

Chuan-Pu Liu

List of Publications by Year in descending order

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119
papers

3,018
citations

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	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
2	Piezocatalytic and doping effects synergistically enhance the oxygen evolution in Sb-doped zinc oxide nanorod arrays as a photoanode for photoelectrochemical water splitting. <i>MRS Energy & Sustainability</i> , 2022, 9, 19-27.	1.3	1
3	Development of porous ZnO thin films for enhancing piezoelectric nanogenerators and force sensors. <i>Nano Energy</i> , 2021, 82, 105702.	8.2	48
4	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
5	Ex-Situ Study on the Evolution of Cubic Cu _{1.8} S Nanowires and Nanobelts with Two-Dimensional Multivariant Superlattices by Cation Exchange. <i>Journal of Physical Chemistry C</i> , 2021, 125, 14590-14598.	1.5	0
6	Review on ZnO-based piezotronics and piezoelectric nanogenerators: aspects of piezopotential and screening effect. <i>JPhys Materials</i> , 2021, 4, 044011.	1.8	43
7	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
8	Fabrication of flexible UV-B photodetectors made of Mg _x Zn _{1-x} O films on PI substrate for enhanced sensitivity by piezophototronic effect. <i>Applied Materials Today</i> , 2020, 20, 100705.	2.3	8
9	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
10	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
11	Enhancing charge transfer for ZnO nanorods based triboelectric nanogenerators through Ga doping. <i>Nano Energy</i> , 2019, 65, 104069.	8.2	35
12	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
13	Recent progress in microstructure development of inorganic one-dimensional nanostructures for enhancing performance of piezotronics and piezoelectric nanogenerators. <i>Nano Energy</i> , 2019, 55, 1-21.	8.2	50
14	Tunable Work Function of Mg _x Zn _{1-x} O as a Viable Friction Material for a Triboelectric Nanogenerator. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 1420-1425.	4.0	40
15	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
16	On enhancing capability of tribocharge transfer of ZnO nanorod arrays by Sb doping for anomalous output performance improvement of triboelectric nanogenerators. <i>Nano Energy</i> , 2018, 45, 311-318.	8.2	48
17	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
18	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

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19	Piezotronic materials and large-scale piezotronics array devices. MRS Bulletin, 2018, 43, 936-940.	1.7	30
20	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
21	Ultrahigh UV responsivity of single nonpolar a -axial GaN nanowire with asymmetric piezopotential via piezo-phototronic effect: Dependence of carrier screening effect on strain. Nano Energy, 2017, 34, 367-374.	8.2	21
22	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
23	Tuning the transport and magnetism in a Bi ₂ Se ₃ topological insulator by Sb doping. RSC Advances, 2017, 7, 47789-47795.	1.7	6
24	High-quality AlN grown with a single substrate temperature below 1200 Å°C. Scientific Reports, 2017, 7, 7135.	1.6	20
25	Optimal geometrical design of inertial vibration DC piezoelectric nanogenerators based on obliquely aligned InN nanowire arrays. Nanoscale, 2017, 9, 14039-14046.	2.8	20
26	Cu doped ZnO nanorods with controllable Cu content by using single metal organic precursors and their photocatalytic and luminescence properties. Journal of Alloys and Compounds, 2017, 691, 936-945.	2.8	35
27	The mechanism of the sodiation and desodiation in Super P carbon electrode for sodium-ion battery. Journal of Power Sources, 2017, 340, 14-21.	4.0	36
28	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
29	Ultraviolet photodetectors based on MgZnO thin film grown by RF magnetron sputtering. Thin Solid Films, 2016, 620, 170-174.	0.8	39
30	Porosity-induced full-range visible-light photodetection via ultrahigh broadband antireflection in ZnO nanowires. NPG Asia Materials, 2016, 8, e314-e314.	3.8	21
31	Efficiency enhancement of green light emitting diodes by improving the uniformity of embedded quantum dots in multiple quantum wells through working pressure control. Journal of Alloys and Compounds, 2016, 669, 156-160.	2.8	7
32	Derivation of the surface free energy of ZnO and GaN using in situ electron beam hole drilling. Nanoscale, 2016, 8, 634-640.	2.8	6
33	Bottom-Up Nano-heteroepitaxy of Wafer-Scale Semipolar GaN on (001) Si. Advanced Materials, 2015, 27, 4845-4850.	11.1	9
34	Ultrasensitive Thin-Film-Based Al _x Ga _{1-x} N Piezotronic Strain Sensors via Alloying-Enhanced Piezoelectric Potential. Advanced Materials, 2015, 27, 6289-6295.	11.1	30
35	Crystal Orientation Dynamics of Collective Zn dots before Preferential Nucleation. Scientific Reports, 2015, 5, 12533.	1.6	7
36	Synthesis and characterization of bis (acetylacetonato ²⁻ , O ²⁻) [zinc(ⁱⁱ)/copper(ⁱⁱ)] hybrid organic-inorganic complexes as solid metal organic precursors. Dalton Transactions, 2015, 44, 7982-7990.	1.6	5

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37	Self-powered n-Mg Zn O/p-Si photodetector improved by alloying-enhanced piezopotential through piezo-phototronic effect. <i>Nano Energy</i> , 2015, 11, 533-539.	8.2	47
38	Direct growth of hollow carbon nanorods on porous graphenic carbon film without catalysts. <i>Carbon</i> , 2015, 84, 272-279.	5.4	4
39	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
40	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
41	Nanogenerators: Optimization of the Output Efficiency of GaN Nanowire Piezoelectric Nanogenerators by Tuning the Free Carrier Concentration (<i>Adv. Energy Mater.</i> 16/2014). <i>Advanced Energy Materials</i> , 2014, 4, .	10.2	1
42	Electrically Conductive Ultrananocrystalline Diamond-Coated Natural Graphite-Copper Anode for New Long Life Lithium-Ion Battery. <i>Advanced Materials</i> , 2014, 26, 3724-3729.	11.1	51
43	Optimization of the Output Efficiency of GaN Nanowire Piezoelectric Nanogenerators by Tuning the Free Carrier Concentration. <i>Advanced Energy Materials</i> , 2014, 4, 1400392.	10.2	106
44	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
45	InN Nanowires: Energy Harvesting from the Obliquely Aligned InN Nanowire Array with a Surface Electron-Accumulation Layer (<i>Adv. Mater.</i> 6/2013). <i>Advanced Materials</i> , 2013, 25, 936-936.	11.1	1
46	Growth and Application of ZnO Nanostructures. <i>International Journal of Applied Ceramic Technology</i> , 2013, 10, 814-838.	1.1	6
47	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
48	Heteroepitaxial nucleation and growth of graphene nanowalls on silicon. <i>Carbon</i> , 2013, 54, 234-240.	5.4	37
49	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
50	Morphology of InN nanorods using spectroscopic Raman imaging. <i>Journal of Raman Spectroscopy</i> , 2013, 44, 791-794.	1.2	15
51	Is it viable to improve light output efficiency by nano-light-emitting diodes?. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	12
52	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
53	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
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	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
56	Crystal Face-Dependent Nanopiezotronics of an Obliquely Aligned InN Nanorod Array. Nano Letters, 2012, 12, 562-568.	4.5	60
57	Systematic studies of the nucleation and growth of ultrananocrystalline diamond films on silicon substrates coated with a tungsten layer. Journal of Applied Physics, 2012, 111, .	1.1	15
58	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
59	Studies of Electronic Excitations of Rectangular ZnO Nanorods by Electron Energy-Loss Spectroscopy. Plasmonics, 2012, 7, 123-130.	1.8	6
60	Single-step growth dynamics of core-shell GaN on Ga ₂ O ₃ freestanding nanoprotruded microbelts. Journal of Materials Science, 2012, 47, 3447-3453.	1.7	11
61	Enhanced ferromagnetism in grain boundary of Co-doped ZnO films: A magnetic force microscopy study. Applied Physics Letters, 2011, 98, 212509.	1.5	23
62	Anisotropic Outputs of a Nanogenerator from Oblique-Aligned ZnO Nanowire Arrays. ACS Nano, 2011, 5, 6707-6713.	7.3	56
63	Undoped and Ga-doped hexagonal platelet interconnected ZnS nanowires: Cathodoluminescence and metal-semiconductor electron transport transition. Scripta Materialia, 2011, 64, 761-764.	2.6	7
64	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
65	Optical properties of In _x Ga _{1-x} P/InP grown at high fluence Ga ⁺ implantation on InP using focused ion beam. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 324-327.	0.6	3
66	Characterization of wurtzite ZnO using valence electron energy loss spectroscopy. Physical Review B, 2011, 84, .	1.1	20
67	Confinement effects of CdSe nanocrystals intercalated into mesoporous silica. Applied Physics Letters, 2010, 96, 111907.	1.5	8
68	Growth and Valence Excitations of ZnO:M(Al, In, Sn) Hierarchical Nanostructures. Journal of Physical Chemistry C, 2010, 114, 18031-18036.	1.5	11
69	Enhanced spontaneous light emission by multiple surface plasmon coupling. Optics Express, 2010, 18, 9677.	1.7	7
70	The Growth of GaN Nanorods with Different Temperature by Molecular Beam Epitaxy. Journal of the Electrochemical Society, 2010, 157, K109.	1.3	11
71	Microstructure and Magnetic Properties of Ni:ZnO Nanorod/Zn:NiO Nanowall Composite Structures. Journal of Physical Chemistry C, 2010, 114, 16191-16196.	1.5	16
72	Interfacial defects controlled electrical and magnetotransport in Co/ZnO nanocomposites. Applied Physics Letters, 2009, 94, .	1.5	11

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73	GaAs _{0.7} Sb _{0.3} /GaAs type-II quantum well with an adjacent InAs quantum-dot stressor layer. Applied Physics Letters, 2009, 94, 111106.	1.5	2
74	Formation of carbon capsules from an amorphous carbon film by Ga and Ni/Co catalysts in a transmission electron microscope. Journal of Materials Research, 2009, 24, 1388-1394.	1.2	3
75	Defect-induced negative differential resistance of GaN nanowires measured by conductive atomic force microscopy. Applied Physics Letters, 2009, 94, .	1.5	19
76	FABRICATION OF BISMUTH NANOWIRE DEVICES USING FOCUSED ION BEAM MILLING. , 2009, , .		2
77	Surface optical phonon modes in ternary aligned crystalline InGaN/GaN multi-quantum well nanopillar arrays. Journal of Raman Spectroscopy, 2009, 40, 2044-2049.	1.2	23
78	Thermal stability of catalytically grown multi-walled carbon nanotubes observed in transmission electron microscopy. Applied Physics A: Materials Science and Processing, 2009, 94, 247-251.	1.1	3
79	Designing Various Self-Assembled ZnO Quantum Dots/Islands on Silicon with Distinctive Characteristics by Magnetron Sputter. Crystal Growth and Design, 2009, 9, 2021-2025.	1.4	24
80	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 nerstian phenomenon for pH and urea detection. , 2009, , .		0
81	The influence of mask area ratio on GaN regrowth by epitaxial lateral overgrowth. Journal of Physics and Chemistry of Solids, 2008, 69, 420-424.	1.9	7
82	Formation of coherent Ge shallow dome islands on Si(001) by ultra-high-vacuum ion beam sputter deposition. Applied Physics A: Materials Science and Processing, 2008, 91, 267-271.	1.1	11
83	Non-lithographic nanopatterning of InGaN/GaN multiple quantum well nanopillars by focused ion beams. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2186-2188.	0.8	2
84	Thermal Behaviors and Phase Evolution of Lead Zirconate Titanate Prepared by Sol-Gel Processing: The Role of the Pyrolysis Time before Calcination. Journal of the American Ceramic Society, 2008, 91, 2545-2552.	1.9	10
85	Growth and Characterization of Epitaxial Fe Nanoislands on Si(001): Size Effects on Ferromagnetic Anisotropy. Crystal Growth and Design, 2008, 8, 3885-3888.	1.4	1
86	Microstructures, surface areas, and oxygen absorption of Ti and Ti-Zr-V films grown using glancing-angle sputtering. Journal of Materials Research, 2008, 23, 579-587.	1.2	7
87	ZnO nanorods with two spatially distinct light emissions. Nanotechnology, 2008, 19, 285703.	1.3	12
88	High angle annular dark field and electron energy loss spectroscopy study on the substitution and distribution of cobalt in ZnO by multilayer growth. Journal of Applied Physics, 2008, 104, 083507.	1.1	3
89	Tunable magnetic order of Co nanoparticles and magnetotransport in Co-ZnO nanocomposites. Applied Physics Letters, 2008, 93, .	1.5	11
90	Recent Patents on Fabrication of Nanowires. Recent Patents on Nanotechnology, 2007, 1, 11-20.	0.7	15

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91	Anomalous formation of InGaN/GaN multiple-quantum-well nanopillar arrays by focused ion beam milling. <i>Nanotechnology</i> , 2007, 18, 445301.	1.3	14
92	Role of grain boundary and grain defects on ferromagnetism in Co:ZnO films. <i>Applied Physics Letters</i> , 2007, 90, 102506.	1.5	111
93	Self-assembled Zn/ZnO dots on silicon by RF magnetron sputter. , 2007, , .		1
94	Origins of efficient green light emission in phase-separated InGaN quantum wells. <i>Nanotechnology</i> , 2006, 17, 3734-3739.	1.3	52
95	Growth and field-emission properties of single-crystalline conic ZnO nanotubes. <i>Nanotechnology</i> , 2006, 17, 753-757.	1.3	30
96	Evidence of oxygen vacancy enhanced room-temperature ferromagnetism in Co-doped ZnO. <i>Applied Physics Letters</i> , 2006, 88, 242507.	1.5	361
97	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
98	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
99	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
100	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
101	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
102	Study of the dominant luminescence mechanism in InGaN/GaN multiple quantum wells comprised of ultrasmall InGaN quasi-quantum dots. <i>Applied Physics Letters</i> , 2005, 86, 121915.	1.5	36
103	Evidence of the Internal Domains for Inducing the Anomalously High Dielectric Constant of CaCu ₃ Ti ₄ O ₁₂ . <i>Chemistry of Materials</i> , 2005, 17, 5167-5171.	3.2	267
104	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
105	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
106	Quantitative characterization of self-assembled coherent islands. <i>Thin Solid Films</i> , 2003, 424, 2-8.	0.8	4
107	The relationship between nano-scale Sm ₂₁₁ /Sm ₁₂₃ interfaces and superconductivity of Sm-Ba-Cu-O materials. <i>IEEE Transactions on Applied Superconductivity</i> , 2003, 13, 3180-3183.	1.1	7
108	Characterization of Co-catalyzed Multiwalled Carbon Nanotubes by High-Resolution Transmission Electron Microscopy. <i>Materials Research Society Symposia Proceedings</i> , 2002, 737, 689.	0.1	0

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109	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
110	The Texture and Electrical Properties of Zr and ZrN _x Thin Films Deposited by Dc Sputtering. Materials Research Society Symposia Proceedings, 2002, 721, 1.	0.1	4
111	Evolution of Ge/Si(001) islands upon oxidation and water etching. Thin Solid Films, 2002, 415, 296-302.	0.8	12
112	High-angle annular dark-field imaging of self-assembled Ge islands on Si(001). Ultramicroscopy, 2001, 87, 79-88.	0.8	23
113	TEM measurement of strain in coherent quantum heterostructures. Ultramicroscopy, 2000, 84, 225-233.	0.8	16
114	Dome-to-pyramid shape transition in Ge/Si islands due to strain relaxation by interdiffusion. Applied Physics Letters, 2000, 77, 1623-1625.	1.5	39
115	Strain Evolution in Coherent Ge/Si Islands. Physical Review Letters, 2000, 84, 1958-1961.	2.9	77
116	Direct measurement of strain in a Ge island on Si(001). Applied Physics Letters, 1999, 75, 46-48.	1.5	40
117	Strain in Coherent Ge Quantum Islands on Si Measured by Transmission Electron Microscopy. Materials Research Society Symposia Proceedings, 1999, 571, 49.	0.1	4
118	Identification of Shape Transitions in Coherent Ge/Si Islands Using Transmission Electron Microscopy. Materials Research Society Symposia Proceedings, 1999, 583, 137.	0.1	0
119	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