

Der-Hsien Lien

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

80
papers

8,033
citations

35
h-index

82
g-index

82
ext. papers

9,474
ext. citations

13.2
avg, IF

5.78
L-index

#	Paper	IF	Citations
80	Fully integrated wearable sensor arrays for multiplexed in situ perspiration analysis. <i>Nature</i> , 2016 , 529, 509-514	50.4	2526
79	Near-unity photoluminescence quantum yield in MoS ₂ . <i>Science</i> , 2015 , 350, 1065-8	33.3	792
78	Few-Layer MoS ₂ with high broadband Photogain and fast optical switching for use in harsh environments. <i>ACS Nano</i> , 2013 , 7, 3905-11	16.7	482
77	Dual-gated MoS ₂ /WSe ₂ van der Waals tunnel diodes and transistors. <i>ACS Nano</i> , 2015 , 9, 2071-9	16.7	441
76	Enhancing sensitivity of a single ZnO micro-/nanowire photodetector by piezo-phototronic effect. <i>ACS Nano</i> , 2010 , 4, 6285-91	16.7	381
75	Wearable Microsensor Array for Multiplexed Heavy Metal Monitoring of Body Fluids. <i>ACS Sensors</i> , 2016 , 1, 866-874	9.2	216
74	Recombination Kinetics and Effects of Superacid Treatment in Sulfur- and Selenium-Based Transition Metal Dichalcogenides. <i>Nano Letters</i> , 2016 , 16, 2786-91	11.5	187
73	Strain-engineered growth of two-dimensional materials. <i>Nature Communications</i> , 2017 , 8, 608	17.4	162
72	Methylxanthine Drug Monitoring with Wearable Sweat Sensors. <i>Advanced Materials</i> , 2018 , 30, e170744224		159
71	Single-InN-nanowire nanogenerator with upto 1 V output voltage. <i>Advanced Materials</i> , 2010 , 22, 4008-13	13.4	148
70	Electrical suppression of all nonradiative recombination pathways in monolayer semiconductors. <i>Science</i> , 2019 , 364, 468-471	33.3	139
69	Probing surface band bending of surface-engineered metal oxide nanowires. <i>ACS Nano</i> , 2012 , 6, 9366-72	16.7	136
68	High Luminescence Efficiency in MoS ₂ Grown by Chemical Vapor Deposition. <i>ACS Nano</i> , 2016 , 10, 6535-41	16.7	115
67	All-printed paper memory. <i>ACS Nano</i> , 2014 , 8, 7613-9	16.7	115
66	Engineering light outcoupling in 2D materials. <i>Nano Letters</i> , 2015 , 15, 1356-61	11.5	105
65	Large-area and bright pulsed electroluminescence in monolayer semiconductors. <i>Nature Communications</i> , 2018 , 9, 1229	17.4	93
64	Photoconductive enhancement of single ZnO nanowire through localized Schottky effects. <i>Optics Express</i> , 2010 , 18, 14836-41	3.3	92

63	Extremely reduced dielectric confinement in two-dimensional hybrid perovskites with large polar organics. <i>Communications Physics</i> , 2018 , 1,	5.4	84
62	Supersensitive, ultrafast, and broad-band light-harvesting scheme employing carbon nanotube/TiO ₂ core-shell nanowire geometry. <i>ACS Nano</i> , 2012 , 6, 6687-92	16.7	76
61	Monolithic 3D CMOS Using Layered Semiconductors. <i>Advanced Materials</i> , 2016 , 28, 2547-54	24	72
60	MoS ₂ Heterojunctions by Thickness Modulation. <i>Scientific Reports</i> , 2015 , 5, 10990	4.9	71
59	Highly Deformable Origami Paper Photodetector Arrays. <i>ACS Nano</i> , 2017 , 11, 10230-10235	16.7	65
58	Highly Stable Near-Unity Photoluminescence Yield in Monolayer MoS by Fluoropolymer Encapsulation and Superacid Treatment. <i>ACS Nano</i> , 2017 , 11, 5179-5185	16.7	64
57	Evaporated tellurium thin films for p-type field-effect transistors and circuits. <i>Nature Nanotechnology</i> , 2020 , 15, 53-58	28.7	63
56	Photon management in nanostructured solar cells. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 3144	7.1	60
55	4H ₂ BiC Metal Semiconductor Metal Ultraviolet Photodetectors in Operation of 450 nm. <i>IEEE Electron Device Letters</i> , 2012 , 33, 1586-1588	4.4	60
54	Concurrent Improvement in Photogain and Speed of a Metal Oxide Nanowire Photodetector through Enhancing Surface Band Bending via Incorporating a Nanoscale Heterojunction. <i>ACS Photonics</i> , 2014 , 1, 354-359	6.3	51
53	Photocurrent Amplification at Carbon Nanotube Metal Contacts. <i>Advanced Materials</i> , 2006 , 18, 98-103	24	50
52	Synthetic WSe monolayers with high photoluminescence quantum yield. <i>Science Advances</i> , 2019 , 5, eaau4728	17.3	48
51	Optical and electrical properties of two-dimensional palladium diselenide. <i>Applied Physics Letters</i> , 2019 , 114, 253102	3.4	44
50	Increasing Photoluminescence Quantum Yield by Nanophotonic Design of Quantum-Confined Halide Perovskite Nanowire Arrays. <i>Nano Letters</i> , 2019 , 19, 2850-2857	11.5	44
49	Light extraction enhancement with radiation pattern shaping of LEDs by waveguiding nanorods with impedance-matching tips. <i>Nanoscale</i> , 2014 , 6, 2624-8	7.7	38
48	Surface effects in metal oxide-based nanodevices. <i>Nanoscale</i> , 2015 , 7, 19874-84	7.7	36
47	Strong optical response and light emission from a monolayer molecular crystal. <i>Nature Communications</i> , 2019 , 10, 5589	17.4	36
46	Dual-functional Memory and Threshold Resistive Switching Based on the Push-Pull Mechanism of Oxygen Ions. <i>Scientific Reports</i> , 2016 , 6, 23945	4.9	35

45	See-Through Ga_2O_3 Solar-Blind Photodetectors for Use in Harsh Environments. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2014 , 20, 112-117	3.8	34
44	Harsh photovoltaics using InGaN/GaN multiple quantum well schemes. <i>Nano Energy</i> , 2015 , 11, 104-109	17.1	33
43	A broadband and omnidirectional light-harvesting scheme employing nanospheres on Si solar cells. <i>Nano Energy</i> , 2014 , 6, 36-43	17.1	33
42	Enhanced Recovery Speed of Nanostructured ZnO Photodetectors Using Nanobelt Networks. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2012 , 18, 1807-1811	3.8	33
41	Resistive memory for harsh electronics: immunity to surface effect and high corrosion resistance via surface modification. <i>Scientific Reports</i> , 2014 , 4, 4402	4.9	32
40	. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2014 , 20, 30-35	3.8	32
39	Shape-Dependent Light Harvesting of 3D Gold Nanocrystals on Bulk Heterojunction Solar Cells: Plasmonic or Optical Scattering Effect?. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 7554-7564	3.8	31
38	Hierarchical structures consisting of SiO ₂ nanorods and p-GaN microdomes for efficiently harvesting solar energy for InGaN quantum well photovoltaic cells. <i>Nanoscale</i> , 2012 , 4, 7346-9	7.7	31
37	Substrate-Dependent Exciton Diffusion and Annihilation in Chemically Treated MoS ₂ and WS ₂ . <i>Journal of Physical Chemistry C</i> , 2020 , 124, 12175-12184	3.8	31
36	Self-powered nanodevices for fast UV detection and energy harvesting using core-shell nanowire geometry. <i>Nano Energy</i> , 2018 , 51, 294-299	17.1	30
35	Resonance-Enhanced Absorption in Hollow Nanoshell Spheres with Omnidirectional Detection and High Responsivity and Speed. <i>Advanced Materials</i> , 2018 , 30, e1801972	24	29
34	Actively variable-spectrum optoelectronics with black phosphorus. <i>Nature</i> , 2021 , 596, 232-237	50.4	28
33	Inkjet-printed transparent nanowire thin film features for UV photodetectors. <i>RSC Advances</i> , 2015 , 5, 70707-70712	3.7	26
32	360° omnidirectional, printable and transparent photodetectors for flexible optoelectronics. <i>Npj Flexible Electronics</i> , 2018 , 2,	10.7	26
31	Neutral Exciton Diffusion in Monolayer MoS. <i>ACS Nano</i> , 2020 , 14, 13433-13440	16.7	23
30	Evaporated Se Te Thin Films with Tunable Bandgaps for Short-Wave Infrared Photodetectors. <i>Advanced Materials</i> , 2020 , 32, e2001329	24	22
29	Enhanced light-extraction from hierarchical surfaces consisting of p-GaN microdomes and SiO ₂ nanorods for GaN-based light-emitting diodes. <i>Applied Physics Letters</i> , 2013 , 103, 161104	3.4	21
28	Improved photoswitching response times of MoS ₂ field-effect transistors by stacking p-type copper phthalocyanine layer. <i>Applied Physics Letters</i> , 2016 , 109, 183502	3.4	21

27	Dip Coating Passivation of Crystalline Silicon by Lewis Acids. <i>ACS Nano</i> , 2019 , 13, 3723-3729	16.7	20
26	Highly Reliable Superhydrophobic Protection for Organic Field-Effect Transistors by Fluoroalkylsilane-Coated TiO Nanoparticles. <i>ACS Nano</i> , 2018 , 12, 11062-11069	16.7	20
25	Scanning Probe Lithography Patterning of Monolayer Semiconductors and Application in Quantifying Edge Recombination. <i>Advanced Materials</i> , 2019 , 31, e1900136	24	17
24	A Fully Transparent Resistive Memory for Harsh Environments. <i>Scientific Reports</i> , 2015 , 5, 15087	4.9	17
23	An energy-harvesting scheme employing CuGaSe ₂ quantum dot-modified ZnO buffer layers for drastic conversion efficiency enhancement in inorganic-organic hybrid solar cells. <i>Nanoscale</i> , 2013 , 5, 6350-5	7.7	15
22	Infrared Photodetectors Based on 2D Materials and Nanophotonics. <i>Advanced Functional Materials</i> , 2019 , 9, 19070	11.7	14
21	Gas sensing improvement of carbon nanotubes by NH ₄ OH flash treatment: a nondestructive purification technique. <i>Journal of Materials Chemistry</i> , 2007 , 17, 3581		13
20	Measuring the Edge Recombination Velocity of Monolayer Semiconductors. <i>Nano Letters</i> , 2017 , 17, 5356-5360	13.6	12
19	A Nanostructuring Method to Decouple Electrical and Thermal Transport through the Formation of Electrically Triggered Conductive Nanofilaments. <i>Advanced Materials</i> , 2018 , 30, e1705385	24	12
18	Recent Advances in Two-Dimensional Quantum Dots and Their Applications. <i>Nanomaterials</i> , 2021 , 11,	5.4	11
17	Increased Optoelectronic Quality and Uniformity of Hydrogenated p-InP Thin Films. <i>Chemistry of Materials</i> , 2016 , 28, 4602-4607	9.6	9
16	Critical capillary absorption of current-melted silver nanodroplets into multiwalled carbon nanotubes. <i>Small</i> , 2012 , 8, 2158-62	11	9
15	Centimeter-Scale and Visible Wavelength Monolayer Light-Emitting Devices. <i>Advanced Functional Materials</i> , 2020 , 30, 1907941	15.6	8
14	Deterministic Assembly of Arrays of Lithographically Defined WS ₂ and MoS ₂ Monolayer Features Directly From Multilayer Sources Into Van Der Waals Heterostructures. <i>Journal of Micro and Nano-Manufacturing</i> , 2019 , 7,	1.3	7
13	Low-resistivity C54-TiSi ₂ as a sidewall-confinement nanoscale electrode for three-dimensional vertical resistive memory. <i>Applied Physics Letters</i> , 2014 , 105, 182101	3.4	6
12	Ultrasound thermal mapping based on a hybrid method combining cross-correlation and zero-crossing tracking. <i>Journal of the Acoustical Society of America</i> , 2013 , 134, 1530-40	2.2	6
11	Resonance frequency shift of a carbon nanotube with a silver nanoparticle adsorbed at various positions. <i>Applied Physics Letters</i> , 2010 , 97, 133105	3.4	6
10	Shape-controlled single-crystal growth of InP at low temperatures down to 220 °C. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 902-906	11.5	6

9	A generic electroluminescent device for emission from infrared to ultraviolet wavelengths. <i>Nature Electronics</i> , 2020 , 3, 612-621	28.4	6
8	Bright electroluminescence in ambient conditions from WSe ₂ p-n diodes using pulsed injection. <i>Applied Physics Letters</i> , 2019 , 115, 011103	3-4	5
7	Defect Inspection Techniques in SiC.. <i>Nanoscale Research Letters</i> , 2022 , 17, 30	5	4
6	Nanophotonic Devices: Resonance-Enhanced Absorption in Hollow Nanoshell Spheres with Omnidirectional Detection and High Responsivity and Speed (Adv. Mater. 34/2018). <i>Advanced Materials</i> , 2018 , 30, 1870257	24	3
5	Strain promoted conductivity of doped carbon nanotubes. <i>Applied Physics Letters</i> , 2008 , 93, 223111	3-4	3
4	Thermoelectrics: A Nanostructuring Method to Decouple Electrical and Thermal Transport through the Formation of Electrically Triggered Conductive Nanofilaments (Adv. Mater. 28/2018). <i>Advanced Materials</i> , 2018 , 30, 1870243	24	
3	Effects of Mg Doping on Double Channel Layer Atmospheric Pressure-Plasma Enhanced Chemical Vapor Deposition Fabricated Amorphous InGaZnO Thin Film Transistors. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2021 , 16, 1412-1416	1-3	
2	Monolayer Semiconductors: Scanning Probe Lithography Patterning of Monolayer Semiconductors and Application in Quantifying Edge Recombination (Adv. Mater. 48/2019). <i>Advanced Materials</i> , 2019 , 31, 1970340	24	
1	Study of InGaZnO Thin Film Transistors With Dual Treatment of Pre-Oxidation ZrO ₂ High- κ Dielectric and Post-Oxidation InGaZnO Channel by Neutral Beam System. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2021 , 16, 1733-1738	1-3	