Audrey Chu

List of Publications by Year
in descending order

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Version: 2024-02-01

42 papers	1,194 citations	331670 21 h-index	395702 33 g-index
42 all docs	42 docs citations	42 times ranked	984 citing authors

#	Article	IF	Citations
1	Colloidal IIâ€“VIâ€”Epitaxial IIIâ€“V heterostructure: A strategy to expand InGaAs spectral response. Applied Physics Letters, 2022, 120, .	3.3	4
2	The complex optical index of PbS nanocrystal thin films and their use for short wave infrared sensor design. Nanoscale, 2022, 14, 2711-2721.	5.6	8
3	Guided-Mode Resonator Coupled with Nanocrystal Intraband Absorption. ACS Photonics, 2022, 9, 985-993.	6.6	10
4	Electroluminescence from nanocrystals above 2â€‰Âµm. Nature Photonics, 2022, 16, 38-44.	31.4	25
5	Optimized Infrared LED and Its Use in an Allâ€HgTe Nanocrystalâ€Based Active Imaging Setup. Advanced Optical Materials, 2022, 10, .	7.3	16
6	HgTe Nanocrystal-Based Photodiode for Extended Short-Wave Infrared Sensing with Optimized Electron Extraction and Injection. ACS Applied Nano Materials, 2022, 5, 8602-8611.	5.0	13
7	Ferroelectric Gating of Narrow Band-Gap Nanocrystal Arrays with Enhanced Lightâ€“Matter Coupling. ACS Photonics, 2021, 8, 259-268.	6.6	23
8	Complex Optical Index of HgTe Nanocrystal Infrared Thin Films and Its Use for Short Wave Infrared Photodiode Design. Advanced Optical Materials, 2021, 9, 2002066.	7.3	36
9	Seeded Growth of HgTe Nanocrystals for Shape Control and Their Use in Narrow Infrared Electroluminescence. Chemistry of Materials, 2021, 33, 2054-2061.	6.7	16
10	Infrared photoconduction at the diffusion length limit in HgTe nanocrystal arrays. Nature Communications, 2021, 12, 1794.	12.8	35
11	Mercury Chalcogenide Quantum Dots: Material Perspective for Device Integration. Chemical Reviews, 2021, 121, 3627-3700.	47.7	70
12	Correlating Structure and Detection Properties in HgTe Nanocrystal Films. Nano Letters, 2021, 21, 4145-4151.	9.1	23
13	Bias Tunable Spectral Response of Nanocrystal Array in a Plasmonic Cavity. Nano Letters, 2021, 21, 6671-6677.	9.1	15
14	Split-Gate Photodiode Based on Graphene/HgTe Heterostructures with a Few Nanosecond Photoresponse. ACS Applied Electronic Materials, 2021, 3, 4681-4688.	4.3	11
15	Optimized Cation Exchange for Mercury Chalcogenide 2D Nanoplatelets and Its Application for Alloys. Chemistry of Materials, 2021, 33, 9252-9261.	6.7	14
16	Designing Photovoltaic Devices Using HgTe Nanocrystals for Short and Midâ€Wave Infrared Detection. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900449.	1.8	3
17	Potential of Colloidal Quantum Dot Based Solar Cells for Near-Infrared Active Detection. ACS Photonics, 2020, 7, 272-278.	6.6	13
18	Time-Resolved Photoemission to Unveil Electronic Coupling between Absorbing and Transport Layers in a Quantum Dot-Based Solar Cell. Journal of Physical Chemistry C, 2020, 124, 23400-23409.	3.1	12

#	Article	IF	Citations
19	Electroluminescence from HgTe Nanocrystals and Its Use for Active Imaging. Nano Letters, 2020, 20, 6185-6190.	9.1	28
20	Near- to Long-Wave-Infrared Mercury Chalcogenide Nanocrystals from Liquid Mercury. Journal of Physical Chemistry C, 2020, 124, 8423-8430.	3.1	14
21	Reconfigurable 2D/0D pâ€“n Graphene/HgTe Nanocrystal Heterostructure for Infrared Detection. ACS Nano, 2020, 14, 4567-4576.	14.6	60
22	Revealing the Band Structure of FAPI Quantum Dot Film and Its Interfaces with Electron and Hole Transport Layer Using Time Resolved Photoemission. Journal of Physical Chemistry C, 2020, 124, 3873-3880.	3.1	10
23	Pushing Absorption of Perovskite Nanocrystals into the Infrared. Nano Letters, 2020, 20, 3999-4006.	9.1	18
24	Nanoplatelet-Based Light-Emitting Diode and Its Use in All-Nanocrystal LiFi-like Communication. ACS Applied Materials & Interfaces, 2020, 12, 22058-22065.	8.0	23
25	The Strong Confinement Regime in HgTe Two-Dimensional Nanoplatelets. Journal of Physical Chemistry C, 2020, 124, 23460-23468.	3.1	29
26	Gate tunable vertical geometry phototransistor based on infrared HgTe nanocrystals. Applied Physics Letters, 2020, 117, .	3.3	16
27	Optoelectronic properties of methyl-terminated germanane. Applied Physics Letters, 2019, 115, .	3.3	18
28	HgTe Nanocrystals for SWIR Detection and Their Integration up to the Focal Plane Array. ACS Applied Materials & Interfaces, 2019, 11, 33116-33123.	8.0	53
29	Azobenzenes as Light-Activable Carrier Density Switches in Nanocrystals. Journal of Physical Chemistry C, 2019, 123, 27257-27263.	3.1	3
30	Near Unity Absorption in Nanocrystal Based Short Wave Infrared Photodetectors Using Guided Mode Resonators. ACS Photonics, 2019, 6, 2553-2561.	6.6	44
31	Impact of dimensionality and confinement on the electronic properties of mercury chalcogenide nanocrystals. Nanoscale, 2019, 11, 3905-3915.	5.6	18
32	HgTe Nanocrystal Inks for Extended Shortâ€Wave Infrared Detection. Advanced Optical Materials, 2019, 7, 1900348.	7.3	52
33	Field-Effect Transistor and Photo-Transistor of Narrow-Band-Gap Nanocrystal Arrays Using Ionic Glasses. Nano Letters, 2019, 19, 3981-3986.	9.1	23
34	A colloidal quantum dot infrared photodetector and its use for intraband detection. Nature Communications, 2019, 10, 2125.	12.8	155
35	Transport in ITO Nanocrystals with Short- to Long-Wave Infrared Absorption for Heavy-Metal-Free Infrared Photodetection. ACS Applied Nano Materials, 2019, 2, 1621-1630.	5.0	19
36	Electronic structure robustness and design rules for 2D colloidal heterostructures. Journal of Applied Physics, 2018, 123, .	2.5	29

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37	Strategy to overcome recombination limited photocurrent generation in CsPbX3 nanocrystal arrays. Applied Physics Letters, 2018, 112, .	3.3	19
38	Design of a Unipolar Barrier for a Nanocrystal-Based Short-Wave Infrared Photodiode. ACS Photonics, 2018, 5, 4569-4576.	6.6	49
39	Coupled HgSe Colloidal Quantum Wells through a Tunable Barrier: A Strategy To Uncouple Optical and Transport Band Gap. Chemistry of Materials, 2018, 30, 4065-4072.	6.7	32
40	Emergence of intraband transitions in colloidal nanocrystals [Invited]. Optical Materials Express, 2018, 8, 1174.	3.0	27
41	Intraband Mid-Infrared Transitions in Ag₂Se Nanocrystals: Potential and Limitations for Hg-Free Low-Cost Photodetection. Journal of Physical Chemistry C, 2018, 122, 18161-18167.	3.1	59
42	Short Wave Infrared Devices Based on HgTe Nanocrystals with Air Stable Performances. Journal of Physical Chemistry C, 2018, 122, 14979-14985.	3.1	49