Somak Mitra

List of Publications by Year
in descending order

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		236612	233125
56	2,107	25	45
papers	citations	h-index	g-index

56	56	56	3587
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Enhanced solar-blind deep UV photodetectors based on solution-processed p-MnO quantum dots and n-GaN pâ€“n junction-structure. Applied Physics Letters, 2022, 120, .	1.5	9
2	Carbon Nitride Thin Filmâ€Sensitized Graphene Fieldâ€Effect Transistor: A Visibleâ€Blind Ultraviolet Photodetector. Advanced Materials Interfaces, 2022, 9, .	1.9	4
3	High-performance DUV-C Solar-Blind n-ZnO Quantum Dot/p-CuO Micro-pyramid Photodetector Arrays. , 2022, , .		0
4	Micropump Fluidic Strategy for Fabricating Perovskite Microwire Array-Based Devices Embedded in Semiconductor Platform. Cell Reports Physical Science, 2021, 2, 100304.	2.8	11
5	A solidâ€“liquid two-phase precipitation method for the growth of fullerene (C60) nanowires. CrystEngComm, 2021, 23, 6340-6348.	1.3	1
6	Domainâ€Sizeâ€Dependent Residual Stress Governs the Phaseâ€Transition and Photoluminescence Behavior of Methylammonium Lead Iodide. Advanced Functional Materials, 2021, 31, 2008088.	7.8	8
7	Evidence of Carrier Localization in AlGaN/GaNâ€Based UV Multiple Quantum Wells with Opposite Polarity Domains Provided by Nanoscale Imaging. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100035.	1.2	3
8	Highly efficient transverse-electric-dominant ultraviolet-C emitters employing GaN multiple quantum disks in AlN nanowire matrix. , 2021, , .		0
9	Giant clam inspired high-speed photo-conversion for ultraviolet optical wireless communication. Optical Materials Express, 2021, 11, 1515.	1.6	2
10	Enhanced-Performance Self-Powered Solar-Blind UV-C Photodetector Based on n-ZnO Quantum Dots Functionalized by p-CuO Micro-pyramids. ACS Applied Materials & Interfaces, 2021, 13, 33335-33344.	4.0	44
11	Identifying Carrier Behavior in Ultrathin Indirectâ€Bandgap CsPbX₃ Nanocrystal Films for Use in UV/Visibleâ€Blind Highâ€Energy Detectors. Small, 2020, 16, e2004513.	5.2	45
12	Titanium Carbide MXene Nucleation Layer for Epitaxial Growth of High-Quality GaN Nanowires on Amorphous Substrates. ACS Nano, 2020, 14, 2202-2211.	7.3	15
13	GaN and InGaN nanowires prepared by metal-assisted electroless etching: Experimental and theoretical studies. Results in Physics, 2020, 19, 103428.	2.0	9
14	Quantifying the Transverse-Electric-Dominant 260 nm Emission from Molecular Beam Epitaxy-Grown GaN-Quantum-Disks Embedded in AlN Nanowires: A Comprehensive Optical and Morphological Characterization. ACS Applied Materials & Interfaces, 2020, 12, 41649-41658.	4.0	4
15	Nanoporous GaN/n-type GaN: A Cathode Structure for ITO-Free Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 3295-3303.	8.8	23
16	Dark-current reduction accompanied photocurrent enhancement in p-type MnO quantum-dot decorated n-type 2D-MoS2-based photodetector. Applied Physics Letters, 2020, 116, .	1.5	46
17	Enhanced UV Emission of GaN Nanowires Functionalized by Wider Band Gap Solution-Processed p-MnO Quantum Dots. ACS Applied Materials & Interfaces, 2020, 12, 34058-34064.	4.0	13
18	Enhanced Photoresponse of WS₂ Photodetectors through Interfacial Defect Engineering Using a TiO₂ Interlayer. ACS Applied Electronic Materials, 2020, 2, 838-845.	2.0	17

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19	Low-Temperature Crystallization Enables 21.9% Efficient Single-Crystal MAPbI₃ Inverted Perovskite Solar Cells. ACS Energy Letters, 2020, 5, 657-662.	8.8	171
20	Meso-Zn(<scp>ii</scp>)porphyrins of tailored functional groups for intensifying the photoacoustic signal. Journal of Materials Chemistry C, 2020, 8, 8546-8559.	2.7	4
21	Optimized performance III-nitride-perovskite-based heterojunction photodetector via asymmetric electrode configuration. RSC Advances, 2020, 10, 6092-6097.	1.7	4
22	Novel Pâ€Type Wide Bandgap Manganese Oxide Quantum Dots Operating at Deep UV Range for Optoelectronic Devices. Advanced Optical Materials, 2019, 7, 1900801.	3.6	35
23	Catalyst-Free Vertical ZnO-Nanotube Array Grown on p-GaN for UV-Light-Emitting Devices. ACS Applied Materials & Interfaces, 2019, 11, 27989-27996.	4.0	27
24	Unambiguously Enhanced Ultraviolet Luminescence of AlGaN Wavy Quantum Well Structures Grown on Large Misoriented Sapphire Substrate. Advanced Functional Materials, 2019, 29, 1905445.	7.8	128
25	Solar-Blind Self-Powered Photodetector Using Solution-Processed Amorphous Coreâ€“Shell Gallium Oxide Nanoparticles. ACS Applied Materials & Interfaces, 2019, 11, 38921-38928.	4.0	44
26	Light-Induced Self-Assembly of Cubic CsPbBr₃ Perovskite Nanocrystals into Nanowires. Chemistry of Materials, 2019, 31, 6642-6649.	3.2	119
27	Highly Stable and Ultrafast Hydrogen Gas Sensor Based on 15 nm Nanogaps Switching in a Palladiumâ€“Gold Nanoribbons Array. Advanced Materials Interfaces, 2019, 6, 1801442.	1.9	18
28	Self-Patterned CsPbBr₃ Nanocrystals for High-Performance Optoelectronics. ACS Applied Materials & Interfaces, 2019, 11, 5223-5231.	4.0	70
29	Ultraviolet-to-blue color-converting scintillating-fibers photoreceiver for 375-nm laser-based underwater wireless optical communication. Optics Express, 2019, 27, 30450.	1.7	52
30	Three-dimensional band diagram in lateral polarity junction III-nitride heterostructures. Optica, 2019, 6, 1058.	4.8	13
31	Photonics: Enhanced Performance of MoS₂ Photodetectors by Inserting an ALDâ€Processed TiO₂ Interlayer (Small 5/2018). Small, 2018, 14, 1870022.	5.2	2
32	High-performance solar-blind flexible deep-UV photodetectors based on quantum dots synthesized by femtosecond-laser ablation. Nano Energy, 2018, 48, 551-559.	8.2	74
33	Enhanced Performance of MoS₂ Photodetectors by Inserting an ALDâ€Processed TiO₂ Interlayer. Small, 2018, 14, 1703176.	5.2	51
34	Scalable integration of periodically aligned 2D-MoS₂ nanoribbon array. APL Materials, 2018, 6, 076102.	2.2	10
35	Double Charged Surface Layers in Lead Halide Perovskite Crystals. Nano Letters, 2017, 17, 2021-2027.	4.5	60
36	Surface Passivation of GaN Nanowires for Enhanced Photoelectrochemical Water-Splitting. Nano Letters, 2017, 17, 1520-1528.	4.5	175

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37	Photoinduced entropy of InGaN/GaN p-i-n double-heterostructure nanowires. Applied Physics Letters, 2017, 110, .	1.5	50
38	High-Performance Ultraviolet-to-Infrared Broadband Perovskite Photodetectors Achieved via Inter-/Intraband Transitions. ACS Applied Materials & Interfaces, 2017, 9, 37832-37838.	4.0	91
39	A Photodetector Based on p-Si/n-ZnO Nanotube Heterojunctions with High Ultraviolet Responsivity. ACS Applied Materials & Interfaces, 2017, 9, 37120-37127.	4.0	85
40	Inside Perovskites: Quantum Luminescence from Bulk Cs₄PbBr₆ Single Crystals. Chemistry of Materials, 2017, 29, 7108-7113.	3.2	200
41	Impact of Silicon Nanocrystal Oxidation on the Nonmetallic Growth of Carbon Nanotubes. ACS Applied Materials & Interfaces, 2016, 8, 19012-19023.	4.0	3
42	Temperature-dependent photoluminescence of surface-engineered silicon nanocrystals. Scientific Reports, 2016, 6, 27727.	1.6	20
43	Silicon Nanocrystal/Nanocarbon Hybrids. , 2016, , 543-561.		1
44	Energy band diagram of device-grade silicon nanocrystals. Nanoscale, 2016, 8, 6623-6628.	2.8	21
45	Enhanced Dispersion of TiO2 Nanoparticles in a TiO2/PEDOT:PSS Hybrid Nanocomposite via Plasma-Liquid Interactions. Scientific Reports, 2015, 5, 15765.	1.6	50
46	Varying Surface Chemistries for p-Doped and n-Doped Silicon Nanocrystals and Impact on Photovoltaic Devices. ACS Applied Materials & Interfaces, 2015, 7, 28207-28214.	4.0	16
47	A silicon nanocrystal/polymer nanocomposite as a down-conversion layer in organic and hybrid solar cells. Nanoscale, 2015, 7, 11566-11574.	2.8	37
48	Surface-engineered silicon nanocrystals as high energy photons downshifters for organic and hybrid solar cells. , 2014, , .		0
49	Microplasmaâ€<scp>I</scp>nduce Liquid Chemistry for Stabilizing of Silicon Nanocrystals Optical Properties in Water. Plasma Processes and Polymers, 2014, 11, 158-163.	1.6	24
50	Improved Optoelectronic Properties of Silicon Nanocrystals/Polymer Nanocomposites by Microplasma-Induced Liquid Chemistry. Journal of Physical Chemistry C, 2013, 117, 23198-23207.	1.5	35
51	Surface-engineered silicon nanocrystals. Nanoscale, 2013, 5, 1385.	2.8	67
52	Built-In Charges and Photoluminescence Stability of 3D Surface-Engineered Silicon Nanocrystals by a Nanosecond Laser and a Direct Current Microplasma. Journal of Physical Chemistry C, 2013, 117, 10939-10948.	1.5	9
53	Enhancement of polymer solar cell performance under low-concentrated sunlight by 3D surface-engineered silicon nanocrystals. , 2013, , .		1
54	Dramatic Enhancement of Photoluminescence Quantum Yields for Surfaceâ€Engineered Si Nanocrystals within the Solar Spectrum. Advanced Functional Materials, 2013, 23, 6051-6058.	7.8	26

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55	Synthesis of tetrahedral quasi-type-II CdSeâ€“CdS coreâ€“shell quantum dots. Nanotechnology, 2011, 22, 425202.	1.3	18
56	Synthesis and surface engineering of nanomaterials by atmospheric-pressure microplasmas. EPJ Applied Physics, 2011, 56, 24020.	0.3	42