

Abhishek Motayed

List of Publications by Year in descending order

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55
papers

1,674
citations

279798

23
h-index

289244

40
g-index

55
all docs

55
docs citations

55
times ranked

2250
citing authors

#	ARTICLE	IF	CITATIONS
1	Identification and quantification of gases and their mixtures using GaN sensor array and artificial neural network. Measurement Science and Technology, 2021, 32, 055111.	2.6	9
2	Back-Gate GaN Nanowire-Based FET Device for Enhancing Gas Selectivity at Room Temperature. Sensors, 2021, 21, 624.	3.8	11
3	Reliable anatase-titania nanoclusters functionalized GaN sensor devices for UV assisted NO ₂ gas-sensing in ppb level. Nanotechnology, 2020, 31, 155504.	2.6	23
4	Accelerated Stress Tests and Statistical Reliability Analysis of Metal-Oxide/GaN Nanostructured Sensor Devices. IEEE Transactions on Device and Materials Reliability, 2020, 20, 742-747.	2.0	6
5	Nanowire-Based Sensor Array for Detection of Cross-Sensitive Gases Using PCA and Machine Learning Algorithms. IEEE Sensors Journal, 2020, 20, 6020-6028.	4.7	57
6	Scalable metal oxide functionalized GaN nanowire for precise SO ₂ detection. Sensors and Actuators B: Chemical, 2020, 318, 128223.	7.8	26
7	Functionalization of GaN Nanowire Sensors With Metal Oxides: An Experimental and DFT Investigation. IEEE Sensors Journal, 2020, 20, 7138-7147.	4.7	16
8	Metal-oxide/GaN based NO ₂ Gas detection at room temperature: an experimental and density functional theory investigation. , 2020, , .		5
9	High-performance room-temperature TiO ₂ -functionalized GaN nanowire gas sensors. Applied Physics Letters, 2019, 115, .	3.3	22
10	Fabrication and comparative study of DC and low frequency noise characterization of GaN/AlGaN based MOS-HEMT and HEMT. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, .	1.2	17
11	Live demonstration: Chip-scale, nano-engineered, environmental gas sensors. , 2016, , .		1
12	The effects of surface conditions of TiO ₂ thin film on the UV assisted sensing response at room temperature. Thin Solid Films, 2016, 620, 76-81.	1.8	23
13	An Antimony Selenide Molecular Ink for Flexible Broadband Photodetectors. Advanced Electronic Materials, 2016, 2, 1600182.	5.1	31
14	Structural and optical nanoscale analysis of GaN core-shell microrod arrays fabricated by combined top-down and bottom-up process on Si(111). Japanese Journal of Applied Physics, 2016, 55, 05FF02.	1.5	4
15	Self-powered p-NiO/n-ZnO heterojunction ultraviolet photodetectors fabricated on plastic substrates. APL Materials, 2015, 3, 106101.	5.1	105
16	High-performing visible-blind photodetectors based on SnO ₂ /CuO nanoheterojunctions. Applied Physics Letters, 2015, 107, .	3.3	38
17	Transfer characteristics and low-frequency noise in single- and multi-layer MoS ₂ field-effect transistors. Applied Physics Letters, 2015, 107, 162102.	3.3	21
18	Top-down fabrication of horizontally-aligned gallium nitride nanowire arrays for sensor development. Microelectronic Engineering, 2015, 142, 58-63.	2.4	16

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19	A solution-processed high-efficiency p-NiO/n-ZnO heterojunction photodetector. RSC Advances, 2015, 5, 14646-14652.	3.6	51
20	Real-time electrical detection of the formation and destruction of lipid bilayers on silicon nanowire devices. Sensing and Bio-Sensing Research, 2015, 4, 103-108.	4.2	1
21	Tunable Ultraviolet Photoresponse in Solution-Processed p-n Junction Photodiodes Based on Transition-Metal Oxides. ACS Applied Materials & Interfaces, 2015, 7, 9660-9667.	8.0	42
22	UV-assisted room-temperature chemiresistive NO ₂ sensor based on TiO ₂ thin film. Journal of Alloys and Compounds, 2015, 653, 255-259.	5.5	71
23	Top-down fabrication of large-area GaN micro- and nanopillars. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2014, 32, .	1.2	36
24	Faceting control in core-shell GaN micropillars using selective epitaxy. APL Materials, 2014, 2, 106104.	5.1	3
25	Electrical transport and low-frequency noise in chemical vapor deposited single-layer MoS ₂ devices. Nanotechnology, 2014, 25, 155702.	2.6	43
26	Nitro-Aromatic Explosive Sensing Using GaN Nanowire-Titania Nanocluster Hybrids. IEEE Sensors Journal, 2013, 13, 1883-1888.	4.7	28
27	Detection of Deep-Levels in Doped Silicon Nanowires Using Low-Frequency Noise Spectroscopy. IEEE Transactions on Electron Devices, 2013, 60, 4206-4212.	3.0	17
28	Formation of large-area GaN nanostructures with controlled geometry and morphology using top-down fabrication scheme. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2012, 30, .	1.2	20
29	UV-Assisted Alcohol Sensing With Zinc Oxide-Functionalized Gallium Nitride Nanowires. IEEE Electron Device Letters, 2012, 33, 1075-1077.	3.9	8
30	Large-area GaN n-core/p-shell arrays fabricated using top-down etching and selective epitaxial overgrowth. Applied Physics Letters, 2012, 101, .	3.3	15
31	Methanol, ethanol and hydrogen sensing using metal oxide and metal (TiO ₂ -Pt) composite nanoclusters on GaN nanowires: a new route towards tailoring the selectivity of nanowire/nanocluster chemical sensors. Nanotechnology, 2012, 23, 175501.	2.6	67
32	UV-assisted alcohol sensing using SnO ₂ functionalized GaN nanowire devices. Sensors and Actuators B: Chemical, 2012, 171-172, 499-507.	7.8	52
33	Realization of vertically-aligned GaN n-p core-shell nanoscale structures using top-down fabrication. , 2011, , .		1
34	Highly selective GaN-nanowire/TiO ₂ -nanocluster hybrid sensors for detection of benzene and related environment pollutants. Nanotechnology, 2011, 22, 295503.	2.6	70
35	Homoepitaxial n-core: p-shell gallium nitride nanowires: HVPE overgrowth on MBE nanowires. Nanotechnology, 2011, 22, 465703.	2.6	10
36	Correlation between the performance and microstructure of Ti/Al/Ti/Au Ohmic contacts to p-type silicon nanowires. Nanotechnology, 2011, 22, 075206.	2.6	15

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37	Selective nano-devices for the detection of nitroaromatic explosive compounds. , 2011, , .		0
38	Characterization of deep-levels in silicon nanowires by low-frequency noise spectroscopy. Applied Physics Letters, 2011, 99, 113107.	3.3	19
39	Rapid thermal oxidation of silicon nanowires. Applied Physics Letters, 2009, 94, .	3.3	21
40	Experimental investigation of electron transport properties of gallium nitride nanowires. Journal of Applied Physics, 2008, 104, .	2.5	31
41	GaN-nanowire/amorphous-Si core-shell heterojunction diodes. Applied Physics Letters, 2008, 93, 193102.	3.3	9
42	Diameter dependent transport properties of gallium nitride nanowire field effect transistors. Applied Physics Letters, 2007, 90, 043104.	3.3	90
43	Phase separations of single-crystal nanowires grown by self-catalytic chemical vapor deposition method. Journal of Chemical Physics, 2007, 126, 064704.	3.0	15
44	365nm operation of n-nanowire/p-gallium nitride homojunction light emitting diodes. Applied Physics Letters, 2007, 90, 183120.	3.3	31
45	Realization of reliable GaN nanowire transistors utilizing dielectrophoretic alignment technique. Journal of Applied Physics, 2006, 100, 114310.	2.5	56
46	Fabrication of GaN-based nanoscale device structures utilizing focused ion beam induced Pt deposition. Journal of Applied Physics, 2006, 100, 024306.	2.5	86
47	Chemical surface treatment and the experimental demonstration of Schottky-Mott rules for metal-semiconductor heterostructure interfaces. Journal of Chemical Physics, 2005, 123, 194703.	3.0	20
48	Two-step surface treatment technique: Realization of nonalloyed low-resistance Ti/Al/Ti/Au ohmic contact to n-GaN. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 663.	1.6	15
49	Electrical, microstructural, and thermal stability characteristics of Ta/Ti/Ni/Au contacts to n-GaN. Journal of Applied Physics, 2004, 95, 1516-1524.	2.5	21
50	Electrical characteristics of Al _x Ga _{1-x} N Schottky diodes prepared by a two-step surface treatment. Journal of Applied Physics, 2004, 96, 3286-3295.	2.5	31
51	Electrical, thermal, and microstructural characteristics of Ti/Al/Ti/Au multilayer Ohmic contacts to n-type GaN. Journal of Applied Physics, 2003, 93, 1087-1094.	2.5	132
52	High-transparency Ni/Au bilayer contacts to n-type GaN. Journal of Applied Physics, 2002, 92, 5218-5227.	2.5	24
53	Design of a 364 nm Electrically Pumped Multi-Quantum Well Continuous Wave Nitride Vertical Cavity Surface Emitting Laser. Materials Research Society Symposia Proceedings, 2002, 744, 1.	0.1	0
54	Low-resistance Ti/Al/Ti/Au multilayer ohmic contact to n-GaN. Journal of Applied Physics, 2001, 89, 6214-6217.	2.5	92

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55	Fundamental investigation of the comparative behaviour of small-signal BJT Darlington and cascode amplifiers. International Journal of Electronics, 2001, 88, 737-749.	1.4	0