

Charlie GrÃ©boval

List of Publications by Year in descending order

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Version: 2024-02-01

48
papers

1,318
citations

304743

22
h-index

377865

34
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48
all docs

48
docs citations

48
times ranked

1080
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	Halide Ligands To Release Strain in Cadmium Chalcogenide Nanoplatelets and Achieve High Brightness. ACS Nano, 2019, 13, 5326-5334.	14.6	71
3	Mercury Chalcogenide Quantum Dots: Material Perspective for Device Integration. Chemical Reviews, 2021, 121, 3627-3700.	47.7	70
4	Reconfigurable 2D/0D p-n Graphene/HgTe Nanocrystal Heterostructure for Infrared Detection. ACS Nano, 2020, 14, 4567-4576.	14.6	60
5	Intraband Mid-Infrared Transitions in Ag ₂ Se Nanocrystals: Potential and Limitations for Hg-Free Low-Cost Photodetection. Journal of Physical Chemistry C, 2018, 122, 18161-18167.	3.1	59
6	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
7	HgTe Nanocrystal Inks for Extended Short-Wave Infrared Detection. Advanced Optical Materials, 2019, 7, 1900348.	7.3	52
8	Design of a Unipolar Barrier for a Nanocrystal-Based Short-Wave Infrared Photodiode. ACS Photonics, 2018, 5, 4569-4576.	6.6	49
9	Short Wave Infrared Devices Based on HgTe Nanocrystals with Air Stable Performances. Journal of Physical Chemistry C, 2018, 122, 14979-14985.	3.1	49
10	Near Unity Absorption in Nanocrystal Based Short Wave Infrared Photodetectors Using Guided Mode Resonators. ACS Photonics, 2019, 6, 2553-2561.	6.6	44
11	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
12	Infrared photoconduction at the diffusion length limit in HgTe nanocrystal arrays. Nature Communications, 2021, 12, 1794.	12.8	35
13	The Strong Confinement Regime in HgTe Two-Dimensional Nanoplatelets. Journal of Physical Chemistry C, 2020, 124, 23460-23468.	3.1	29
14	Electroluminescence from HgTe Nanocrystals and Its Use for Active Imaging. Nano Letters, 2020, 20, 6185-6190.	9.1	28
15	Photoconductive focal plane array based on HgTe quantum dots for fast and cost-effective short-wave infrared imaging. Nanoscale, 2022, 14, 9359-9368.	5.6	28
16	Emergence of intraband transitions in colloidal nanocrystals [Invited]. Optical Materials Express, 2018, 8, 1174.	3.0	27
17	Evidence for a narrow band gap phase in 1Tâ€² WS ₂ nanosheet. Applied Physics Letters, 2019, 115, .	3.3	25
18	Electroluminescence from nanocrystals above 2â€‰%Âµm. Nature Photonics, 2022, 16, 38-44.	31.4	25

#	ARTICLE	IF	CITATIONS
19	Ionic Glass-Gated 2D Material-Based Phototransistor: MoSe ₂ over LaF ₃ as Case Study. <i>Advanced Functional Materials</i> , 2019, 29, 1902723.	14.9	24
20	Field-Effect Transistor and Photo-Transistor of Narrow-Band-Gap Nanocrystal Arrays Using Ionic Glasses. <i>Nano Letters</i> , 2019, 19, 3981-3986.	9.1	23
21	Nanoplatelet-Based Light-Emitting Diode and Its Use in All-Nanocrystal LiFi-like Communication. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 22058-22065.	8.0	23
22	Ferroelectric Gating of Narrow Band-Gap Nanocrystal Arrays with Enhanced Light-Matter Coupling. <i>ACS Photonics</i> , 2021, 8, 259-268.	6.6	23
23	Correlating Structure and Detection Properties in HgTe Nanocrystal Films. <i>Nano Letters</i> , 2021, 21, 4145-4151.	9.1	23
24	Transport in ITO Nanocrystals with Short- to Long-Wave Infrared Absorption for Heavy-Metal-Free Infrared Photodetection. <i>ACS Applied Nano Materials</i> , 2019, 2, 1621-1630.	5.0	19
25	Optoelectronic properties of methyl-terminated germanane. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	18
26	Impact of dimensionality and confinement on the electronic properties of mercury chalcogenide nanocrystals. <i>Nanoscale</i> , 2019, 11, 3905-3915.	5.6	18
27	Effect of Pressure on Interband and Intraband Transition of Mercury Chalcogenide Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2019, 123, 13122-13130.	3.1	18
28	Pushing Absorption of Perovskite Nanocrystals into the Infrared. <i>Nano Letters</i> , 2020, 20, 3999-4006.	9.1	18
29	Seeded Growth of HgTe Nanocrystals for Shape Control and Their Use in Narrow Infrared Electroluminescence. <i>Chemistry of Materials</i> , 2021, 33, 2054-2061.	6.7	16
30	Gate tunable vertical geometry phototransistor based on infrared HgTe nanocrystals. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	16
31	Optimized Infrared LED and Its Use in an All-HgTe Nanocrystal-Based Active Imaging Setup. <i>Advanced Optical Materials</i> , 2022, 10, .	7.3	16
32	Bias Tunable Spectral Response of Nanocrystal Array in a Plasmonic Cavity. <i>Nano Letters</i> , 2021, 21, 6671-6677.	9.1	15
33	Near- to Long-Wave-Infrared Mercury Chalcogenide Nanocrystals from Liquid Mercury. <i>Journal of Physical Chemistry C</i> , 2020, 124, 8423-8430.	3.1	14
34	Optimized Cation Exchange for Mercury Chalcogenide 2D Nanoplatelets and Its Application for Alloys. <i>Chemistry of Materials</i> , 2021, 33, 9252-9261.	6.7	14
35	Potential of Colloidal Quantum Dot Based Solar Cells for Near-Infrared Active Detection. <i>ACS Photonics</i> , 2020, 7, 272-278.	6.6	13
36	HgTe Nanocrystal-Based Photodiode for Extended Short-Wave Infrared Sensing with Optimized Electron Extraction and Injection. <i>ACS Applied Nano Materials</i> , 2022, 5, 8602-8611.	5.0	13

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37	Time-Resolved Photoemission to Unveil Electronic Coupling between Absorbing and Transport Layers in a Quantum Dot-Based Solar Cell. <i>Journal of Physical Chemistry C</i> , 2020, 124, 23400-23409.	3.1	12
38	Broadband Enhancement of Mid-Wave Infrared Absorption in a Multi-Resonant Nanocrystal-Based Device. <i>Advanced Optical Materials</i> , 2022, 10, .	7.3	12
39	Split-Gate Photodiode Based on Graphene/HgTe Heterostructures with a Few Nanosecond Photoresponse. <i>ACS Applied Electronic Materials</i> , 2021, 3, 4681-4688.	4.3	11
40	Revealing the Band Structure of FAPI Quantum Dot Film and Its Interfaces with Electron and Hole Transport Layer Using Time Resolved Photoemission. <i>Journal of Physical Chemistry C</i> , 2020, 124, 3873-3880.	3.1	10
41	Few picosecond dynamics of intraband transitions in THz HgTe nanocrystals. <i>Nanophotonics</i> , 2021, 10, 2753-2763.	6.0	10
42	Guided-Mode Resonator Coupled with Nanocrystal Intraband Absorption. <i>ACS Photonics</i> , 2022, 9, 985-993.	6.6	10
43	2D Monolayer of the 1T ⁺ Phase of Alloyed WSSe from Colloidal Synthesis. <i>Journal of Physical Chemistry C</i> , 2021, 125, 11058-11065.	3.1	9
44	The complex optical index of PbS nanocrystal thin films and their use for short wave infrared sensor design. <i>Nanoscale</i> , 2022, 14, 2711-2721.	5.6	8
45	Nanocrystal-Based Active Photonics Device through Spatial Design of Light-Matter Coupling. <i>ACS Photonics</i> , 2022, 9, 2528-2535.	6.6	7
46	Colloidal II-VI Epitaxial III-V heterostructure: A strategy to expand InGaAs spectral response. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	4
47	Azobenzenes as Light-Activable Carrier Density Switches in Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2019, 123, 27257-27263.	3.1	3
48	Designing Photovoltaic Devices Using HgTe Nanocrystals for Short and Mid-Wave Infrared Detection. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 1900449.	1.8	3