Linwei Yu

List of Publications by Year
in descending order

122 papers	3,584 citations	94269 37 h-index	161609 54 g-index
124 all docs	124 docs citations	124 times ranked	3832 citing authors

#	Article	IF	Citations
1	Dualâ€Phase CsPbBr₃â€“CsPb₂Br₅ Perovskite Thin Films via Vapor Deposition for Highâ€Performance Rigid and Flexible Photodetectors. Small, 2018, 14, 1702523.	5.2	139
2	Ultrafast Solarâ€Blind Ultraviolet Detection by Inorganic Perovskite CsPbX₃ Quantum Dots Radial Junction Architecture. Advanced Materials, 2017, 29, 1700400.	11.1	129
3	Plasma-enhanced low temperature growth of silicon nanowires and hierarchical structures by using tin and indium catalysts. Nanotechnology, 2009, 20, 225604.	1.3	110
4	Highly Connected Siliconâ€“Copper Alloy Mixture Nanotubes as Highâ€Rate and Durable Anode Materials for Lithiumâ€Ion Batteries. Advanced Functional Materials, 2016, 26, 524-531.	7.8	110
5	High efficiency and stable hydrogenated amorphous silicon radial junction solar cells built on VLS-grown silicon nanowires. Solar Energy Materials and Solar Cells, 2013, 118, 90-95.	3.0	107
6	Incorporation and redistribution of impurities into silicon nanowires during metal-particle-assisted growth. Nature Communications, 2014, 5, 4134.	5.8	91
7	Room-temperature valleytronic transistor. Nature Nanotechnology, 2020, 15, 743-749.	15.6	87
8	Enhancing Hybrid Perovskite Detectability in the Deep Ultraviolet Region with Down-Conversion Dual-Phase (CsPbBr₃â€“Cs₄PbBr₆) Films. Journal of Physical Chemistry Letters, 2018, 9, 1592-1599.	2.1	82
9	In situ generation of indium catalysts to grow crystalline silicon nanowires at low temperature on ITO. Journal of Materials Chemistry, 2008, 18, 5187.	6.7	81
10	Bismuth-Catalyzed and Doped Silicon Nanowires for One-Pump-Down Fabrication of Radial Junction Solar Cells. Nano Letters, 2012, 12, 4153-4158.	4.5	76
11	A review on plasma-assisted VLS synthesis of silicon nanowires and radial junction solar cells. Journal Physics D: Applied Physics, 2014, 47, 393001.	1.3	73
12	Mixed cation perovskite solar cells by stack-sequence chemical vapor deposition with self-passivation and gradient absorption layer. Nano Energy, 2018, 48, 536-542.	8.2	70
13	Mo-O bond doping and related-defect assisted enhancement of photoluminescence in monolayer MoS₂. AIP Advances, 2014, 4, 123004.	0.6	69
14	An In-Plane Solid-Liquid-Solid Growth Mode for Self-Avoiding Lateral Silicon Nanowires. Physical Review Letters, 2009, 102, 125501.	2.9	68
15	Gallium assisted plasma enhanced chemical vapor deposition of silicon nanowires. Nanotechnology, 2009, 20, 155602.	1.3	68
16	High Efficient Hole Extraction and Stable Allâ€Bromide Inorganic Perovskite Solar Cells via Derivativeâ€Phase Gradient Bandgap Architecture. Solar Rrl, 2019, 3, 1900030.	3.1	67
17	Rapid, stable and self-powered perovskite detectors via a fast chemical vapor deposition process. RSC Advances, 2017, 7, 18224-18230.	1.7	57
18	Growth mechanism and dynamics of in-plane solid-liquid-solid silicon nanowires. Physical Review B, 2010, 81, .	1.1	54

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19	Hierarchical nano-branched c-Si/SnO2 nanowires for high areal capacity and stable lithium-ion battery. Nano Energy, 2016, 19, 511-521.	8.2	52
20	Synthesis, morphology and compositional evolution of silicon nanowires directly grown on SnO2substrates. Nanotechnology, 2008, 19, 485605.	1.3	50
21	Growth study of indium-catalyzed silicon nanowires by plasma enhanced chemical vapor deposition. Applied Physics A: Materials Science and Processing, 2010, 100, 287-296.	1.1	49
22	Engineering island-chain silicon nanowires via a droplet mediated Plateau-Rayleigh transformation. Nature Communications, 2016, 7, 12836.	5.8	49
23	Cadmium-doped flexible perovskite solar cells with a low-cost and low-temperature-processed CdS electron transport layer. RSC Advances, 2017, 7, 19457-19463.	1.7	48
24	Omnidirectional and effective salt-rejecting absorber with rationally designed nanoarchitecture for efficient and durable solar vapour generation. Journal of Materials Chemistry A, 2018, 6, 22976-22986.	5.2	48
25	Silicon nanowire solar cells grown by PECVD. Journal of Non-Crystalline Solids, 2012, 358, 2299-2302.	1.5	47
26	Wetting Layer: The Key Player in Plasma-Assisted Silicon Nanowire Growth Mediated by Tin. Journal of Physical Chemistry C, 2013, 117, 17786-17790.	1.5	44
27	Understanding Light Harvesting in Radial Junction Amorphous Silicon Thin Film Solar Cells. Scientific Reports, 2015, 4, 4357.	1.6	44
28	A bottom-up synthetic hierarchical buffer structure of copper silicon nanowire hybrids as ultra-stable and high-rate lithium-ion battery anodes. Journal of Materials Chemistry A, 2018, 6, 7877-7886.	5.2	44
29	Initial nucleation and growth of in-plane solid-liquid-solid silicon nanowires catalyzed by indium. Physical Review B, 2009, 80, .	1.1	43
30	All-in-situ fabrication and characterization of silicon nanowires on TCO/glass substrates for photovoltaic application. Solar Energy Materials and Solar Cells, 2010, 94, 1855-1859.	3.0	43
31	Fast-Response and Low-Hysteresis Flexible Pressure Sensor Based on Silicon Nanowires. IEEE Electron Device Letters, 2018, 39, 1069-1072.	2.2	43
32	Radial junction amorphous silicon solar cells on PECVD-grown silicon nanowires. Nanotechnology, 2012, 23, 194011.	1.3	42
33	Planar Growth, Integration, and Applications of Semiconducting Nanowires. Advanced Materials, 2020, 32, e1903945.	11.1	42
34	Highly Sensitive Ammonia Gas Detection at Room Temperature by Integratable Silicon Nanowire Field-Effect Sensors. ACS Applied Materials & Interfaces, 2021, 13, 14377-14384.	4.0	42
35	Deterministic Line-Shape Programming of Silicon Nanowires for Extremely Stretchable Springs and Electronics. Nano Letters, 2017, 17, 7638-7646.	4.5	41
36	Core-shell structure and unique faceting of Sn-catalyzed silicon nanowires. Applied Physics Letters, 2010, 97, 023107.	1.5	39

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37	Allâ€inorganic Perovskite Quantum Dots/pâ€Si Heterojunction Lightâ€Emitting Diodes under DC and AC Driving Modes. Advanced Optical Materials, 2018, 6, 1700897.	3.6	39
38	Growth-in-place deployment of in-plane silicon nanowires. Applied Physics Letters, 2011, 99, .	1.5	38
39	Guided growth of in-plane silicon nanowires. Applied Physics Letters, 2009, 95, .	1.5	37
40	Snâ€catalyzed silicon nanowire solar cells with 4.9% efficiency grown on glass. Progress in Photovoltaics: Research and Applications, 2013, 21, 77-81.	4.4	37
41	New Approaches to Improve the Performance of Thin-Film Radial Junction Solar Cells Built Over Silicon Nanowire Arrays. IEEE Journal of Photovoltaics, 2015, 5, 40-45.	1.5	35
42	Inâ€Plane Selfâ€Turning and Twin Dynamics Renders Large Stretchability to Monoâ€Like Zigzag Silicon Nanowire Springs. Advanced Functional Materials, 2016, 26, 5352-5359.	7.8	34
43	Natural occurrence of the diamond hexagonal structure in silicon nanowires grown by a plasma-assisted vapourâ€“liquidâ€“solid method. Nanoscale, 2017, 9, 8113-8118.	2.8	34
44	Theoretical short-circuit current density for different geometries and organizations of silicon nanowires in solar cells. Solar Energy Materials and Solar Cells, 2013, 117, 645-651.	3.0	33
45	Highly cross-linked Cu/a-Si coreâ€“shell nanowires for ultra-long cycle life and high rate lithium batteries. Nanoscale, 2016, 8, 2613-2619.	2.8	33
46	High performance transparent in-plane silicon nanowire Fin-TFTs via a robust nano-droplet-scanning crystallization dynamics. Nanoscale, 2017, 9, 10350-10357.	2.8	33
47	The Effect of Decomposed PbI2 on Microscopic Mechanisms of Scattering in CH3NH3PbI3 Films. Nanoscale Research Letters, 2019, 14, 208.	3.1	33
48	Rational Energy Band Alignment and Au Nanoparticles in Surface Plasmon Enhanced Siâ€Based Perovskite Quantum Dot Lightâ€Emitting Diodes. Advanced Optical Materials, 2018, 6, 1800693.	3.6	32
49	Monolithic Integration of Silicon Nanowire Networks as a Soft Wafer for Highly Stretchable and Transparent Electronics. Nano Letters, 2019, 19, 6235-6243.	4.5	32
50	Stability and evolution of low-surface-tension metal catalyzed growth of silicon nanowires. Applied Physics Letters, 2011, 98, .	1.5	31
51	In-Plane Epitaxial Growth of Silicon Nanowires and Junction Formation on Si(100) Substrates. Nano Letters, 2014, 14, 6469-6474.	4.5	31
52	Surface-activation modified perovskite crystallization for improving photovoltaic performance. Materials Today Energy, 2017, 5, 173-180.	2.5	31
53	Plasmon Excited Ultrahot Carriers and Negative Differential Photoresponse in a Vertical Graphene van der Waals Heterostructure. Nano Letters, 2019, 19, 3295-3304.	4.5	28
54	Firmly standing three-dimensional radial junctions on soft aluminum foils enable extremely low cost flexible thin film solar cells with very high power-to-weight performance. Nano Energy, 2018, 53, 83-90.	8.2	25

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55	Assessing individual radial junction solar cells over millions on VLS-grown silicon nanowires. Nanotechnology, 2013, 24, 275401.	1.3	23
56	Operating principles of in-plane silicon nanowires at simple step-edges. Nanoscale, 2015, 7, 5197-5202.	2.8	22
57	Full potential of radial junction Si thin film solar cells with advanced junction materials and design. Applied Physics Letters, 2015, 107, .	1.5	20
58	Highly stretchable graphene nanoribbon springs by programmable nanowire lithography. Npj 2D Materials and Applications, 2019, 3, .	3.9	20
59	High-temperature stable plasmonic and cavity resonances in metal nanoparticle-decorated silicon nanopillars for strong broadband absorption in photothermal applications. Nanoscale, 2019, 11, 14777-14784.	2.8	19
60	Bi-Sn alloy catalyst for simultaneous morphology and doping control of silicon nanowires in radial junction solar cells. Applied Physics Letters, 2015, 107, .	1.5	18
61	Heteroepitaxial Writing of Silicon-on-Sapphire Nanowires. Nano Letters, 2016, 16, 7317-7324.	4.5	18
62	Photoelectric Cardiac Pacing by Flexible and Degradable Amorphous Si Radial Junction Stimulators. Advanced Healthcare Materials, 2020, 9, e1901342.	3.9	18
63	Highly flexible radial tandem junction thin film solar cells with excellent power-to-weight ratio. Nano Energy, 2021, 86, 106121.	8.2	18
64	Improved Efficiency of Silicon Nanoholes/Gold Nanoparticles/Organic Hybrid Solar Cells via Localized Surface Plasmon Resonance. Nanoscale Research Letters, 2016, 11, 160.	3.1	17
65	Enhanced up-conversion luminescence from NaYF₄:Yb,Er nanocrystals by Gd³⁺ ions induced phase transformation and plasmonic Au nanosphere arrays. RSC Advances, 2016, 6, 102869-102874.	1.7	17
66	Low Power Consumption Red Light-Emitting Diodes Based on Inorganic Perovskite Quantum Dots under an Alternating Current Driving Mode. Nanomaterials, 2018, 8, 974.	1.9	17
67	3D Sidewall Integration of Ultrahighâ€Density Silicon Nanowires for Stacked Channel Electronics. Advanced Electronic Materials, 2019, 5, 1800627.	2.6	17
68	High Performance Si Nanowire TFTs With Ultrahigh on/off Current Ratio and Steep Subthreshold Swing. IEEE Electron Device Letters, 2020, 41, 46-49.	2.2	17
69	Unprecedented Uniform 3D Growth Integration of 10-Layer Stacked Si Nanowires on Tightly Confined Sidewall Grooves. Nano Letters, 2020, 20, 7489-7497.	4.5	17
70	Flexible and Robust 3D aâ€SiGe Radial Junction Nearâ€Infrared Photodetectors for Rapid Sphygmic Signal Monitoring. Advanced Functional Materials, 2022, 32, 2107040.	7.8	17
71	Highly Stretchable Highâ€Performance Silicon Nanowire Field Effect Transistors Integrated on Elastomer Substrates. Advanced Science, 2022, 9, e2105623.	5.6	17
72	Engineering in-plane silicon nanowire springs for highly stretchable electronics. Journal of Semiconductors, 2018, 39, 011001.	2.0	16

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73	Nanodroplet Hydrodynamic Transformation of Uniform Amorphous Bilayer into Highly Modulated Ge/Si Island-Chains. Nano Letters, 2018, 18, 6931-6940.	4.5	16
74	Cylindrical Line-Feeding Growth of Free-Standing Silicon Nanohelices as Elastic Springs and Resonators. Nano Letters, 2020, 20, 5072-5080.	4.5	16
75	How tilting and cavity-mode-resonant absorption contribute to light harvesting in 3D radial junction solar cells. Optics Express, 2015, 23, A1288.	1.7	15
76	Biomimetic Radial Tandem Junction Photodetector with Natural RGB Color Discrimination Capability. Advanced Optical Materials, 2017, 5, 1700390.	3.6	15
77	Ab Initio Design, Shaping, and Assembly of Free-Standing Silicon Nanoprobes. Nano Letters, 2021, 21, 2773-2779.	4.5	15
78	Germanium quantum dot infrared photodetectors addressed by self-aligned silicon nanowire electrodes. Nanotechnology, 2020, 31, 145602.	1.3	14
79	Light Harvesting and Enhanced Performance of Si Quantum Dot/Si Nanowire Heterojunction Solar Cells. Particle and Particle Systems Characterization, 2016, 33, 38-43.	1.2	13
80	Advanced radial junction thin film photovoltaics and detectors built on standing silicon nanowires. Nanotechnology, 2019, 30, 302001.	1.3	13
81	Microscopic measurements of variations in local (photo)electronic properties in nanostructured solar cells. Solar Energy Materials and Solar Cells, 2013, 119, 228-234.	3.0	11
82	Type-II coreâ€“shell Siâ€“CdS nanocrystals: synthesis and spectroscopic and electrical properties. Chemical Communications, 2014, 50, 11922-11925.	2.2	11
83	Correlative microscopy of radial junction nanowire solar cells using nanoindent position markers. Solar Energy Materials and Solar Cells, 2015, 135, 106-112.	3.0	11
84	Meandering growth of in-plane silicon nanowire springs. Applied Physics Letters, 2019, 114, .	1.5	11
85	An Optimized FinFET Channel With Improved Line-Edge Roughness and Linewidth Roughness Using the Hydrogen Thermal Treatment Technology. IEEE Nanotechnology Magazine, 2017, 16, 1081-1087.	1.1	10
86	Facile 3D integration of Si nanowires on Bosch-etched sidewalls for stacked channel transistors. Nanoscale, 2020, 12, 2787-2792.	2.8	10
87	Three-dimensional a-Si/a-Ge radial heterojunction near-infrared photovoltaic detector. Scientific Reports, 2019, 9, 19752.	1.6	9
88	Superfast Growth Dynamics of High-Quality Silicon Nanowires on Polymer Films via Self-Selected Laser-Droplet-Heating. Nano Letters, 2021, 21, 569-576.	4.5	9
89	Coupled boron-doping and geometry control of tin-catalyzed silicon nanowires for high performance radial junction photovoltaics. Optics Express, 2019, 27, 37248.	1.7	9
90	Optical absorption in vertical silicon nanowires for solar cell applications. Proceedings of SPIE, 2011, , .	0.8	8

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91	Morphology control and growth dynamics of in-plane solidâ€“liquidâ€“solid silicon nanowires. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1045-1049.	1.3	8
92	Boosting light emission from Si-based thin film over Si and SiO_2 nanowires architecture. Optics Express, 2015, 23, 5388.	1.7	8
93	Robust neuronal differentiation of human iPSC-derived neural progenitor cells cultured on densely-spaced spiky silicon nanowire arrays. Scientific Reports, 2021, 11, 18819.	1.6	8
94	Designable Integration of Silicide Nanowire Springs as Ultraâ€Compact and Stretchable Electronic Interconnections. Small, 2022, 18, e2104690.	5.2	8
95	Non-invasive digital etching of van der Waals semiconductors. Nature Communications, 2022, 13, 1844.	5.8	8
96	Investigating inhomogeneous electronic properties of radial junction solar cells using correlative microscopy. Japanese Journal of Applied Physics, 2015, 54, 08KA08.	0.8	7
97	Nanoscale Photovoltaic Responses in 3D Radial Junction Solar Cells Revealed by High Spatial Resolution Laser Excitation Photoelectric Microscopy. ACS Nano, 2019, 13, 10359-10365.	7.3	6
98	On the Mechanism of In Nanoparticle Formation by Exposing ITO Thin Films to Hydrogen Plasmas. Langmuir, 2017, 33, 12114-12119.	1.6	5
99	Synergetic effect in rolling GaIn alloy droplets enables ultralow temperature growth of silicon nanowires at 70 Â°C on plastics. Nanoscale, 2020, 12, 8949-8957.	2.8	5
100	Innovative all-silicon based a-SiNx:O/c-Si heterostructure solar-blind photodetector with both high responsivity and fast response speed. APL Photonics, 2022, 7, .	3.0	5
101	Terrace-confined guided growth of high-density ultrathin silicon nanowire array for large area electronics. Nanotechnology, 2021, 32, 265602.	1.3	4
102	In situ observation of droplet nanofluidics for yielding low-dimensional nanomaterials. Applied Surface Science, 2022, 573, 151510.	3.1	4
103	Review on 3D growth engineering and integration of nanowires for advanced nanoelectronics and sensor applications. Nanotechnology, 2022, 33, 222002.	1.3	4
104	Precise morphology control of in-plane silicon nanowires via a simple plasma pre-treatment. Applied Surface Science, 2022, 593, 153435.	3.1	4
105	Bismuth-catalyzed n-type doping and growth evolution of planar silicon nanowires. Applied Physics Letters, 2020, 117, .	1.5	3
106	Bias-selected full Red/Green/Blue color sensing and imaging based on inversely stacked radial PINIP junctions. Nano Futures, 2020, 4, 035007.	1.0	2
107	Unexpected phosphorus doping routine of planar silicon nanowires for integrating CMOS logics. Nanoscale, 2021, 13, 15031-15037.	2.8	2
108	Guided growth of in-plane lateral SiNWs led by indium catalysts. Materials Research Society Symposia Proceedings, 2009, 1178, 92.	0.1	1

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109	Catalyst formation and growth of Sn- and In-catalyzed silicon nanowires. Materials Research Society Symposia Proceedings, 2010, 1258, 1.	0.1	1
110	Quantum Dots: Ultrafast Solarâ€Blind Ultraviolet Detection by Inorganic Perovskite CsPbX‹sub›3‹/sub› Quantum Dots Radial Junction Architecture (Adv. Mater. 23/2017). Advanced Materials, 2017, 29, .	11.1	1
111	Perovskite Quantum Dot Photodetectors. Springer Series in Materials Science, 2020, , 181-218.	0.4	1
112	Ultrathin 3D radial tandem-junction photocathode with a high onset potential of 1.15 V for solar hydrogen production. Chinese Journal of Catalysis, 2022, 43, 1842-1850.	6.9	1
113	An analyzing of anomalous peak in the capacitance-voltage characteristics at Hg/GaN Schottky contact. , 2011, , .		0
114	CuO nanowires-based Radial hetero-junction thin film silicon solar cells with a high open-circuit voltage. , 2017, , .		0
115	Deterministic deployment of in-plane silicon nanowires for high performance large area electronics. , 2018, , .		0
116	Corrections to â€œHigh Performance Si Nanowire TFTs With Ultrahigh On/Off Current Ratio and Steep Subthreshold Swingâ€•[Jan 20 46-49]. IEEE Electron Device Letters, 2020, 41, 1604-1604.	2.2	0
117	22.2: ‹i›Invited Paper:‹/i› Programmable integration of silicon nanowires into orderly and stretchable arrays for high performance thin film transistors. Digest of Technical Papers SID International Symposium, 2021, 52, 144-144.	0.1	0
118	Coupled Investigation of Contact Potential and Microstructure Evolution of Ultra-Thin AlOx for Crystalline Si Passivation. Nanomaterials, 2021, 11, 1803.	1.9	0
119	Polymorphous Nano-Si and Radial Junction Solar Cells. , 2018, , 1-53.		0
120	Polymorphous Nano-Si and Radial Junction Solar Cells. , 2019, , 879-931.		0
121	Advanced PECVD Processes for SiNW Based Solar Cells and Thin Film Transistors. , 2020, , .		0
122	Tapering-free monocrystalline Ge nanowires synthesized via plasma-assisted VLS using In and Sn catalysts. Nanotechnology, 2022, , .	1.3	0