Paul W Leu

List of Publications by Year
in descending order

54 papers	4,691 citations	257101 24 h-index	161609 54 g-index
56 all docs	56 docs citations	56 times ranked	7313 citing authors

#	Article	IF	Citations
1	Nanowire active-matrix circuitry for low-voltage macroscale artificial skin. Nature Materials, 2010, 9, 821-826.	13.3	1,162
2	Three-dimensional nanopillar-array photovoltaics on low-cost and flexible substrates. Nature Materials, 2009, 8, 648-653.	13.3	997
3	Ultrathin compound semiconductor on insulator layers for high-performance nanoscale transistors. Nature, 2010, 468, 286-289.	13.7	373
4	Ordered Arrays of Dual-Diameter Nanopillars for Maximized Optical Absorption. Nano Letters, 2010, 10, 3823-3827.	4.5	269
5	Challenges and prospects of nanopillar-based solar cells. Nano Research, 2009, 2, 829.	5.8	223
6	Tunable and selective resonant absorption in vertical nanowires. Optics Letters, 2012, 37, 3756.	1.7	134
7	Ab initiocalculations of the mechanical and electronic properties of strained Si nanowires. Physical Review B, 2008, 77, .	1.1	130
8	Enhanced absorption in silicon nanocone arrays for photovoltaics. Nanotechnology, 2012, 23, 194003.	1.3	120
9	Uniform and Ordered Copper Nanomeshes by Microsphere Lithography for Transparent Electrodes. Nano Letters, 2014, 14, 2105-2110.	4.5	120
10	Surface chemical control of the electronic structure of silicon nanowires: Density functional calculations. Physical Review B, 2006, 73, .	1.1	109
11	Effect of growth orientation and surface roughness on electron transport in silicon nanowires. Physical Review B, 2007, 75, .	1.1	79
12	Nanoscale doping of InAs via sulfur monolayers. Applied Physics Letters, 2009, 95, .	1.5	71
13	Hierarchical Graphene/Metal Grid Structures for Stable, Flexible Transparent Conductors. ACS Nano, 2015, 9, 5440-5446.	7.3	65
14	Hybrid Coreâ"Shell Nanowire Forests as Self-Selective Chemical Connectors. Nano Letters, 2009, 9, 2054-2058.	4.5	59
15	Rational geometrical design of multi-diameter nanopillars for efficient light harvesting. Nano Energy, 2013, 2, 951-957.	8.2	57
16	Strong broadband absorption in GaAs nanocone and nanowire arrays for solar cells. Optics Express, 2014, 22, A386.	1.7	55
17	Superhemophobic and Antivirofouling Coating for Mechanically Durable and Wash-Stable Medical Textiles. ACS Applied Materials & Interfaces, 2020, 12, 22120-22128.	4.0	45
18	Single-crystal germanium layers grown on silicon by nanowire seeding. Nature Nanotechnology, 2009, 4, 649-653.	15.6	43

#	Article	IF	Citations
19	Broadband light absorption enhancement in ultrathin film crystalline silicon solar cells with high index of refraction nanosphere arrays. Nano Energy, 2016, 19, 471-475.	8.2	40
20	High index of refraction nanosphere coatings for light trapping in crystalline silicon thin film solar cells. Nano Energy, 2015, 13, 226-232.	8.2	37
21	Creating glasswing butterfly-inspired durable antifogging superomniphobic supertransmissive, superclear nanostructured glass through Bayesian learning and optimization. Materials Horizons, 2019, 6, 1632-1642.	6.4	34
22	Ultrahigh-transparency, ultrahigh-haze nanograss glass with fluid-induced switchable haze. Optica, 2017, 4, 1522.	4.8	30
23	Stable lotus leaf-inspired hierarchical, fluorinated polypropylene surfaces for reduced bacterial adhesion. Reactive and Functional Polymers, 2018, 128, 40-46.	2.0	27
24	Challenges and Prospects of Bio-Inspired and Multifunctional Transparent Substrates and Barrier Layers for Optoelectronics. ACS Nano, 2020, 14, 16241-16265.	7.3	27
25	Identification of Efficient Active Sites in Nitrogen-Doped Carbon Nanotubes for Oxygen Reduction Reaction. Journal of Physical Chemistry C, 2020, 124, 8689-8696.	1.5	27
26	Designing metal hemispheres on silicon ultrathin film solar cells for plasmonic light trapping. Optics Letters, 2014, 39, 4647.	1.7	25
27	Critical heat flux enhancement in pool boiling through increased rewetting on nanopillar array surfaces. Scientific Reports, 2018, 8, 4815.	1.6	24
28	Self-cleaning, high transmission, near unity haze OTS/silica nanostructured glass. Journal of Materials Chemistry C, 2018, 6, 9191-9199.	2.7	23
29	Hierarchical metal nanomesh/microgrid structures for high performance transparent electrodes. RSC Advances, 2015, 5, 70713-70717.	1.7	22
30	Stain-resistant, superomniphobic flexible optical plastics based on nano-enoki mushroom-like structures. Journal of Materials Chemistry A, 2019, 7, 15698-15706.	5.2	19
31	Fundamental Performance Limits and Haze Evaluation of Metal Nanomesh Transparent Conductors. Advanced Optical Materials, 2018, 6, 1700829.	3.6	18
32	Vertical Germanium Nanowire Arrays in Microfluidic Channels for Charged Molecule Detection. Journal of the Electrochemical Society, 2009, 156, K11.	1.3	17
33	The role of propagating modes in silver nanowire arrays for transparent electrodes. Optics Express, 2013, 21, A419.	1.7	16
34	Parahydrophobicity and stick-slip wetting dynamics of vertically aligned carbon nanotube forests. Carbon, 2019, 152, 474-481.	5.4	16
35	Coal-Derived Functionalized Nano-Graphene Oxide for Bleach Washable, Durable Antiviral Fabric Coatings. ACS Applied Nano Materials, 2022, 5, 718-728.	2.4	16
36	Copper nanowire arrays for transparent electrodes. Journal of Applied Physics, 2013, 114, .	1.1	14

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37	Comparative study of absorption in tilted silicon nanowire arrays for photovoltaics. Nanoscale Research Letters, 2014, 9, 620.	3.1	14
38	Polymer-Embedded Silver Microgrids by Particle-Free Reactive Inks for Flexible High-Performance Transparent Conducting Electrodes. ACS Applied Electronic Materials, 2021, 3, 2079-2086.	2.0	14
39	Group IV semiconductor nanowire arrays: epitaxy in different contexts. Semiconductor Science and Technology, 2010, 25, 024016.	1.0	13
40	Discovering high-performance broadband and broad angle antireflection surfaces by machine learning. Optica, 2020, 7, 784.	4.8	13
41	Oxide-encapsulated vertical germanium nanowire structures and their DC transport properties. Nanotechnology, 2008, 19, 485705.	1.3	12
42	Novel Carrier Doping Mechanism for Transparent Conductor: Electron Donation from Embedded Ag Nanoparticles to the Oxide Matrix. ACS Applied Materials & Interfaces, 2017, 9, 19973-19979.	4.0	12
43	Synergistic effect of surface plasmonic particles in PbS/TiO2 heterojunction solar cells. Solar Energy Materials and Solar Cells, 2014, 128, 386-393.	3.0	10
44	Scalable Fabrication of Metal Oxide Functional Materials and Their Applications in High-Temperature Optical Sensing. Jom, 2015, 67, 53-58.	0.9	10
45	Flexible nanograss with highest combination of transparency and haze for optoelectronic plastic substrates. Nanotechnology, 2018, 29, 42LT01.	1.3	10
46	Achieving Highly Conductive, Stretchable, and Washable Fabric from Reactive Silver Ink and Increased Interfacial Adhesion. ACS Applied Polymer Materials, 2022, 4, 5253-5260.	2.0	10
47	Mechanically durable, super-repellent 3D printed microcell/nanoparticle surfaces. Nano Research, 2022, 15, 5678-5686.	5.8	6
48	Engineering inverse woodpile and woodpile photonic crystal solar cells for light trapping. Nanotechnology, 2016, 27, 225404.	1.3	4
49	COMPUTATIONAL SIMULATIONS OF NANOSTRUCTURED SOLAR CELLS. Nano LIFE, 2012, 02, 1230007.	0.6	3
50	Plasmonic nanomesh sandwiches for ultrathin film silicon solar cells. Journal of Optics (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222	1.0	3
51	Surface nanostructuring of alkali-aluminosilicate Gorilla display glass substrates using a maskless process. Nanotechnology, 2022, 33, 245301.	1.3	2
52	Detailed balance analysis of vertical GaAs nanowire array solar cells: exceeding the Shockley Queisser limit. Optics Express, 2022, 30, 16145.	1.7	2
53	Solar module orientation and tracking type performance and optimization. Journal of Photonics for Energy, 2021, 11, .	0.8	1
54	Frontside scattering structures for enhanced performance in flexible ultrathin crystalline silicon solar cells. Journal of Photonics for Energy, 2018, 8, 1.	0.8	0