

# Samaresh Das

## List of Publications by Year in descending order

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84  
papers

1,419  
citations

279701

23  
h-index

377752

34  
g-index

85  
all docs

85  
docs citations

85  
times ranked

1898  
citing authors

#	ARTICLE	IF	CITATIONS
1	MoSe <sub>2</sub> /n-GaN Heterojunction Induced High Photoconductive Gain for Low-Noise Broadband Photodetection from Ultraviolet to Near-Infrared Wavelengths. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	9
2	Silicon-based qubit technology: progress and future prospects. <i>Bulletin of Materials Science</i> , 2022, 45, 1.	0.8	1
3	Self-driven broadband terahertz detector based on platinum telluride (PtTe <sub>2</sub> ). , 2022, , .		0
4	Self-powered, low-noise and high-speed nanolayered MoSe <sub>2</sub> /p-GaN heterojunction photodetector from ultraviolet to near-infrared wavelengths. <i>Nanotechnology</i> , 2022, 33, 305201.	1.3	7
5	Ge <sup>0.92</sup> Sn <sup>0.08</sup> core-shell single nanowire infrared photodetector with superior characteristics for on-chip optical communication. <i>Applied Physics Letters</i> , 2022, 120, .	1.5	8
6	Highly Sensitive Tungsten Oxide Thin Film-Based Field-Effect Transistor for Real-Time Monitoring of Dissolved Ammonia in Human Plasma. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	8
7	Impact of the Channel Thickness on the Photoresponse of Black Arsenic Mid-Infrared Photodetectors. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 27444-27455.	4.0	4
8	Zero-Biased and Broadband (0.1–1.5 THz) Terahertz Detector Using Dirac Semimetal-Platinum Telluride (PtTe <sub>2</sub> ). , 2022, 6, 1-4.		4
9	Near Room Temperature Sensing by In <sub>2</sub> O <sub>3</sub> Decorated Silicon Nanowires for Sensitive Detection of Ethanol. <i>IEEE Sensors Journal</i> , 2021, 21, 7275-7282.	2.4	6
10	In <sub>2</sub> Se <sub>3</sub> /Silicon-on-Insulator Heterojunction Phototransistor for Low Noise Dual-Band Detection. <i>IEEE Electron Device Letters</i> , 2021, 42, 755-758.	2.2	13
11	Low-noise, high-detectivity, polarization-sensitive, room-temperature infrared photodetectors based on Ge quantum dot-decorated Si-on-insulator nanowire field-effect transistors. <i>Nanotechnology</i> , 2021, 32, 315205.	1.3	18
12	Highly Responsive Metal Oxide (V <sub>2</sub> O <sub>5</sub> )-Based NEMS Pirani Gauge for <i>In-Situ</i> Hermeticity Monitoring. <i>Journal of Microelectromechanical Systems</i> , 2021, 30, 340-342.	1.7	12
13	Metrology Perspective of Single-Photon Detectors: Review on Global Calibration Methods. <i>Advanced Quantum Technologies</i> , 2021, 4, 2100008.	1.8	3
14	MoS <sub>2</sub> /TiO <sub>2</sub> Hybrid Nanostructure-Based Field-Effect Transistor for Highly Sensitive, Selective, and Rapid Detection of Gram-Positive Bacteria. <i>Advanced Materials Technologies</i> , 2020, 5, 1900615.	3.0	36
15	In <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> Heterostructure for Highly Responsive Low-Noise Ultraviolet Photodetector. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 166-172.	1.6	23
16	Integration of Nanometer-Thick 1T-TaS <sub>2</sub> Films with Silicon for an Optically Driven Wide-Band Terahertz Modulator. <i>ACS Applied Nano Materials</i> , 2020, 3, 10767-10777.	2.4	13
17	Highly Efficient Nanostructured PtSe <sub>2</sub> FET for Toxic Gas Detection. , 2020, , .		5
18	Large-Scale Synthesis of Nickel Sulfide for Electronic Device Applications. <i>MRS Advances</i> , 2020, 5, 2727-2735.	0.5	4

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19	Nanolayered Black Arsenic "Silicon Lateral Heterojunction Photodetector for Visible to Mid-Infrared Wavelengths. ACS Applied Nano Materials, 2020, 3, 9401-9409.	2.4	14
20	Carrier Transport In Multilayer n-MoSe <sub>2</sub> And p-Germanium Heterojunction Back Gated Field Effect Transistors. , 2020, , .		0
21	Photo-Induced Negative Differential Transconductance in Back-Gated Layered MoSe <sub>2</sub> /p-Ge Heterojunction Field Effect Transistors. ACS Applied Electronic Materials, 2020, 2, 1567-1573.	2.0	2
22	A highly sensitive wearable flexible strain sensor based on polycrystalline MoS <sub>2</sub> thin film. Nanotechnology, 2020, 31, 385501.	1.3	21
23	Resonant tunneling and hole transport behavior in low noise silicon tri-gate junctionless single hole transistor. Semiconductor Science and Technology, 2020, 35, 065011.	1.0	1
24	Ultrahigh Negative Infrared Photoconductance in Highly As-Doped Germanium Nanowires Induced by Hot Electron Trapping. ACS Applied Electronic Materials, 2020, 2, 1934-1942.	2.0	8
25	Broadband terahertz study of flexible polymer thin films. AIP Conference Proceedings, 2020, , .	0.3	0
26	Organic field effect transistors based on self-assembling core-modified peptidic polymers. Molecular Systems Design and Engineering, 2020, 5, 847-855.	1.7	10
27	Size-Dependent Photoresponse of Germanium Nanocrystals-Metal Oxide Semiconductor Photodetector. IEEE Transactions on Electron Devices, 2020, 67, 558-565.	1.6	17
28	Optically Pumped Broadband Terahertz Modulator Based on Nanostructured PtSe <sub>2</sub> Thin Films. Advanced Optical Materials, 2020, 8, 1901714.	3.6	34
29	Broadband infrared photodetector based on nanostructured MoSe <sub>2</sub> "Si heterojunction extended up to 2.5 $\mu\text{m}$ spectral range. Nanotechnology, 2020, 31, 455208.	1.3	38
30	Efficiency enhancement in InGaN-based laser diodes using an optimized Al <sub>0.12</sub> Ga <sub>0.88</sub> N electron blocking layer. Semiconductor Science and Technology, 2020, 35, 105017.	1.0	3
31	Room temperature terahertz detector based on single silicon nanowire junctionless transistor with high detectivity. Semiconductor Science and Technology, 2020, 35, 125020.	1.0	5
32	Diameter-Dependent Piezoresistive Sensing Performance of Junctionless Gate-All-Around Nanowire FET. IEEE Transactions on Electron Devices, 2020, 67, 2884-2889.	1.6	7
33	Diameter-dependent photoresponse with high internal gain in a back gated single Si nanowire phototransistor. Journal Physics D: Applied Physics, 2019, 52, 425103.	1.3	8
34	Sidewall Transfer Patterning-Based Nano-Crystalline MoS <sub>2</sub> Sensing Element for Stress and Optical MEMS Sensor. , 2019, , .		2
35	Azurin-TiO <sub>2</sub> hybrid nanostructure field effect transistor for efficient ultraviolet detection. Nanotechnology, 2019, 30, 495205.	1.3	21
36	Vancomycin functionalized WO <sub>3</sub> thin film-based impedance sensor for efficient capture and highly selective detection of Gram-positive bacteria. Biosensors and Bioelectronics, 2019, 136, 23-30.	5.3	44

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37	Temperature dependent current transport behavior of improved low noise NiGe schottky diodes for low leakage Ge-MOSFET. Semiconductor Science and Technology, 2019, 34, 035026.	1.0	6
38	Self-powered room temperature broadband infrared photodetector based on MoSe <sub>2</sub> /germanium heterojunction with 35 A/W responsivity at 1550 nm. Applied Physics Letters, 2019, 114, .	1.5	41
39	Low cost flexible 1.1 μm -1.6 μm photodetector fabricated by hydrothermal grown large area MoSe <sub>2</sub> nanostructures. , 2019, , .		2
40	Interfacial Engineering in TiO <sub>2</sub> /Nano-Si Heterostructure-Based Device Prototype for E-Nose Application. IEEE Transactions on Electron Devices, 2018, 65, 1127-1131.	1.6	10
41	MoO <sub>3</sub> /nano-Si heterostructure based highly sensitive and acetone selective sensor prototype: a key to non-invasive detection of diabetes. Nanotechnology, 2018, 29, 275503.	1.3	25
42	S-Layer Protein for Resistive Switching and Flexible Nonvolatile Memory Device. ACS Applied Materials & Interfaces, 2018, 10, 4866-4873.	4.0	29
43	Temperature Dependent Electrical Characteristics of Nanostructured WO <sub>3</sub> Based Ambipolar Bottom Gate FET. IEEE Nanotechnology Magazine, 2018, 17, 1288-1294.	1.1	2
44	High speed efficient ultraviolet photodetector based on 500 nm width multiple WO <sub>3</sub> nanowires. Applied Physics Letters, 2018, 113, .	1.5	26
45	Development of scalable planar MEMS technology for low power operated ethanol sensor. Journal of Micromechanics and Microengineering, 2018, 28, 105020.	1.5	3
46	High speed MSM photodetector based on Ge nanowires network. Semiconductor Science and Technology, 2017, 32, 055008.	1.0	13
47	High-Speed Scalable Silicon-MoS <sub>2</sub> P-N Heterojunction Photodetectors. Scientific Reports, 2017, 7, 44243.	1.6	121
48	Metalloprotein based scalable field effect transistor with enhanced switching behaviour. Sensors and Actuators B: Chemical, 2017, 246, 363-369.	4.0	12
49	Wafer-Scale Synthesized MoS <sub>2</sub> /Porous Silicon Nanostructures for Efficient and Selective Ethanol Sensing at Room Temperature. ACS Applied Materials & Interfaces, 2017, 9, 21017-21024.	4.0	55
50	Scalable fabrication of prototype sensor for selective and sub-ppm level ethanol sensing based on TiO <sub>2</sub> nanotubes decorated porous silicon. Sensors and Actuators B: Chemical, 2017, 249, 602-610.	4.0	46
51	Polymer functionalized nanostructured porous silicon for selective water vapor sensing at room temperature. Superlattices and Microstructures, 2017, 104, 547-552.	1.4	5
52	Dopant induced single electron tunneling within the sub-bands of single silicon NW tri-gate junctionless n-MOSFET. Journal Physics D: Applied Physics, 2017, 50, 365104.	1.3	5
53	High performance broadband photodetector based on MoS <sub>2</sub> /porous silicon heterojunction. Applied Physics Letters, 2017, 111, .	1.5	31
54	Effect of TiO <sub>2</sub> Functionalization on Nano-Porous Silicon for Selective Alcohol Sensing at Room Temperature. Journal of Materials Science and Technology, 2017, 33, 516-522.	5.6	29

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55	Low-cost and reliable nanowire fabrication method for ultrasensitive pressure sensor. , 2017, , .		2
56	Azurin based flexible device for resistive switching memory application. , 2017, , .		2
57	Characterization of photoresponse in single Si nanowire p-n junction using conductive atomic force microscopy. , 2016, , .		0
58	High sensitivity silicon single nanowire junctionless phototransistor. Applied Physics Letters, 2016, 108, .	1.5	11
59	Synthesis of $\text{MoO}_3$ nano-flakes by dry oxidation of RF sputtered Mo thin films and their application in gas sensing. Semiconductor Science and Technology, 2016, 31, 115010.	1.0	28
60	Errata to "Surface-Potential-Based Drain Current Analytical Model for Triple-Gate Junctionless Nanowire Transistors" [Dec 12 3510-3518]. IEEE Transactions on Electron Devices, 2016, 63, 527-527.	1.6	1
61	Selective acetone electrical detection using functionalized nano-porous silicon. , 2015, , .		2
62	Junctionless nanowire transistor fabricated with high mobility Ge channel. Physica Status Solidi - Rapid Research Letters, 2014, 8, 65-68.	1.2	16
63	Charge sensing of two isolated double quantum dots. , 2014, , .		0
64	Fully CMOS-compatible top-down fabrication of sub-50nm silicon nanowire sensing devices. Microelectronic Engineering, 2014, 118, 47-53.	1.1	14
65	Morphology and growth of capped Ge/Si quantum dots. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	6
66	Electroluminescence from metal-insulator-semiconductor tunneling diodes using compressively strained Ge on Si <sub>0.5</sub> Ge <sub>0.5</sub> virtual substrates. Optics Express, 2013, 21, 28219.	1.7	6
67	Photoinduced Hole-Transfer in Nanoparticle-Dye Hybrid Composites: A Route for Exciton Dissociation Leading to Photovoltaic Devices. Nanoscience and Nanotechnology Letters, 2013, 5, 13-18.	0.4	1
68	Influence of channel material properties on performance of nanowire transistors. Journal of Applied Physics, 2012, 111, .	1.1	24
69	High Efficiency Si/CdS Radial Nanowire Heterojunction Photodetectors Using Etched Si Nanowire Templates. Journal of Physical Chemistry C, 2012, 116, 7126-7133.	1.5	110
70	Top-down process of Germanium nanowires using EBL exposure of Hydrogen Silsesquioxane resist. , 2012, , .		5
71	Intrinsic gate delay and energy-delay product in junctionless nanowire transistors. , 2012, , .		6
72	Sensitivity analysis of steep subthreshold slope (S-slope) in Junctionless nanotransistors. , 2012, , .		0

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73	Electron transport in germanium junctionless nanowire transistors. , 2012, , .		0
74	The zero temperature coefficient in junctionless nanowire transistors. Applied Physics Letters, 2012, 101, 062101.	1.5	27
75	Surface-Potential-Based Drain Current Analytical Model for Triple-Gate Junctionless Nanowire Transistors. IEEE Transactions on Electron Devices, 2012, 59, 3510-3518.	1.6	94
76	Mobility enhancement effect in heavily doped junctionless nanowire silicon-on-insulator metal-oxide-semiconductor field-effect transistors. Applied Physics Letters, 2012, 101, 213502.	1.5	45
77	Device Design and Estimated Performance for p-Type Junctionless Transistors on Bulk Germanium Substrates. IEEE Transactions on Electron Devices, 2012, 59, 2308-2313.	1.6	31
78	Optical and electrical properties of undoped and doped Ge nanocrystals. Nanoscale Research Letters, 2012, 7, 143.	3.1	30
79	Improved infrared photoluminescence characteristics from circularly ordered self-assembled Ge islands. Nanoscale Research Letters, 2011, 6, 416.	3.1	12
80	Temperature dependent photoluminescence from porous silicon nanostructures: Quantum confinement and oxide related transitions. Journal of Applied Physics, 2011, 110, 094309.	1.1	28
81	Structural and optical properties of germanium nanostructures on Si(100) and embedded in high-k oxides. Nanoscale Research Letters, 2011, 6, 224.	3.1	32
82	Light emission and floating gate memory characteristics of germanium nanocrystals. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 635-638.	0.8	12
83	Properties of self-assembled Ge islands grown by molecular beam epitaxy. International Journal of Nanotechnology, 2009, 6, 552.	0.1	0
84	Bilayer MoS2 on Silicon for higher Terahertz Amplitude Modulation. Nano Express, 0, , .	1.2	4