.7	144

#	Article	IF	Citations
19	Rationally Designed Energy Transfer in Upconverting Nanoparticles. Advanced Materials, 2015, 27, 5753-5761.	21.0	128
20	Energy-Looping Nanoparticles: Harnessing Excited-State Absorption for Deep-Tissue Imaging. ACS Nano, 2016, 10, 8423-8433.	14.6	122
21	Low irradiance multiphoton imaging with alloyed lanthanide nanocrystals. Nature Communications, 2018, 9, 3082.	12.8	120
22	Robot-Accelerated Perovskite Investigation and Discovery. Chemistry of Materials, 2020, 32, 5650-5663.	6.7	113
23	Millisecond Kinetics of Nanocrystal Cation Exchange Using Microfluidic X-ray Absorption Spectroscopyâ€. Journal of Physical Chemistry A, 2007, 111, 12210-12215.	2.5	103
24	Concentrating and Recycling Energy in Lanthanide Codopants for Efficient and Spectrally Pure Emission: The Case of NaYF₄:Er³⁺/Tm³⁺ Upconverting Nanocrystals. Journal of Physical Chemistry B, 2012, 116, 10561-10570.	2.6	102
25	Focusing Nanocrystal Size Distributions via Production Control. Nano Letters, 2011, 11, 1976-1980.	9.1	86
26	Apparent self-heating of individual upconverting nanoparticle thermometers. Nature Communications, 2018, 9, 4907.	12.8	82
27	Energy Transfer Networks within Upconverting Nanoparticles Are Complex Systems with Collective, Robust, and History-Dependent Dynamics. Journal of Physical Chemistry C, 2019, 123, 2678-2689.	3.1	57
28	Experiment Specification, Capture and Laboratory Automation Technology (ESCALATE): a software pipeline for automated chemical experimentation and data management. MRS Communications, 2019, 9, 846-859.	1.8	51
29	Photon avalanche in lanthanide doped nanoparticles for biomedical applications: super-resolution imaging. Nanoscale Horizons, 2019, 4, 881-889.	8.0	49
30	MoS₂ Liquid Cell Electron Microscopy Through Clean and Fast Polymer-Free MoS₂ Transfer. Nano Letters, 2019, 19, 1788-1795.	9.1	45
31	Controlled Assembly of Upconverting Nanoparticles for Low-Threshold Microlasers and Their Imaging in Scattering Media. ACS Nano, 2020, 14, 1508-1519.	14.6	44
32	Elucidating the Weakly Reversible Csâ€“Pbâ€“Br Perovskite Nanocrystal Reaction Network with High-Throughput Maps and Transformations. Journal of the American Chemical Society, 2020, 142, 11915-11926.	13.7	42
33	Dynamics of Nanoscale Dendrite Formation in Solution Growth Revealed Through in Situ Liquid Cell Electron Microscopy. Nano Letters, 2018, 18, 6427-6433.	9.1	38
34	Bright sub-20-nm cathodoluminescent nanoprobes for electron microscopy. Nature Nanotechnology, 2019, 14, 420-425.	31.5	36
35	Dynamic behavior of nanoscale liquids in graphene liquid cells revealed by in situ transmission electron microscopy. Micron, 2019, 116, 22-29.	2.2	31
36	Far-field optical nanothermometry using individual sub-50 nm upconverting nanoparticles. Nanoscale, 2016, 8, 11611-11616.	5.6	24

#	Article	IF	Citations
37	Design Rules for One-Step Seeded Growth of Nanocrystals: Threading the Needle between Secondary Nucleation and Ripening. Chemistry of Materials, 2019, 31, 4173-4183.	6.7	21
38	Photostable and efficient upconverting nanocrystal-based chemical sensors. Optical Materials, 2018, 84, 345-353.	3.6	19
39	Precursor reaction kinetics control compositional grading and size of CdSe_{1âˆ’x}S_x nanocrystal heterostructures. Chemical Science, 2019, 10, 6539-6552.	7.4	18
40	Upconverting nanoparticle micro-lightbulbs designed for deep tissue optical stimulation and imaging. Biomedical Optics Express, 2018, 9, 4359.	2.9	16
41	Expanding the Iâ€“IIâ€“V Phase Space: Soft Synthesis of Polytypic Ternary and Binary Zinc Antimonides. Chemistry of Materials, 2018, 30, 6173-6182.	6.7	15
42	Multifunctional Magnetic and Upconverting Nanobeads as Dual Modal Imaging Tools. Bioconjugate Chemistry, 2017, 28, 2707-2714.	3.6	13
43	Dimensional Control over Metal Halide Perovskite Crystallization Guided by Active Learning. Chemistry of Materials, 2022, 34, 756-767.	6.7	13
44	Sizeâ€Dependent Photon Avalanching in Tm³⁺ Doped LiYF₄ Nano, Micro, and Bulk Crystals. Advanced Optical Materials, 2022, 10, .	7.3	13
45	Enhancing FRET biosensing beyond 10 nm with photon avalanche nanoparticles. Nanoscale Advances, 2020, 2, 4863-4872.	4.6	12
46	Using automated serendipity to discover how trace water promotes and inhibits lead halide perovskite crystal formation. Applied Physics Letters, 2021, 119, .	3.3	12
47	Can Machines â€œLearnâ€• Halide Perovskite Crystal Formation without Accurate Physicochemical Features?. Journal of Physical Chemistry C, 2020, 124, 13982-13992.	3.1	11
48	Active meta-learning for predicting and selecting perovskite crystallization experiments. Journal of Chemical Physics, 2022, 156, 064108.	3.0	11
49	Improving Data and Prediction Quality of High-Throughput Perovskite Synthesis with Model Fusion. Journal of Chemical Information and Modeling, 2021, 61, 1593-1602.	5.4	10
50	Surface-Sensitive Photon Avalanche Behavior Revealed by Single-Avalanching-Nanoparticle Imaging. Journal of Physical Chemistry C, 2021, 125, 23976-23982.	3.1	10
51	Direct formation of nitrogen-vacancy centers in nitrogen doped diamond along the trajectories of swift heavy ions. Applied Physics Letters, 2021, 118, .	3.3	7
52	Performance of Spherical Quantum Well Down Converters in Solid State Lighting. ACS Applied Materials & Interfaces, 2021, 13, 12191-12197.	8.0	6
53	Predicting the impact of temperature dependent multi-phonon relaxation processes on the photon avalanche behavior in Tm3+: NaYF4 nanoparticles. Optical Materials: X, 2021, 12, 100102.	0.8	6
54	(INVITED) Infrared-to-ultraviolet upconverting nanoparticles for COVID-19-related disinfection applications. Optical Materials: X, 2021, 12, 100099.	0.8	6

#	Article	IF	Citations
55	Development and Prospects of Halide Perovskite Single Crystal Films. Advanced Electronic Materials, 2022, 8, .	5.1	6
56	Dynamics of Polymer Nanocapsule Buckling and Collapse Revealed by <i>In Situ</i> Liquid-Phase TEM. Langmuir, 2022, 38, 7168-7178.	3.5	5
57	Synthesis and X-ray absorption spectroscopy of potassium transition metal fluoride nanocrystals. CrystEngComm, 2019, 21, 135-144.	2.6	4
58	Hybrid nanocapsules for <i>in situ</i> TEM imaging of gas evolution reactions in confined liquids. Nanoscale, 2020, 12, 18606-18615.	5.6	4
59	Fabrication of ultrathin suspended membranes from atomic layer deposition films. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2022, 40, 023001.	1.2	3
60	Probe field enhancement in photonic crystals by upconversion nanoparticles. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 06F403.	1.2	2
61	Spatiotemporal Route to Understanding Metal Halide Perovskitoid Crystallization. Chemistry of Materials, 2022, 34, 5386-5396.	6.7	2
62	Room-temperature continuous-wave upconverting micro- and nanolasing for bio-optofluidics. EPJ Web of Conferences, 2020, 238, 07005.	0.3	0