

Chuan-Pu Liu

List of Publications by Year in descending order

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119
papers

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147726

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182361

51
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120
all docs

120
docs citations

120
times ranked

4073
citing authors

#	ARTICLE	IF	CITATIONS
1	Evidence of oxygen vacancy enhanced room-temperature ferromagnetism in Co-doped ZnO. Applied Physics Letters, 2006, 88, 242507.	1.5	361
2	Evidence of the Internal Domains for Inducing the Anomalously High Dielectric Constant of CaCu ₃ Ti ₄ O ₁₂ . Chemistry of Materials, 2005, 17, 5167-5171.	3.2	267
3	Role of grain boundary and grain defects on ferromagnetism in Co:ZnO films. Applied Physics Letters, 2007, 90, 102506.	1.5	111
4	Optimization of the Output Efficiency of GaN Nanowire Piezoelectric Nanogenerators by Tuning the Free Carrier Concentration. Advanced Energy Materials, 2014, 4, 1400392.	10.2	106
5	Enhancement of Green Emission from InGaN/GaN Multiple Quantum Wells via Coupling to Surface Plasmons in a Two-Dimensional Silver Array. Advanced Functional Materials, 2011, 21, 4719-4723.	7.8	85
6	Strain Evolution in Coherent Ge/Si Islands. Physical Review Letters, 2000, 84, 1958-1961.	2.9	77
7	Crystal Face-Dependent Nanopiezotronics of an Obliquely Aligned InN Nanorod Array. Nano Letters, 2012, 12, 562-568.	4.5	60
8	Enhanced response and selectivity of H ₂ S sensing through controlled Ni doping into ZnO nanorods by using single metal organic precursors. Sensors and Actuators B: Chemical, 2018, 273, 1278-1290.	4.0	57
9	Anisotropic Outputs of a Nanogenerator from Oblique-Aligned ZnO Nanowire Arrays. ACS Nano, 2011, 5, 6707-6713.	7.3	56
10	Origins of efficient green light emission in phase-separated InGaN quantum wells. Nanotechnology, 2006, 17, 3734-3739.	1.3	52
11	Electrically Conductive Ultrananocrystalline Diamond-Coated Natural Graphite-Copper Anode for New Long Life Lithium-Ion Battery. Advanced Materials, 2014, 26, 3724-3729.	11.1	51
12	Piezoelectric effect on compensation of the quantum-confined Stark effect in InGaN/GaN multiple quantum wells based green light-emitting diodes. Nano Energy, 2016, 28, 373-379.	8.2	51
13	Recent progress in microstructure development of inorganic one-dimensional nanostructures for enhancing performance of piezotronics and piezoelectric nanogenerators. Nano Energy, 2019, 55, 1-21.	8.2	50
14	Fabrication of a Large-Area Al-Doped ZnO Nanowire Array Photosensor with Enhanced Photoresponse by Straining. Advanced Functional Materials, 2012, 22, 3875-3881.	7.8	49
15	On enhancing capability of tribocharge transfer of ZnO nanorod arrays by Sb doping for anomalous output performance improvement of triboelectric nanogenerators. Nano Energy, 2018, 45, 311-318.	8.2	48
16	Development of porous ZnO thin films for enhancing piezoelectric nanogenerators and force sensors. Nano Energy, 2021, 82, 105702.	8.2	48
17	Self-powered n-Mg Zn O/p-Si photodetector improved by alloying-enhanced piezopotential through piezo-phototronic effect. Nano Energy, 2015, 11, 533-539.	8.2	47
18	Review on ZnO-based piezotronics and piezoelectric nanogenerators: aspects of piezopotential and screening effect. JPhys Materials, 2021, 4, 044011.	1.8	43

#	ARTICLE	IF	CITATIONS
19	Effects of Free Carriers on Piezoelectric Nanogenerators and Piezotronic Devices Made of GaN Nanowire Arrays. <i>Small</i> , 2014, 10, 4718-4725.	5.2	42
20	Direct measurement of strain in a Ge island on Si(001). <i>Applied Physics Letters</i> , 1999, 75, 46-48.	1.5	40
21	Energy Harvesting from the Obliquely Aligned InN Nanowire Array with a Surface Electron Accumulation Layer. <i>Advanced Materials</i> , 2013, 25, 861-866.	11.1	40
22	Tunable Work Function of MgZnO as a Viable Friction Material for a Triboelectric Nanogenerator. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 1420-1425.	4.0	40
23	Dome-to-pyramid shape transition in Ge/Si islands due to strain relaxation by interdiffusion. <i>Applied Physics Letters</i> , 2000, 77, 1623-1625.	1.5	39
24	Ultraviolet photodetectors based on MgZnO thin film grown by RF magnetron sputtering. <i>Thin Solid Films</i> , 2016, 620, 170-174.	0.8	39
25	Output power enhancement of InGaN/GaN based green light-emitting diodes with high-density ultra-small In-rich quantum dots. <i>Journal of Alloys and Compounds</i> , 2013, 555, 250-254.	2.8	37
26	Heteroepitaxial nucleation and growth of graphene nanowalls on silicon. <i>Carbon</i> , 2013, 54, 234-240.	5.4	37
27	Study of the dominant luminescence mechanism in InGaN/GaN multiple quantum wells comprised of ultrasmall InGaN quasiquantum dots. <i>Applied Physics Letters</i> , 2005, 86, 121915.	1.5	36
28	The mechanism of the sodiation and desodiation in Super P carbon electrode for sodium-ion battery. <i>Journal of Power Sources</i> , 2017, 340, 14-21.	4.0	36
29	Cu doped ZnO nanorods with controllable Cu content by using single metal organic precursors and their photocatalytic and luminescence properties. <i>Journal of Alloys and Compounds</i> , 2017, 691, 936-945.	2.8	35
30	Room temperature carbon monoxide gas sensor using Cu doped OMS-2 nanofibers. <i>Sensors and Actuators B: Chemical</i> , 2018, 266, 751-760.	4.0	35
31	Enhancing charge transfer for ZnO nanorods based triboelectric nanogenerators through Ga doping. <i>Nano Energy</i> , 2019, 65, 104069.	8.2	35
32	Influence of the preferred orientation and thickness of zirconium nitride films on the diffusion property in copper. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2004, 22, 1075.	1.6	31
33	Growth and field-emission properties of single-crystalline conic ZnO nanotubes. <i>Nanotechnology</i> , 2006, 17, 753-757.	1.3	30
34	Ultrasensitive AlGaN Piezotronic Strain Sensors via Alloying-Enhanced Piezoelectric Potential. <i>Advanced Materials</i> , 2015, 27, 6289-6295.	11.1	30
35	Piezotronic materials and large-scale piezotronics array devices. <i>MRS Bulletin</i> , 2018, 43, 936-940.	1.7	30
36	Designing Various Self-Assembled ZnO Quantum Dots/Islands on Silicon with Distinctive Characteristics by Magnetron Sputter. <i>Crystal Growth and Design</i> , 2009, 9, 2021-2025.	1.4	24

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37	High-angle annular dark-field imaging of self-assembled Ge islands on Si(001). <i>Ultramicroscopy</i> , 2001, 87, 79-88.	0.8	23
38	Surface optical phonon modes in ternary aligned crystalline InGaN/GaN multi-quantum-well nanopillar arrays. <i>Journal of Raman Spectroscopy</i> , 2009, 40, 2044-2049.	1.2	23
39	Enhanced ferromagnetism in grain boundary of Co-doped ZnO films: A magnetic force microscopy study. <i>Applied Physics Letters</i> , 2011, 98, 212509.	1.5	23
40	Gigantic enhancement of electricity generation in piezoelectric semiconductors by creating pores as a universal approach. <i>Energy and Environmental Science</i> , 2019, 12, 410-417.	15.6	22
41	The influence of magnesium and hydrogen introduction in sputtered zinc oxide thin films. <i>Thin Solid Films</i> , 2006, 498, 152-157.	0.8	21
42	Porosity-induced full-range visible-light photodetection via ultrahigh broadband antireflection in ZnO nanowires. <i>NPG Asia Materials</i> , 2016, 8, e314-e314.	3.8	21
43	Ultrahigh UV responsivity of single nonpolar a -axial GaN nanowire with asymmetric piezopotential via piezo-phototronic effect: Dependence of carrier screening effect on strain. <i>Nano Energy</i> , 2017, 34, 367-374.	8.2	21
44	Characterization of wurtzite ZnO using valence electron energy loss spectroscopy. <i>Physical Review B</i> , 2011, 84, .	1.1	20
45	High-quality AlN grown with a single substrate temperature below 1200 Å°C. <i>Scientific Reports</i> , 2017, 7, 7135.	1.6	20
46	Optimal geometrical design of inertial vibration DC piezoelectric nanogenerators based on obliquely aligned InN nanowire arrays. <i>Nanoscale</i> , 2017, 9, 14039-14046.	2.8	20
47	Defect-induced negative differential resistance of GaN nanowires measured by conductive atomic force microscopy. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	19
48	Tuning the emitting wavelength of InGaN/GaN superlattices from blue, green to yellow by controlling the size of InGaN quasi-quantum dot. <i>Thin Solid Films</i> , 2006, 498, 128-132.	0.8	17
49	TEM measurement of strain in coherent quantum heterostructures. <i>Ultramicroscopy</i> , 2000, 84, 225-233.	0.8	16
50	Microstructure and Magnetic Properties of Ni:ZnO Nanorod/Zn:NiO Nanowall Composite Structures. <i>Journal of Physical Chemistry C</i> , 2010, 114, 16191-16196.	1.5	16
51	Improved light emission of GaN-based light-emitting diodes by efficient localized surface plasmon coupling with silver nanoparticles. <i>Journal of Alloys and Compounds</i> , 2014, 585, 460-464.	2.8	16
52	Influence of substrate bias on practical adhesion, toughness, and roughness of reactive dc-sputtered zirconium nitride films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2004, 22, 2041-2047.	0.9	15
53	Recent Patents on Fabrication of Nanowires. <i>Recent Patents on Nanotechnology</i> , 2007, 1, 11-20.	0.7	15
54	Ultrananocrystalline diamond nano-pillars synthesized by microwave plasma bias-enhanced nucleation and bias-enhanced growth in hydrogen-diluted methane. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	15

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55	Systematic studies of the nucleation and growth of ultrananocrystalline diamond films on silicon substrates coated with a tungsten layer. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	15
56	Morphology of InN nanorods using spectroscopic Raman imaging. <i>Journal of Raman Spectroscopy</i> , 2013, 44, 791-794.	1.2	15
57	Efficiency enhancement of blue light emitting diodes by eliminating V-defects from InGaN/GaN multiple quantum well structures through GaN capping layer control. <i>Applied Surface Science</i> , 2018, 439, 1127-1132.	3.1	15
58	Freestanding Three-Dimensional CuO/NiO Core-Shell Nanowire Arrays as High-Performance Lithium-Ion Battery Anode. <i>Scientific Reports</i> , 2018, 8, 18034.	1.6	15
59	Enhanced output performance of ZnO thin film triboelectric nanogenerators by leveraging surface limited ga doping and insulating bulk. <i>Nano Energy</i> , 2021, 89, 106394.	8.2	15
60	Anomalous formation of InGaN/GaN multiple-quantum-well nanopillar arrays by focused ion beam milling. <i>Nanotechnology</i> , 2007, 18, 445301.	1.3	14
61	Derivation of analytical equations with experimental verification for working mechanism of triboelectric nanogenerators in contact-separation mode. <i>Nano Energy</i> , 2020, 76, 104969.	8.2	13
62	Evolution of Ge/Si(001) islands upon oxidation and water etching. <i>Thin Solid Films</i> , 2002, 415, 296-302.	0.8	12
63	ZnO nanorods with two spatially distinct light emissions. <i>Nanotechnology</i> , 2008, 19, 285703.	1.3	12
64	Is it viable to improve light output efficiency by nano-light-emitting diodes?. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	12
65	Interface characterization and indium content of indium-rich quantum dots in InGaN/GaN multiple quantum wells. <i>Applied Surface Science</i> , 2006, 252, 3922-3927.	3.1	11
66	Formation of coherent Ge shallow dome islands on Si(001) by ultra-high-vacuum ion beam sputter deposition. <i>Applied Physics A: Materials Science and Processing</i> , 2008, 91, 267-271.	1.1	11
67	Tunable magnetic order of Co nanoparticles and magnetotransport in Co-ZnO nanocomposites. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	11
68	Interfacial defects controlled electrical and magnetotransport in Co/ZnO nanocomposites. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	11
69	Growth and Valence Excitations of ZnO:M(Al, In, Sn) Hierarchical Nanostructures. <i>Journal of Physical Chemistry C</i> , 2010, 114, 18031-18036.	1.5	11
70	The Growth of GaN Nanorods with Different Temperature by Molecular Beam Epitaxy. <i>Journal of the Electrochemical Society</i> , 2010, 157, K109.	1.3	11
71	Single-step growth dynamics of core-shell GaN on Ga ₂ O ₃ freestanding nanoprotuded microbelts. <i>Journal of Materials Science</i> , 2012, 47, 3447-3453.	1.7	11
72	Thermal Behaviors and Phase Evolution of Lead Zirconate Titanate Prepared by Sol-Gel Processing: The Role of the Pyrolysis Time before Calcination. <i>Journal of the American Ceramic Society</i> , 2008, 91, 2545-2552.	1.9	10

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73	Conducting nitrogen-incorporated ultrananocrystalline diamond coating for highly structural stable anode materials in lithium ion battery. <i>Nano Energy</i> , 2020, 74, 104811.	8.2	10
74	Bottom-up Nano-heteroepitaxy of Wafer-scale Semipolar GaN on (001) Si. <i>Advanced Materials</i> , 2015, 27, 4845-4850.	11.1	9
75	Confinement effects of CdSe nanocrystals intercalated into mesoporous silica. <i>Applied Physics Letters</i> , 2010, 96, 111907.	1.5	8
76	Fabrication of flexible UV-B photodetectors made of $Mg_xZn_{1-x}O$ films on PI substrate for enhanced sensitivity by piezophototronic effect. <i>Applied Materials Today</i> , 2020, 20, 100705.	2.3	8
77	The relationship between nano-scale Sm211/Sm123 interfaces and superconductivity of Sm-Ba-Cu-O materials. <i>IEEE Transactions on Applied Superconductivity</i> , 2003, 13, 3180-3183.	1.1	7
78	Characterization of sputtered nano-crystalline zirconium carbide as a diffusion barrier for Cu metallization. <i>Journal of Electronic Materials</i> , 2005, 34, 1408-1413.	1.0	7
79	The influence of mask area ratio on GaN regrowth by epitaxial lateral overgrowth. <i>Journal of Physics and Chemistry of Solids</i> , 2008, 69, 420-424.	1.9	7
80	Microstructures, surface areas, and oxygen absorption of Ti and Ti-Zr-V films grown using glancing-angle sputtering. <i>Journal of Materials Research</i> , 2008, 23, 579-587.	1.2	7
81	Enhanced spontaneous light emission by multiple surface plasmon coupling. <i>Optics Express</i> , 2010, 18, 9677.	1.7	7
82	Undoped and Ga-doped hexagonal platelet interconnected ZnS nanowires: Cathodoluminescence and metal-semiconductor electron transport transition. <i>Scripta Materialia</i> , 2011, 64, 761-764.	2.6	7
83	Synthesis of Porous Single Crystalline ZnO Nanowires and the Derivation of Surface Free Energy from Equilibrium Nanopore. <i>Journal of the Electrochemical Society</i> , 2012, 159, H239-H242.	1.3	7
84	Crystal Orientation Dynamics of Collective Zn dots before Preferential Nucleation. <i>Scientific Reports</i> , 2015, 5, 12533.	1.6	7
85	Resonance Raman spectroscopic study of shape-induced phase transition in CdSe nanoclusters. <i>Journal of Raman Spectroscopy</i> , 2015, 46, 1-3.	1.2	7
86	Efficiency enhancement of green light emitting diodes by improving the uniformity of embedded quantum dots in multiple quantum wells through working pressure control. <i>Journal of Alloys and Compounds</i> , 2016, 669, 156-160.	2.8	7
87	Studies of Electronic Excitations of Rectangular ZnO Nanorods by Electron Energy-Loss Spectroscopy. <i>Plasmonics</i> , 2012, 7, 123-130.	1.8	6
88	Growth and Application of ZnO Nanostructures. <i>International Journal of Applied Ceramic Technology</i> , 2013, 10, 814-838.	1.1	6
89	Derivation of the surface free energy of ZnO and GaN using in situ electron beam hole drilling. <i>Nanoscale</i> , 2016, 8, 634-640.	2.8	6
90	Tuning the transport and magnetism in a $CrBi_2Se_3$ topological insulator by Sb doping. <i>RSC Advances</i> , 2017, 7, 47789-47795.	1.7	6

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91	Analytical and experimental investigation of dual-mode piezo-gated thin film transistor for force sensors. <i>Nano Energy</i> , 2022, 95, 106985.	8.2	6
92	The influence of quasi-quantum dots on the physical properties of blue InGaN/GaN multiple quantum wells. <i>Nanotechnology</i> , 2006, 17, 4300-4306.	1.3	5
93	Synthesis and characterization of bis (acetylacetonato I^{II} -O, O^{II}) [zinc(II)/copper(II)] hybrid organic-inorganic complexes as solid metal organic precursors. <i>Dalton Transactions</i> , 2015, 44, 7982-7990.	1.6	5
94	Synergistic effects of Ga doping and Mg alloying over the enhancement of the stress sensitivity of a Ga-doped MgZnO pressure sensor. <i>Nanoscale Advances</i> , 2021, 3, 3909-3917.	2.2	5
95	Strain in Coherent Ge Quantum Islands on Si Measured by Transmission Electron Microscopy. <i>Materials Research Society Symposia Proceedings</i> , 1999, 571, 49.	0.1	4
96	The Texture and Electrical Properties of Zr and ZrNx Thin Films Deposited by Dc Sputtering. <i>Materials Research Society Symposia Proceedings</i> , 2002, 721, 1.	0.1	4
97	Quantitative characterization of self-assembled coherent islands. <i>Thin Solid Films</i> , 2003, 424, 2-8.	0.8	4
98	Influence of surface oxidation on the valence electron energy-loss spectrum of wurtzite aluminum nitride. <i>Applied Physics Letters</i> , 2013, 102, 061902.	1.5	4
99	Direct growth of hollow carbon nanorods on porous graphenic carbon film without catalysts. <i>Carbon</i> , 2015, 84, 272-279.	5.4	4
100	High angle annular dark field and electron energy loss spectroscopy study on the substitution and distribution of cobalt in ZnO by multilayer growth. <i>Journal of Applied Physics</i> , 2008, 104, 083507.	1.1	3
101	Formation of carbon capsules from an amorphous carbon film by Ga and Ni/Co catalysts in a transmission electron microscope. <i>Journal of Materials Research</i> , 2009, 24, 1388-1394.	1.2	3
102	Thermal stability of catalytically grown multi-walled carbon nanotubes observed in transmission electron microscopy. <i>Applied Physics A: Materials Science and Processing</i> , 2009, 94, 247-251.	1.1	3
103	Optical properties of $\text{In}_x\text{Ga}_{1-x}\text{P}/\text{InP}$ grown at high fluence Ga^+ implantation on InP using focused ion beam. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2011, 269, 324-327.	0.6	3
104	Non-lithographic nanopatterning of InGaN/GaN multiple quantum well nanopillars by focused ion beams. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008, 5, 2186-2188.	0.8	2
105	GaAs _{0.7} Sb _{0.3} /GaAs type-II quantum well with an adjacent InAs quantum-dot stressor layer. <i>Applied Physics Letters</i> , 2009, 94, 111106.	1.5	2
106	FABRICATION OF BISMUTH NANOWIRE DEVICES USING FOCUSED ION BEAM MILLING. , 2009, , .		2
107	Self-assembled Zn/ZnO dots on silicon by RF magnetron sputter. , 2007, , .		1
108	Growth and Characterization of Epitaxial Fe Nanoislands on Si(001): Size Effects on Ferromagnetic Anisotropy. <i>Crystal Growth and Design</i> , 2008, 8, 3885-3888.	1.4	1

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109	Photosensors: Fabrication of a Large-Area Al-Doped ZnO Nanowire Array Photosensor with Enhanced Photoresponse by Straining (Adv. Funct. Mater. 18/2012). Advanced Functional Materials, 2012, 22, 3874-3874.	7.8	1
110	InN Nanowires: Energy Harvesting from the Obliquely Aligned InN Nanowire Array with a Surface Electron-Accumulation Layer (Adv. Mater. 6/2013). Advanced Materials, 2013, 25, 936-936.	11.1	1
111	Nanogenerators: Optimization of the Output Efficiency of GaN Nanowire Piezoelectric Nanogenerators by Tuning the Free Carrier Concentration (Adv. Energy Mater. 16/2014). Advanced Energy Materials, 2014, 4, .	10.2	1
112	Novel hybrid transition metal complexes of diaquabis(acetylacetonato ²⁻) ₂ [nickel(II)/zinc(II)] as solid metal-organic precursors: Synthesis, properties and magnetic response. Applied Organometallic Chemistry, 2017, 31, e3746.	1.7	1
113	Piezocatalytic and doping effects synergistically enhance the oxygen evolution in Sb-doped zinc oxide nanorod arrays as a photoanode for photoelectrochemical water splitting. MRS Energy & Sustainability, 2022, 9, 19-27.	1.3	1
114	Identification of Shape Transitions in Coherent Ge/Si Islands Using Transmission Electron Microscopy. Materials Research Society Symposia Proceedings, 1999, 583, 137.	0.1	0
115	Shape Reversal of Ge/Si Domes to Pyramids Via Si-Ge Intermixing and Strain Reduction. Materials Research Society Symposia Proceedings, 1999, 583, 45.	0.1	0
116	Characterization of Co-catalyzed Multiwalled Carbon Nanotubes by High-Resolution Transmission Electron Microscopy. Materials Research Society Symposia Proceedings, 2002, 737, 689.	0.1	0
117	The Microstructure of Co Nanoparticles Directly Deposited on Si (001) Substrates Using DC Magnetron Sputtering. Materials Research Society Symposia Proceedings, 2002, 737, 712.	0.1	0
118	A novel flash-ion-sensitive field-effect transistor (FISFET) with HfO ₂ /Gd ₂ O ₃ (Gd) nano-crystal/SiO ₂ sensing membranes under super nernstian phenomenon for pH and urea detection. , 2009, , .		0
119	Ex-Situ Study on the Evolution of Cubic Cu _{1.8} S Nanowires and Nanobelts with Two-Dimensional Multivariant Superlattices by Cation Exchange. Journal of Physical Chemistry C, 2021, 125, 14590-14598.	1.5	0