

# Wei Li

## List of Publications by Year in descending order

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109  
papers

1,656  
citations

257450

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110  
docs citations

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times ranked

1352  
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#	ARTICLE	IF	CITATIONS
1	Innovative all-silicon based a-SiNx:O/c-Si heterostructure solar-blind photodetector with both high responsivity and fast response speed. <i>APL Photonics</i> , 2022, 7, .	5.7	5
2	Promoting sensitivity and selectivity of NO <sub>2</sub> gas sensor based on (P,N)-doped single-layer WSe <sub>2</sub> : A first principles study. <i>Results in Physics</i> , 2022, 34, 105296.	4.1	6
3	First principle study on gas sensor mechanism of black-AsP monolayer. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2021, 70, 157101.	0.5	4
4	Design and Research of Enhanced LED Performance Based on Graphical Substrate with Multilayer Hyperbolic Metamaterials. <i>Plasmonics</i> , 2021, 16, 1593-1604.	3.4	1
5	Design of a Microwave Power Detection System in the 5G-Communication Frequency Band. <i>Sensors</i> , 2021, 21, 2674.	3.8	0
6	High-Performance Tapered Fiber Surface Plasmon Resonance Sensor Based on the Graphene/Ag/TiO <sub>2</sub> Layer. <i>Plasmonics</i> , 2021, 16, 2291-2303.	3.4	15
7	A separable nonlinear least squares approach for double-diode photovoltaic model parameter extraction. <i>Journal of Renewable and Sustainable Energy</i> , 2021, 13, .	2.0	4
8	Properties of S-Functionalized Nitrogen-Based MXene (Ti <sub>2</sub> NS <sub>2</sub> ) as a Hosting Material for Lithium-Sulfur Batteries. <i>Nanomaterials</i> , 2021, 11, 2478.	4.1	12
9	Research progress of flexible wearable pressure sensors. <i>Sensors and Actuators A: Physical</i> , 2021, 330, 112838.	4.1	70
10	Sensing mechanism of Sb, S doped SnO <sub>2</sub> (1 $\times$ 1 $\times$ 0) surface for CO. <i>Applied Surface Science</i> , 2020, 502, 1441406.1		34
11	Sensing mechanism of hydrogen storage on Li, Na and K-decorated Ti <sub>2</sub> C. <i>Applied Physics A: Materials Science and Processing</i> , 2020, 126, 1.	2.3	6
12	Inhomogeneous probe surface induced effect in Kelvin probe force microscopy. <i>Journal of Applied Physics</i> , 2020, 127, 184302.	2.5	1
13	Sensitivity enhancement of WS <sub>2</sub> -coated SPR-based optical fiber biosensor for detecting glucose concentration*. <i>Chinese Physics B</i> , 2020, 29, 110701.	1.4	11
14	Effect of Prefabricated Layer Structure on Properties of CZTS Thin Films and Solar Cells. <i>IOP Conference Series: Earth and Environmental Science</i> , 2020, 571, 012033.	0.3	0
15	Characterization of Pt- or Pd-doped graphene based on density functional theory for H <sub>2</sub> gas sensor. <i>Materials Research Express</i> , 2019, 6, 095603.	1.6	11
16	Enhanced Humidity Sensing Response of SnO <sub>2</sub> /Silicon Nanopillar Array by UV Irradiation. <i>Sensors</i> , 2019, 19, 2141.	3.8	3
17	Calculating electrostatic interactions in atomic force microscopy with semiconductor samples. <i>AIP Advances</i> , 2019, 9, .	1.3	5
18	Fabrication and characteristics of N-I-P structure amorphous silicon solar cells with CdS quantum dots on nanopillar array. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2019, 109, 152-155.	2.7	9

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19	The Role of Nâ€“Siâ€“O Defect States in Optical Gain from an aâ€“SiN<sub>x</sub></i>O<sub>y</sub></i>/SiO<sub>2</sub> Waveguide and in Light Emission from an nâ€“aâ€“SiN<sub>x</sub>O<sub>y</sub>/pâ€“Si Heterojunction LED. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018, 215, 1700750.	1.8	5
20	Microscopic and Macroscopic Bipolar Injection and Carrier Recombination in Single-layer Si Nanocrystals. <i>IOP Conference Series: Materials Science and Engineering</i> , 2018, 436, 012003.	0.6	1
21	Nanoscale Characterization of Active Doping Concentration in Boronâ€“Doped Individual Si Nanocrystals. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018, 215, 1800531.	1.8	3
22	Enhanced Humidity Sensitivity with Silicon Nanopillar Array by UV Light. <i>Sensors</i> , 2018, 18, 660.	3.8	7
23	Surface potential extraction from electrostatic and Kelvin-probe force microscopy images. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	10
24	The role of potassium in grain boundaries of flexible CZTSSe thin film solar cells. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 17503-17507.	2.2	3
25	Improved power efficiency in phosphorus doped n-a-SiNxOy/p-Si heterojunction light emitting diode. <i>Applied Physics Letters</i> , 2017, 110, 081109.	3.3	10
26	Physical properties in polydomain c/a/c/a phase PbTiO3 ferroelectric thick films: effect of thermal stresses. <i>Applied Physics A: Materials Science and Processing</i> , 2017, 123, 1.	2.3	2
27	Surface potential modeling and reconstruction in Kelvin probe force microscopy. <i>Nanotechnology</i> , 2017, 28, 365705.	2.6	14
28	Fabrication of Ordered SnO2 Nanostructures with Enhanced Humidity Sensing Performance. <i>Sensors</i> , 2017, 17, 2392.	3.8	32
29	Organic Vapour Sensing Properties of Area-Ordered and Size-Controlled Silicon Nanopillar. <i>Sensors</i> , 2016, 16, 1880.	3.8	8
30	Time-resolved and temperature-dependent photoluminescence study on phosphorus doped Si quantum dots/SiO2 multilayers with ultra-small dot sizes. <i>Optical Materials Express</i> , 2016, 6, 3233.	3.0	20
31	Dynamics of high quantum efficiency photoluminescence from N-Si-O bonding states in oxygenated amorphous silicon nitride films. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	15
32	Simulation and Experimental Study on Anti-reflection Characteristics of Nano-patterned Si Structures for Si Quantum Dot-Based Light-Emitting Devices. <i>Nanoscale Research Letters</i> , 2016, 11, 317.	5.7	8
33	Phosphorus Doping in Si Nanocrystals/SiO2 Multilayers and Light Emission with Wavelength Compatible for Optical Telecommunication. <i>Scientific Reports</i> , 2016, 6, 22888.	3.3	52
34	Charge storage in Si-nanocrystals embedded NOS structure characterized by Kelvin probe force microscopy. , 2016, , .		0
35	Depth-dependent humidity sensing properties of silicon nanopillar array. <i>Sensors and Actuators B: Chemical</i> , 2016, 237, 526-533.	7.8	15
36	Controlled Fabrication of Si Nanowires with Nanodots Using Nanosphere Lithography. <i>Journal of Nanoscience and Nanotechnology</i> , 2016, 16, 1537-1540.	0.9	2

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37	Pyroelectric property of SrTiO <sub>3</sub> /Si ferroelectric-semiconductor heterojunctions near room temperature. Journal of Advanced Dielectrics, 2015, 05, 1550031.	2.4	2
38	Enhanced photoluminescence from CdS with SiO <sub>2</sub> nanopillar arrays. Scientific Reports, 2015, 5, 11375.	3.3	12
39	Enhancement of electroluminescence from embedded Si quantum dots/SiO <sub>2</sub> multilayers film by localized-surface-plasmon and surface roughening. Scientific Reports, 2015, 5, 11881.	3.3	13
40	The flexoelectric effect associated size dependent pyroelectricity in solid dielectrics. AIP Advances, 2015, 5, .	1.3	16
41	Observation of "fast" and "slow" decay processes in oxygen-doped hydrogenated amorphous silicon nitride thin films. Optical Materials Express, 2015, 5, 22.	3.0	6
42	The role of N-Si-O bonding configurations in tunable photoluminescence of oxygenated amorphous silicon nitride films. Applied Physics Letters, 2015, 106, .	3.3	11
43	Enhanced broadband spectral response and energy conversion efficiency for hetero-junction solar cells with graded-sized Si quantum dots/SiC multilayers. Journal of Materials Chemistry C, 2015, 3, 12061-12067.	5.5	24
44	Charge transfer of single laser crystallized intrinsic and phosphorus-doped Si-nanocrystals visualized by Kelvin probe force microscopy. Journal of Applied Physics, 2014, 116, 134309.	2.5	8
45	Charging effect in silicon nanocrystals observed by electrostatic and Kelvin-probe force microscopy. , 2014, , .		0
46	Light Trapping and Downshifting Effect of Periodically Nanopatterned SiQuantumDotBased Structures for Enhanced Photovoltaic Properties. Particle and Particle Systems Characterization, 2014, 31, 459-464.	2.3	32
47	Microscopic and macroscopic characterization of the charging effects in SiC/Si nanocrystals/SiC sandwiched structures. Nanotechnology, 2014, 25, 055703.	2.6	10
48	Higher than 60% internal quantum efficiency of photoluminescence from amorphous silicon oxynitride thin films at wavelength of 470 nm. Applied Physics Letters, 2014, 105, .	3.3	20
49	The role of N <sub>x</sub> Si <sub>x</sub> O <sub>y</sub> bonding configuration in acquiring strong blue to red photoluminescence from amorphous SiN <sub>x</sub> O <sub>y</sub> film. Canadian Journal of Physics, 2014, 92, 602-605.	1.1	6
50	Humidity sensing properties of morphology-controlled ordered silicon nanopillar. Applied Surface Science, 2014, 317, 970-973.	6.1	26
51	Nanoscale quantification of charge injection and transportation process in Si-nanocrystal based sandwiched structure. Nanoscale, 2013, 5, 9971.	5.6	16
52	Optical absorption and charging effect in nano-crystalline Ge/SiN <sub>x</sub> multilayers. Applied Surface Science, 2013, 269, 129-133.	6.1	1
53	Structural and electroluminescent properties of Si quantum dots/SiC multilayers. Applied Surface Science, 2013, 269, 37-40.	6.1	17
54	Sub-100 nm Single Crystalline Periodic Nano Silicon Wire Obtained by Modified Nanoimprint Lithography. Nanoscience and Nanotechnology Letters, 2013, 5, 737-740.	0.4	2

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55	Strong blue light emission from a-SiN <sub>x</sub> :O films via localized surface plasmon enhancement. Applied Physics Letters, 2012, 101, .	3.3	9
56	Enhanced luminescence from Si quantum dots/SiO <sub>2</sub> multilayers by hydrogen annealing. Journal of Non-Crystalline Solids, 2012, 358, 2141-2144.	3.1	6
57	Comparative study of electroluminescence from annealed amorphous SiC single layer and amorphous Si/SiC multilayers. Journal of Non-Crystalline Solids, 2012, 358, 2114-2117.	3.1	9
58	Size-dependent electroluminescence from Si quantum dots embedded in amorphous SiC matrix. Journal of Applied Physics, 2011, 110, .	2.5	45
59	Structural and electronic properties of Si nanocrystals embedded in amorphous SiC matrix. Journal of Alloys and Compounds, 2011, 509, 3963-3966.	5.5	43
60	Si-based photonic quantum dots with the self-similar distributed Bragg reflectors. Thin Solid Films, 2011, 519, 3295-3300.	1.8	0
61	On-chip silicon-based active photonic molecules by complete photonic bandgap light confinement. Applied Physics Letters, 2011, 99, 034105.	3.3	9
62	Two-Dimensional Cavity Resonant Modes of Si Based Bragg Reflection Ridge Waveguide. Chinese Physics Letters, 2011, 28, 066803.	3.3	0
63	Subband Light Emission from Phosphorous-Doped Amorphous Si/SiO <sub>2</sub> Multilayers at Room Temperature. Chinese Physics Letters, 2011, 28, 067802.	3.3	14
64	Field emission characterizes of size-controllable Si nanopillar arrays. EPJ Applied Physics, 2010, 51, 20601.	0.7	0
65	Low turn-on and high efficient oxidized amorphous silicon nitride light-emitting devices induced by high density amorphous silicon nanoparticles. Thin Solid Films, 2010, 518, 3938-3941.	1.8	0
66	High-conductive nanocrystalline silicon with phosphorous and boron doping. Applied Surface Science, 2010, 257, 1337-1341.	6.1	37
67	Capacitance characteristics of metal-oxide-semiconductor capacitors with a single layer of embedded nickel nanoparticles for the application of nonvolatile memory. Chinese Physics B, 2010, 19, 047308.	1.4	7
68	Improved emission efficiency of electroluminescent device containing nc-Si/SiO <sub>2</sub> multilayers by using nano-patterned substrate. Optics Express, 2010, 18, 917.	3.4	17
69	Charge storage and light emission properties of three dimension controllable Si nanostructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 721-727.	0.8	4
70	Fabrication of highly ordered metallic arrays and silicon pillars with controllable size using nanosphere lithography. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 41, 1600-1603.	2.7	10
71	Morphology control and electron field emission properties of high-ordered Si nanoarrays fabricated by modified nanosphere lithography. Applied Surface Science, 2009, 255, 5414-5417.	6.1	9
72	Field dependent electroluminescence from amorphous Si/SiN <sub>x</sub> multilayer structure. Applied Physics Letters, 2009, 94, 161101.	3.3	11

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73	Photonic quantum dots based on Bragg reflectors grown by conformal deposition on patterned substrates. Applied Surface Science, 2008, 254, 4211-4215.	6.1	0
74	Luminescence behavior from amorphous silicon-carbide film-based optical microcavities. Materials Chemistry and Physics, 2008, 111, 279-282.	4.0	11
75	Role of barrier layers in electroluminescence from SiN-based multilayer light-emitting devices. Applied Physics Letters, 2008, 92, .	3.3	44
76	Field emission from a periodic amorphous silicon pillar array fabricated by modified nanosphere lithography. Nanotechnology, 2008, 19, 135308.	2.6	33
77	The evolution of photoluminescence in oxidized amorphous silicon nitride films by rapid thermal annealing. Journal Physics D: Applied Physics, 2008, 41, 165411.	2.8	0
78	Silicon based photonic quantum dots. , 2008, , .		0
79	Intense green light emission from low temperature grown SiNO complex system. , 2008, , .		0
80	Fabrication and characterization of Si nanotip arrays for Si-based nano-devices. , 2008, , .		1
81	Strong green-yellow electroluminescence from oxidized amorphous silicon nitride light-emitting devices. Applied Physics Letters, 2007, 90, 093515.	3.3	44
82	New Self-Limiting Assembly Model for Si Quantum Rings on Si(100). Physical Review Letters, 2007, 98, 166102.	7.8	32
83	Size dependence of optical eigenmodes in photonic quantum dots prepared by conformal deposition method. Applied Physics Letters, 2007, 90, 174101.	3.3	16
84	Enhanced electroluminescence efficiency of oxidized amorphous silicon nitride light-emitting devices by modulating Si <sup>x</sup> N ratio. Applied Physics Letters, 2007, 91, .	3.3	32
85	Conformal coverage for two-dimensional arrays of microcavities with quasi-three dimensional confinement by distributed Bragg reflectors. Applied Surface Science, 2007, 253, 4254-4259.	6.1	4
86	Effects of hydrogen plasma annealing on the luminescence from a-Si:H/SiO <sub>2</sub> and nc-Si/SiO <sub>2</sub> multilayers. Applied Surface Science, 2007, 253, 8647-8651.	6.1	6
87	Fabrication of large-scale periodic silicon nanopillar arrays for 2D nanomold using modified nanosphere lithography. Applied Surface Science, 2007, 253, 9035-9038.	6.1	40
88	Annealing effect on structures and luminescence of amorphous SiN films. Materials Letters, 2007, 61, 5010-5013.	2.6	6
89	Luminescence and resonant energy transfer of two sizes of CdTe quantum dots embedded in gelatin films. Journal of Materials Science, 2007, 42, 9696-9699.	3.7	15
90	Direct observation of resonant energy transfer between quantum dots of two different sizes in a single water droplet. Applied Physics Letters, 2006, 89, 033121.	3.3	18

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91	Oxygen induced strong green light emission from low-temperature grown amorphous silicon nitride films. Applied Physics Letters, 2006, 89, 221120.	3.3	40
92	Charging and Coulomb blockade effects of the nc-Si embedded in SiN <sub>x</sub> double-barrier structures. Journal of Non-Crystalline Solids, 2006, 352, 1126-1129.	3.1	2
93	UV and blue light emission from SiC nanoclusters in annealed amorphous SiC alloys. Journal of Non-Crystalline Solids, 2006, 352, 1398-1401.	3.1	17
94	Enhanced green to red photoluminescence in thermally annealed of amorphous-Si:H/SiO <sub>2</sub> multilayers. Thin Solid Films, 2006, 515, 2322-2325.	1.8	11
95	Visible light emission from single layer Si nanodots fabricated by laser irradiation method. Applied Physics Letters, 2006, 89, 163107.	3.3	37
96	RESONANT TUNNELING AND COULOMB BLOCKADE IN A NANOCRYSTALLINE Si DOUBLE-BARRIER FLOATING-GATE STRUCTURE. International Journal of Nanoscience, 2006, 05, 853-858.	0.7	0
97	Photoluminescence characteristics from amorphous SiC thin films with various structures deposited at low temperature. Solid State Communications, 2005, 133, 565-568.	1.9	54
98	Formation of a dense nanocrystalline Si array on an insulating layer by laser irradiation of ultrathin amorphous Si films. Scripta Materialia, 2005, 53, 811-815.	5.2	13
99	Hydrogen-induced recovery of photoluminescence from annealed a-Si:H/a-SiO <sub>2</sub> multilayers. Journal of Applied Physics, 2005, 98, 033532.	2.5	21
100	Contribution of multiple emitting centers to luminescence from Si/SiO <sub>2</sub> multilayers with step by step thermal annealing. Solid State Communications, 2004, 131, 701-705.	1.9	26
101	Room temperature electron tunneling and storage in a nanocrystalline silicon floating gate structure. Journal of Non-Crystalline Solids, 2004, 338-340, 318-321.	3.1	7
102	The dependence of the interface and shape on the constrained growth of nc-Si in a-SiN <sub>x</sub> /a-Si:H/a-SiN <sub>x</sub> structures. Journal of Physics Condensed Matter, 2002, 14, 10083-10091.	1.8	28
103	Novel photoluminescence from hydrogenated amorphous carbon films prepared by using xylene source. Journal of Materials Research, 2001, 16, 325-328.	2.6	7
104	Vacuum electron emission with low turn-on electric field from hydrogenated amorphous carbon thin films. Applied Physics Letters, 2001, 79, 141-143.	3.3	20
105	Full color light emission from amorphous SiC <sub>x</sub> :H with organic-inorganic structures. Journal of Applied Physics, 2000, 88, 6408-6412.	2.5	54
106	The influence of the growth conditions on the structural and optical properties of hydrogenated amorphous silicon carbide thin films. Journal of Alloys and Compounds, 1999, 290, 273-278.	5.5	36
107	Observation of the size-dependent blueshifted electroluminescence from nanocrystalline Si fabricated by KrF excimer laser annealing of hydrogenated amorphous silicon/amorphous-SiN <sub>x</sub> :H superlattices. Applied Physics Letters, 1998, 72, 722-724.	3.3	59
108	Red-green-blue light emission from hydrogenated amorphous silicon carbide films prepared by using organic compound xylene as carbon source. Applied Physics Letters, 1998, 72, 13-15.	3.3	36

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109	Green electro- and photoluminescence from nanocrystalline Si film prepared by continuous wave Ar+ laser annealing of heavily phosphorus doped hydrogenated amorphous silicon film. Applied Physics Letters, 1998, 73, 105-107.	3.3	29