Qiliang Li

List of Publications by Year
in descending order

108 papers	3,434 citations	159585 30 h-index	149698 56 g-index
109 all docs	109 docs citations	109 times ranked	5362 citing authors

#	Article	IF	Citations
1	Toward Clean and Crackless Transfer of Graphene. ACS Nano, 2011, 5, 9144-9153.	14.6	701
2	Recent Advances in Electrochemical Sensors for Detecting Toxic Gases: NO2, SO2 and H2S. Sensors, 2019, 19, 905.	3.8	223
3	Phase transition, effective mass and carrier mobility of MoS2 monolayer under tensile strain. Applied Surface Science, 2015, 325, 27-32.	6.1	132
4	Enhanced Channel Modulation in Dual-Gated Silicon Nanowire Transistors. Nano Letters, 2005, 5, 2519-2523.	9.1	129
5	Silicon nanowires as enhancement-mode Schottky barrier field-effect transistors. Nanotechnology, 2005, 16, 1482-1485.	2.6	126
6	Chemical Discrimination with an Unmodified Graphene Chemical Sensor. ACS Sensors, 2016, 1, 26-31.	7.8	121
7	Ultraviolet/ozone treatment to reduce metal-graphene contact resistance. Applied Physics Letters, 2013, 102, .	3.3	112
8	Capacitance and conductance characterization of ferrocene-containing self-assembled monolayers on silicon surfaces for memory applications. Applied Physics Letters, 2002, 81, 1494-1496.	3.3	98
9	Porphyrins Bearing Mono or Tripodal Benzylphosphonic Acid Tethers for Attachment to Oxide Surfaces. Journal of Organic Chemistry, 2004, 69, 1453-1460.	3.2	79
10	Topological Insulator Bi2Se3 Nanowire High Performance Field-Effect Transistors. Scientific Reports, 2013, 3, .	3.3	73
11	Porphyrins Bearing Arylphosphonic Acid Tethers for Attachment to Oxide Surfaces. Journal of Organic Chemistry, 2004, 69, 1444-1452.	3.2	71
12	Anisotropic thermoelectric behavior in armchair and zigzag mono- and fewlayer MoS2 in thermoelectric generator applications. Scientific Reports, 2015, 5, 13706.	3.3	61
13	Electrical characterization of redox-active molecular monolayers on SiO2 for memory applications. Applied Physics Letters, 2003, 83, 198-200.	3.3	59
14	Redox-Active Molecular Nanowire Flash Memory for High-Endurance and High-Density Nonvolatile Memory Applications. ACS Applied Materials & Interfaces, 2015, 7, 27306-27313.	8.0	59
15	Synthesis of Porphyrins Bearing Hydrocarbon Tethers and Facile Covalent Attachment to Si(100). Journal of Organic Chemistry, 2004, 69, 5568-5577.	3.2	58
16	Strain-engineering the anisotropic electrical conductance in ReS2 monolayer. Applied Physics Letters, 2016, 108, .	3.3	53
17	Silicon nanowire electromechanical switches for logic device application. Nanotechnology, 2007, 18, 315202.	2.6	52
18	Precise Alignment of Single Nanowires and Fabrication of Nanoelectromechanical Switch and Other Test Structures. IEEE Nanotechnology Magazine, 2007, 6, 256-262.	2.0	52

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19	SOI Field-Effect Diode DRAM Cell: Design and Operation. IEEE Electron Device Letters, 2013, 34, 1002-1004.	3.9	49
20	Preparation of epitaxial hexagonal YMnO3 thin films and observation of ferroelectric vortex domains. Npj Quantum Materials, 2016, 1, .	5.2	49
21	Multiple-bit storage properties of porphyrin monolayers on SiO2. Applied Physics Letters, 2004, 85, 1829-1831.	3.3	46
22	A computational study of the electronic properties of one-dimensional armchair phosphorene nanotubes. Journal of Applied Physics, 2015, 118, .	2.5	45
23	Electrical transport and low-frequency noise in chemical vapor deposited single-layer MoS_2 devices. Nanotechnology, 2014, 25, 155702.	2.6	43
24	Recent Progress in Smart Electronic Nose Technologies Enabled with Machine Learning Methods. Sensors, 2021, 21, 7620.	3.8	42
25	Silicon nanowire on oxide/nitride/oxide for memory application. Nanotechnology, 2007, 18, 235204.	2.6	38
26	Enhanced energy storage performance and thermal stability in relaxor ferroelectric $(1−x)BiFeO_3−x(0.85BaTiO_3−0.15Bi(Sn_{0.5}Zn_{0.5})O_3)$ ceramics. Journal of the American Ceramic Society, 2021, 104, 2646-2654.	3.8	38
27	Discrimination Enhancement with Transient Feature Analysis of a Graphene Chemical Sensor. Analytical Chemistry, 2016, 88, 1401-1406.	6.5	35
28	Target Detection, Positioning and Tracking Using New UAV Gas Sensor Systems: Simulation and Analysis. Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 94, 871-882.	3.4	34
29	Fabrication, characterization and simulation of high performance Si nanowire-based non-volatile memory cells. Nanotechnology, 2011, 22, 254020.	2.6	31
30	Random telegraph signals in n-type ZnO nanowire field effect transistors at low temperature. Applied Physics Letters, 2007, 91, .	3.3	30
31	Autonomous Visual Perception for Unmanned Surface Vehicle Navigation in an Unknown Environment. Sensors, 2019, 19, 2216.	3.8	29
32	Scaling of the SOI field effect diode (FED) for memory application. , 2009, , .		27
33	Hole doping induced half-metallic itinerant ferromagnetism and giant magnetoresistance in CrI3 monolayer. Applied Surface Science, 2021, 535, 147693.	6.1	26
34	Discrete charge states in nanowire flash memory with multiple Ta2O5 charge-trapping stacks. Applied Physics Letters, 2014, 104, .	3.3	25
35	Maritime vessel emission monitoring by an UAV gas sensor system. Ocean Engineering, 2020, 218, 108206.	4.3	24
36	Field effects of current crowding in metal-MoS2 contacts. Applied Physics Letters, 2016, 108, .	3.3	23

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37	The large-scale integration of high-performance silicon nanowire field effect transistors. Nanotechnology, 2009, 20, 415202.	2.6	22
38	High-performance room-temperature TiO2-functionalized GaN nanowire gas sensors. Applied Physics Letters, 2019, 115, .	3.3	22
39	Self-aligned multi-channel silicon nanowire field-effect transistors. Solid-State Electronics, 2012, 78, 92-96.	1.4	21
40	Novel Two-Dimensional Mechano-Electric Generators and Sensors Based on Transition Metal Dichalcogenides. Scientific Reports, 2015, 5, 12854.	3.3	21
41	Transfer characteristics and low-frequency noise in single- and multi-layer MoS2 field-effect transistors. Applied Physics Letters, 2015, 107, 162102.	3.3	21
42	SOI FED-SRAM Cell: Structure and Operation. IEEE Transactions on Electron Devices, 2015, 62, 2865-2870.	3.0	21
43	<i>In vivo</i> electrochemical characterization and inflammatory response of multiwalled carbon nanotube-based electrodes in rat hippocampus. Journal of Neural Engineering, 2010, 7, 016002.	3.5	20
44	Non-volatile memory with self-assembled ferrocene charge trapping layer. Applied Physics Letters, 2013, 103, .	3.3	19
45	Study of interfacial strain at the α-Al2O3/monolayer MoS2 interface by first principle calculations. Applied Surface Science, 2018, 428, 593-597.	6.1	18
46	Metrology for the Electrical Characterization of Semiconductor Nanowires. IEEE Transactions on Electron Devices, 2008, 55, 3086-3095.	3.0	17
47	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
48	Redox-active monolayers on nano-scale silicon electrodes. Nanotechnology, 2005, 16, 257-261.	2.6	16
49	Precise gas discrimination with cross-reactive graphene and metal oxide sensor arrays. Applied Physics Letters, 2018, 113, .	3.3	16
50	A Hierarchical Vision-Based UAV Localization for an Open Landing. Electronics (Switzerland), 2018, 7, 68.	3.1	16
51	On the Nature of the Memory Mechanism of Gated-Thyristor Dynamic-RAM Cells. IEEE Journal of the Electron Devices Society, 2015, 3, 468-471.	2.1	15
52	Design and Fabrication of Ta$_{2}$O $_{5}$ Stacks for Discrete Multibit Memory Application. IEEE Nanotechnology Magazine, 2013, 12, 1151-1157.	2.0	14
53	Hybrid silicon/molecular FETs: a study of the interaction of redox-active molecules with silicon MOSFETs. IEEE Nanotechnology Magazine, 2006, 5, 258-264.	2.0	13
54	Adaptive Semantic Segmentation for Unmanned Surface Vehicle Navigation. Electronics (Switzerland), 2020, 9, 213.	3.1	13

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55	Precise Detection and Quantitative Prediction of Blood Glucose Level With an Electronic Nose System. IEEE Sensors Journal, 2022, 22, 12452-12459.	4.7	13
56	Properties of Functionalized Redox-Active Monolayers on Thin Silicon Dioxide—A Study of the Dependence of Retention Time on Oxide Thickness. IEEE Nanotechnology Magazine, 2005, 4, 278-283.	2.0	12
57	New families of large band gap 2D topological insulators in ethynyl-derivative functionalized compounds. Applied Surface Science, 2019, 484, 1208-1213.	6.1	12
58	Silicon nanowire NVM cell using high-k dielectric charge storage layer. Microelectronic Engineering, 2008, 85, 2403-2405.	2.4	11
59	Piezoelectricity enhancement and bandstructure modification of atomic defect-mediated MoS_2 monolayer. Physical Chemistry Chemical Physics, 2017, 19, 24271-24275.	2.8	11
60	High-Performance Nonequilibrium InSb PIN Infrared Photodetectors. IEEE Transactions on Electron Devices, 2019, 66, 1361-1367.	3.0	11
61	Silicon nanowire NVM with high-k gate dielectric stack. Microelectronic Engineering, 2009, 86, 1957-1960.	2.4	10
62	Novel Molecular Non-Volatile Memory: Application of Redox-Active Molecules. Applied Sciences (Switzerland), 2016, 6, 7.	2.5	10
63	Optimization of the Transient Feature Analysis for Graphene Chemical Vapor Sensors: A Comprehensive Study. IEEE Sensors Journal, 2017, 17, 6350-6359.	4.7	10
64	Surface morphology and structural observation of laser interference crystallized a-Si:H/a-SiNx:H multilayers. Applied Surface Science, 2000, 165, 85-90.	6.1	8
65	Self-assembled nanowire array capacitors: capacitance and interface state profile. Nanotechnology, 2014, 25, 135201.	2.6	8
66	Two-dimensional hybrid layered materials: strain engineering on the band structure of MoS2/WSe2hetero-multilayers. Nanotechnology, 2017, 28, 365202.	2.6	8
67	Modulation of drain current by redox-active molecules incorporated in Si MOSFETs. , 0, , .		7
68	Enhanced ferroelectric properties of Pb(Ta0.05Zr0.48Ti0.47)O3thin films on Pt/TiO2/SiO2/Si substrates using La0.67Sr0.33MnO3buffer layers. Journal Physics D: Applied Physics, 2000, 33, 107-110.	2.8	6
69	SnTe field effect transistors and the anomalous electrical response of structural phase transition. Applied Physics Letters, 2014, 105, .	3.3	6
70	A New Combined Vision Technique for Micro Aerial Vehicle Pose Estimation. Robotics, 2017, 6, 6.	3.5	6
71	Enhance the Discrimination Precision of Graphene Gas Sensors with a Hidden Markov Model. Analytical Chemistry, 2018, 90, 13790-13795.	6.5	6
72	Nonvolatile memory based on redox-active ruthenium molecular monolayers. Applied Physics Letters, 2019, 115, 162102.	3.3	6

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73	New Alternating Current Noise Analytics Enables High Discrimination in Gas Sensing. Analytical Chemistry, 2020, 92, 824-829.	6.5	6
74	Enhanced performance of In_2O_3 nanowire field effect transistors with controllable surface functionalization of Ag nanoparticles. Nanotechnology, 2020, 31, 355703.	2.6	6
75	Hybrid CMOS/molecular memories using redox-active self-assembled monolayers. , 0, , .		5
76	HYBRID SILICON-MOLECULAR ELECTRONICS. Modern Physics Letters B, 2008, 22, 1183-1202.	1.9	5
77	A hierarchical vision-based localization of rotor unmanned aerial vehicles for autonomous landing. International Journal of Distributed Sensor Networks, 2018, 14, 155014771880065.	2.2	4
78	Observation and control of the anomalous Aharonov-Bohm oscillation in enhanced-mode topological insulator nanowire field-effect transistors. Applied Physics Letters, 2019, 115, 073107.	3.3	4
79	Silicon Nanowire Electromechanical Switch for Logic Device Application. Materials Research Society Symposia Proceedings, 2007, 1018, 1.	0.1	3
80	Dirac fermions induced in strained zigzag phosphorus nanotubes and their applications in field effect transistors. Physical Chemistry Chemical Physics, 2016, 18, 32521-32527.	2.8	3
81	Nanoelectronic Materials, Devices and Modeling: Current Research Trends. Electronics (Switzerland), 2019, 8, 564.	3.1	3
82	Novel Te doping in Y2O3â€"Al2O3 system phosphor. Journal of Alloys and Compounds, 2020, 821, 153474.	5.5	3
83	Families of asymmetrically functionalized germanene films as promising quantum spin Hall insulators. Physical Chemistry Chemical Physics, 2021, 23, 3595-3605.	2.8	3
84	Steep subthreshold slope nanowire FETs with gate-induced Schottky-barrier tunneling. , 2009, , .		2
85	High performance topological insulator nanowire field-effect transistors. , 2013, , .		2
86	On the T-RAM and FED-RAM memory mechanism. , 2015, , .		2
87	A New Type of Explosive Chemical Detector Based on an Organic Photovoltaic Cell. Electronics (Switzerland), 2017, 6, 55.	3.1	2
88	Approach for investigating lateral conduction in self-assembled monolayers. Applied Physics Letters, 2005, 87, 262115.	3.3	1
89	Nanowire electromechanical logic switch. , 2007, , .		1
90	Polarization of Bi2Te3 thin film in a floating-gate capacitor structure. Applied Physics Letters, 2014, 105, 233505.	3.3	1

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91	Gate assisted Kelvin test structure to measure the electron and hole flows at the same nanowire contacts. Applied Physics Letters, 2014, 105, 133513.	3.3	1
92	Redox-Active Molecules for Novel Nonvolatile Memory Applications. , 0, , .		1
93	Porphyrins Bearing Arylphosphonic Acid Tethers for Attachment to Oxide Surfaces.. ChemInform, 2004, 35, no.	0.0	0
94	Porphyrins Bearing Mono or Tripodal Benzylphosphonic Acid Tethers for Attachment to Oxide Surfaces.. ChemInform, 2004, 35, no.	0.0	0
95	Silicon Nanowire Field Effect Transistor Test Structures Fabricated by Top-down Approaches. , 0, , .		0
96	Random Telegraph Signals and 1/f Noise in ZnO Nanowire Field Effect Transistors. , 2007, , .		0
97	Methods to Characterize the Electrical and Mechanical Properties of Si Nanowires. AIP Conference Proceedings, 2007, , .	0.4	0
98	Silicon nanowire memory application using hafnium oxide charge storage layer. , 2007, , .		0
99	Measurements for the reliability and electrical characterization of semiconductor nanowires. , 2008, , .		0
100	Design, Fabrication and Characterization of High-Performance Silicon Nanowire Transistor. , 2008, , .		0
101	Application of ALD High-k Dielectric Films as Charge Storage Layer and Blocking Oxide in Nonvolatile Memories. ECS Transactions, 2009, 25, 473-479.	0.5	0
102	Advanced Capacitance Metrology for Nanoelectronic Device Characterization. , 2009, , .		0
103	Self-aligned multi-channel silicon nanowire field-effect transistors. , 2011, , .		0
104	High performance Bi<inf>2</inf>Se<inf>3</inf> nanowire field-effect transistors. , 2013, , .		0
105	A reliable vehicle detection-location framework based on homography planar projection. , 2016, , .		0
106	Design and optimization of collection efficiency and conversion gain of buried p-well SOI pixel X-ray detector. Electronics (Switzerland), 2017, 6, 26.	3.1	0
107	A Novel Vectorization Tracking Algorithm for Maritime Emission Monitoring Assisted with E-Nose Enabled Unmanned Aerial Vehicle. IEEE Sensors Journal, 2024, , 1-1.	4.7	0
108	Three-Dimensional Simulation Study of the Improved On/Off Current Ratio in Silicon Nanowire Field-Effect Transistors. Journal of the Korean Physical Society, 2008, 53, 1680-1684.	0.7	0