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	A colloidal quantum dot infrared photodetector and its use for intraband detection. Nature Communications, 2019, 10, 2125.	12.8	155
2	Mercury Chalcogenide Quantum Dots: Material Perspective for Device Integration. Chemical Reviews, 2021, 121, 3627-3700.	47.7	70
3	Reconfigurable 2D/0D pâ€“n Graphene/HgTe Nanocrystal Heterostructure for Infrared Detection. ACS Nano, 2020, 14, 4567-4576.	14.6	60
4	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
5	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
6	HgTe Nanocrystal Inks for Extended Shortâ€Wave Infrared Detection. Advanced Optical Materials, 2019, 7, 1900348.	7.3	52
7	Design of a Unipolar Barrier for a Nanocrystal-Based Short-Wave Infrared Photodiode. ACS Photonics, 2018, 5, 4569-4576.	6.6	49
8	Short Wave Infrared Devices Based on HgTe Nanocrystals with Air Stable Performances. Journal of Physical Chemistry C, 2018, 122, 14979-14985.	3.1	49
9	Near Unity Absorption in Nanocrystal Based Short Wave Infrared Photodetectors Using Guided Mode Resonators. ACS Photonics, 2019, 6, 2553-2561.	6.6	44
10	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
11	Infrared photoconduction at the diffusion length limit in HgTe nanocrystal arrays. Nature Communications, 2021, 12, 1794.	12.8	35
12	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
13	Electronic structure robustness and design rules for 2D colloidal heterostructures. Journal of Applied Physics, 2018, 123, .	2.5	29
14	The Strong Confinement Regime in HgTe Two-Dimensional Nanoplatelets. Journal of Physical Chemistry C, 2020, 124, 23460-23468.	3.1	29
15	Electroluminescence from HgTe Nanocrystals and Its Use for Active Imaging. Nano Letters, 2020, 20, 6185-6190.	9.1	28
16	Emergence of intraband transitions in colloidal nanocrystals [Invited]. Optical Materials Express, 2018, 8, 1174.	3.0	27
17	Electroluminescence from nanocrystals above 2â€‰Âµm. Nature Photonics, 2022, 16, 38-44.	31.4	25
18	Field-Effect Transistor and Photo-Transistor of Narrow-Band-Gap Nanocrystal Arrays Using Ionic Glasses. Nano Letters, 2019, 19, 3981-3986.	9.1	23

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19	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
20	Ferroelectric Gating of Narrow Band-Gap Nanocrystal Arrays with Enhanced Lightâ€“Matter Coupling. ACS Photonics, 2021, 8, 259-268.	6.6	23
21	Correlating Structure and Detection Properties in HgTe Nanocrystal Films. Nano Letters, 2021, 21, 4145-4151.	9.1	23
22	Strategy to overcome recombination limited photocurrent generation in CsPbX3 nanocrystal arrays. Applied Physics Letters, 2018, 112, .	3.3	19
23	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
24	Optoelectronic properties of methyl-terminated germanane. Applied Physics Letters, 2019, 115, .	3.3	18
25	Impact of dimensionality and confinement on the electronic properties of mercury chalcogenide nanocrystals. Nanoscale, 2019, 11, 3905-3915.	5.6	18
26	Pushing Absorption of Perovskite Nanocrystals into the Infrared. Nano Letters, 2020, 20, 3999-4006.	9.1	18
27	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
28	Gate tunable vertical geometry phototransistor based on infrared HgTe nanocrystals. Applied Physics Letters, 2020, 117, .	3.3	16
29	Optimized Infrared LED and Its Use in an Allâ€HgTe Nanocrystalâ€Based Active Imaging Setup. Advanced Optical Materials, 2022, 10, .	7.3	16
30	Bias Tunable Spectral Response of Nanocrystal Array in a Plasmonic Cavity. Nano Letters, 2021, 21, 6671-6677.	9.1	15
31	Near- to Long-Wave-Infrared Mercury Chalcogenide Nanocrystals from Liquid Mercury. Journal of Physical Chemistry C, 2020, 124, 8423-8430.	3.1	14
32	Optimized Cation Exchange for Mercury Chalcogenide 2D Nanoplatelets and Its Application for Alloys. Chemistry of Materials, 2021, 33, 9252-9261.	6.7	14
33	Potential of Colloidal Quantum Dot Based Solar Cells for Near-Infrared Active Detection. ACS Photonics, 2020, 7, 272-278.	6.6	13
34	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
35	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
36	Split-Gate Photodiode Based on Graphene/HgTe Heterostructures with a Few Nanosecond Photoresponse. ACS Applied Electronic Materials, 2021, 3, 4681-4688.	4.3	11

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37	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
38	Guided-Mode Resonator Coupled with Nanocrystal Intraband Absorption. ACS Photonics, 2022, 9, 985-993.	6.6	10
39	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
40	Colloidal IIâ€“VIâ€”Epitaxial IIIâ€“V heterostructure: A strategy to expand InGaAs spectral response. Applied Physics Letters, 2022, 120, .	3.3	4
41	Azobenzenes as Light-Activable Carrier Density Switches in Nanocrystals. Journal of Physical Chemistry C, 2019, 123, 27257-27263.	3.1	3
42	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