

Gwo-Ching Wang

List of Publications by Year in descending order

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98
papers

3,541
citations

126708

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143772

57
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98
all docs

98
docs citations

98
times ranked

4554
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrafast optical switching properties of single-wall carbon nanotube polymer composites at 1.55 μm . Applied Physics Letters, 2002, 81, 975-977.	1.5	425
2	Novel Nano-Column and Nano-Flower Arrays by Glancing Angle Deposition. Nano Letters, 2002, 2, 351-354.	4.5	232
3	Diffusion-Controlled Epitaxy of Large Area Coalesced WSe_2 Monolayers on Sapphire. Nano Letters, 2018, 18, 1049-1056.	4.5	197
4	Photon Transport in One-Dimensional Incommensurately Epitaxial CsPbX_3 Arrays. Nano Letters, 2016, 16, 7974-7981.	4.5	124
5	H^2 -phase tungsten nanorod formation by oblique-angle sputter deposition. Applied Physics Letters, 2003, 83, 3096-3098.	1.5	116
6	Physical self-assembly and the nucleation of three-dimensional nanostructures by oblique angle deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 1778-1784.	0.9	112
7	Flexo-photovoltaic effect in MoS_2 . Nature Nanotechnology, 2021, 16, 894-901.	15.6	107
8	High-resolution low-energy electron diffraction study of $\text{Pb}(110)$ surface roughening transition. Physical Review Letters, 1989, 63, 1621-1624.	2.9	99
9	Kinetic Roughening in Polymer Film Growth by Vapor Deposition. Physical Review Letters, 2000, 85, 3229-3232.	2.9	84
10	Metal-coated Si springs: Nanoelectromechanical actuators. Applied Physics Letters, 2004, 84, 3657-3659.	1.5	81
11	Low temperature melting of copper nanorod arrays. Journal of Applied Physics, 2006, 99, 064304.	1.1	81
12	Quantitative island size determination in the chemisorbed layer $\text{W}(110) \text{p}(2 \times 1)\text{-O}$. Surface Science, 1979, 81, 69-89.	0.8	79
13	Vanadium disulfide flakes with nanolayered titanium disulfide coating as cathode materials in lithium-ion batteries. Nature Communications, 2019, 10, 1764.	5.8	73
14	Effect of interface roughness on hysteresis loops of ultrathin Co films from 2 to 30 ML on $\text{Cu}(001)$ surfaces. Surface Science, 1997, 373, 181-194.	0.8	70
15	FABRICATION OF Si NANOCOLUMNS AND Si SQUARE SPIRALS ON SELF-ASSEMBLED MONOLAYER COLLOID SUBSTRATES. International Journal of Nanoscience, 2002, 01, 87-97.	0.4	69
16	Substrate-Independent Palladium Atomic Layer Deposition. Chemical Vapor Deposition, 2003, 9, 258-264.	1.4	65
17	Stress reduction in tungsten films using nanostructured compliant layers. Journal of Applied Physics, 2004, 96, 5740-5746.	1.1	63
18	Plasma-Assisted Atomic Layer Deposition of Palladium. Chemical Vapor Deposition, 2005, 11, 60-66.	1.4	63

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19	Physical realization of two-dimensional Ising critical phenomena: Oxygen chemisorbed on the W(112) surface. <i>Physical Review B</i> , 1985, 31, 5918-5922.	1.1	55
20	A Method Toward Fabricating Semiconducting $3R\text{-NbS}_2$ Ultrathin Films. <i>Journal of Physical Chemistry C</i> , 2015, 119, 19763-19771.	1.5	50
21	Layer thickness dependence of CPP giant magnetoresistance in individual CoNi/Cu multilayer nanowires grown by electrodeposition. <i>Physical Review B</i> , 2007, 75, .	1.1	49
22	High-Crystallinity Epitaxial Sb_2Se_3 Thin Films on Mica for Flexible Near-Infrared Photodetectors. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 35222-35231.	4.0	47
23	Enhanced cold field emission from $\sim 100^\circ$ oriented W nanoemitters. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2004, 22, 1048.	1.6	45
24	Atomic Layer Deposition of Pd on an Oxidized Metal Substrate. <i>Chemical Vapor Deposition</i> , 2006, 12, 290-294.	1.4	44
25	Stress reduction in sputter deposited films using nanostructured compliant layers by high working-gas pressures. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2005, 23, 986-990.	0.9	43
26	A two-step dry process for Cs_2Snl_6 perovskite thin film. <i>Materials Research Letters</i> , 2017, 5, 540-546.	4.1	40
27	Nontrivial strength of van der Waals epitaxial interaction in soft perovskites. <i>Physical Review Materials</i> , 2018, 2, .	0.9	40
28	van der Waals Epitaxy of Antimony Islands, Sheets, and Thin Films on Single-Crystalline Graphene. <i>ACS Nano</i> , 2018, 12, 6100-6108.	7.3	38
29	Characterization of random rough surfaces by in-plane light scattering. <i>Journal of Applied Physics</i> , 1998, 84, 2571-2582.	1.1	36
30	A simple growth method for Nb_2O_5 films and their optical properties. <i>RSC Advances</i> , 2015, 5, 36129-36139.	1.7	36
31	Frequency-dependent electrical transport in carbon nanotubes. <i>Physical Review B</i> , 2001, 64, .	1.1	34
32	In situ reflection high energy electron diffraction surface pole figure study of biaxial texture evolution in anisotropic Mg nanoblades during shadowing growth. <i>Journal of Applied Physics</i> , 2007, 102, 014306.	1.1	34
33	Texture of Ru columns grown by oblique angle sputter deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2006, 24, 235-245.	0.9	33
34	Plasma-Enhanced Atomic Layer Deposition of Palladium on a Polymer Substrate. <i>Chemical Vapor Deposition</i> , 2007, 13, 307-311.	1.4	32
35	Evidence of enhanced electron-phonon coupling in ultrathin epitaxial copper films. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	31
36	Vacancy-induced disordering in the Pb(100) surface. <i>Physical Review B</i> , 1991, 44, 1306-1310.	1.1	30

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37	Real-time observation of initial stages of copper film growth on silicon oxide using reflection high-energy electron diffraction. <i>Journal of Applied Physics</i> , 2004, 96, 7071-7079.	1.1	30
38	Incident flux angle induced crystal texture transformation in nanostructured molybdenum films. <i>Journal of Applied Physics</i> , 2012, 112, 024303.	1.1	27
39	Revealing the Crystalline Integrity of Wafer-Scale Graphene on SiO ₂ /Si: An Azimuthal RHEED Approach. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 23081-23091.	4.0	27
40	Quantitative island size determination in the chemisorbed layer W(110)p(2Å-1)O. <i>Surface Science</i> , 1981, 107, 494-518.	0.8	26
41	Monolayer MoS ₂ on sapphire: an azimuthal reflection high-energy electron diffraction perspective. <i>2D Materials</i> , 2021, 8, 025003.	2.0	26
42	CdTe/ZnTe/GaAs Heterostructures for Single-Crystal CdTe Solar Cells. <i>Journal of Electronic Materials</i> , 2014, 43, 2895-2900.	1.0	25
43	Surface pole figures by reflection high-energy electron diffraction. <i>Applied Physics Letters</i> , 2006, 89, 241903.	1.5	24
44	van der Waals epitaxy of CdTe thin film on graphene. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	24
45	Epitaxial CdTe Thin Films on Mica by Vapor Transport Deposition for Flexible Solar Cells. <i>ACS Applied Energy Materials</i> , 2020, 3, 4589-4599.	2.5	24
46	Power-law scaling during shadowing growth of nanocolumns by oblique angle deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2007, 25, 160-166.	0.9	22
47	Reflection high-energy electron diffraction from carbon nanotubes. <i>Physical Review B</i> , 2001, 64, .	1.1	21
48	Reflection high-energy electron diffraction measurements of reciprocal space structure of 2D materials. <i>Nanotechnology</i> , 2016, 27, 485703.	1.3	21
49	van der Waals epitaxy of Ge films on mica. <i>Journal of Applied Physics</i> , 2017, 122, 185305.	1.1	20
50	Asymmetry of magneto-optical Kerr effect loops of Co nano-columns grown by oblique incident angle deposition. <i>Journal of Magnetism and Magnetic Materials</i> , 2004, 283, 65-70.	1.0	19
51	Layer-by-layer assembly of Zn(ii) and Ni(ii) 5,10,15,20-tetra(4-ethynylphenyl)porphyrin multilayers on Au using copper catalyzed azide-alkyne cycloaddition. <i>RSC Advances</i> , 2012, 2, 7513.	1.7	18
52	Characterization of pitting corrosion in aluminum films by light scattering. <i>Applied Physics Letters</i> , 1998, 73, 2432-2434.	1.5	17
53	Field Angle and Thickness Dependence of Coercivity in Electrodeposited CoNi-Cu Multilayer Nanowires. <i>IEEE Transactions on Magnetics</i> , 2006, 42, 2975-2977.	1.2	16
54	Monte Carlo simulation of submonolayer vapor-deposition polymerization. <i>Physical Review E</i> , 1999, 60, 4310-4318.	0.8	14

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55	Magnetization reversal of a thin polycrystalline cobalt film measured by the magneto-optic Kerr effect (MOKE) technique and field-dependent magnetic force microscopy. <i>Journal of Magnetism and Magnetic Materials</i> , 1999, 204, 79-89.	1.0	14
56	In situ measurement of thickness dependent electrical resistance of ultrathin Co films on SiO ₂ /Si(111) substrate. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2000, 18, 2992-2996.	0.9	14
57	Naturally formed ultrathin V ₂ O ₅ heteroepitaxial layer on VO ₂ /sapphire(001) film. <i>Applied Surface Science</i> , 2017, 419, 365-372.	3.1	14
58	Large Metallic Vanadium Disulfide Ultrathin Flakes for Spintronic Circuits and Quantum Computing Devices. <i>ACS Applied Nano Materials</i> , 2019, 2, 3684-3694.	2.4	14
59	Tunable 2D Group-IV Metal Alloys. <i>Advanced Materials</i> , 2021, 33, e2104265.	11.1	14
60	Field-induced cation migration in Cu oxide films by in situ scanning tunneling microscopy. <i>Applied Physics Letters</i> , 2003, 82, 4672-4674.	1.5	13
61	Deformation of amorphous silicon nanostructures subjected to monotonic and cyclic loading. <i>Journal of Materials Research</i> , 2008, 23, 328-335.	1.2	13
62	In situ reflection high energy electron diffraction study of dehydrogenation process of Pd coated Mg nanoblades. <i>Journal of Applied Physics</i> , 2008, 104, 033534.	1.1	13
63	Instrument response of reflection high energy electron diffraction pole figure. <i>Applied Surface Science</i> , 2014, 288, 458-465.	3.1	13
64	Single-Crystal CdTe Homojunction Structures for Solar Cell Applications. <i>Journal of Electronic Materials</i> , 2015, 44, 3118-3123.	1.0	12
65	Metalorganic vapor phase epitaxy of large size CdTe grains on mica through chemical and van der Waals interactions. <i>Physical Review Materials</i> , 2018, 2, .	0.9	12
66	Epitaxial Growth of Thick Ag/Si(111) Films. <i>Materials Research Society Symposia Proceedings</i> , 1987, 102, 271.	0.1	10
67	van der Waals epitaxy of SnS film on single crystal graphene buffer layer on amorphous SiO ₂ /Si. <i>Applied Surface Science</i> , 2018, 435, 759-768.	3.1	10
68	Anisotropic scaling of hard disk surface structures. <i>Journal of Applied Physics</i> , 2000, 88, 3361-3366.	1.1	9
69	Mechanical properties of porous methyl silsesquioxane and nanoclustering silica films using atomic force microscope. <i>Journal of Porous Materials</i> , 2010, 17, 11-18.	1.3	8
70	Metal-enhanced Ge _{1-x} Sn _x alloy film growth on glass substrates using a biaxial CaF ₂ buffer layer. <i>CrystEngComm</i> , 2014, 16, 8794-8804.	1.3	8
71	Analyses of orientational superlattice domains in epitaxial ZnTe thin films grown on graphene and mica. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	8
72	Novel Mechanisms on the Growth Morphology of Films. <i>Materials Research Society Symposia Proceedings</i> , 2002, 749, 1.	0.1	7

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73	Modular Approach for Metal-Semiconductor Heterostructures with Very Large Interface Lattice Misfit: A First-Principles Perspective. <i>Crystal Growth and Design</i> , 2016, 16, 2328-2334.	1.4	7
74	Large scale epitaxial graphite grown on twin free nickel(111)/spinel substrate. <i>CrystEngComm</i> , 2020, 22, 119-129.	1.3	7
75	Orientation domain dispersions in wafer scale epitaxial monolayer WSe ₂ on sapphire. <i>Applied Surface Science</i> , 2021, 567, 150798.	3.1	7
76	Retardation of oxidation in Co nanocolumns: Scanning tunneling microscopy study. <i>Applied Physics Letters</i> , 2002, 81, 4601-4603.	1.5	6
77	Growth of CdTe Films on Amorphous Substrates Using CaF ₂ Nanorods as a Buffer Layer. <i>Journal of Electronic Materials</i> , 2009, 38, 1600-1604.	1.0	6
78	Strain measurement of ultrathin epitaxial films using electron diffraction techniques. <i>Journal of Applied Physics</i> , 2019, 125, 082401.	1.1	6
79	A setup combining four-point probe and surface magneto-optical Kerr effect for measurements of magnetotransport and magnetic properties of ultrathin films in ultrahigh vacuum. <i>Review of Scientific Instruments</i> , 1998, 69, 1811-1813.	0.6	5
80	Uniaxial magnetic anisotropy in three-bilayer Co/Cu and Co/Al superlattices. <i>Thin Solid Films</i> , 2019, 681, 32-40.	0.8	5
81	Domain boundaries in incommensurate epitaxial layers on weakly interacting substrates. <i>Journal of Applied Physics</i> , 2021, 130, 065301.	1.1	5
82	Enhanced van der Waals epitaxy via electron transfer enabled interfacial dative bond formation. <i>Physical Review Materials</i> , 2017, 1, .	0.9	4
83	Near-surface stoichiometry of high temperature superconducting YBaCuO thin films. <i>Journal of Materials Research</i> , 1990, 5, 1392-1396.	1.2	3
84	Development of Experimental Techniques for Thermoelectric Properties Characterization of Low-Dimensional Structures. <i>Materials Research Society Symposia Proceedings</i> , 2003, 793, 244.	0.1	3
85	Physical Self-Assembly And Nano-Patterning. <i>Materials Research Society Symposia Proceedings</i> , 2004, 849, 171.	0.1	3
86	Orientation epitaxy of Ge _{1-x} Sn _x films grown on single crystal CaF ₂ substrates. <i>CrystEngComm</i> , 2016, 18, 2757-2769.	1.3	3
87	Defect Structure Analysis of Thick Epitaxial Films with Very Large Lattice Mismatch: Ag/Si(111) and Ag/Si(001).. <i>Materials Research Society Symposia Proceedings</i> , 1988, 138, 545.	0.1	2
88	Effect of Substrate Misorientation on Heteroepitaxy with Large Lattice Mismatch: Ag/Si(111). <i>Materials Research Society Symposia Proceedings</i> , 1989, 160, 225.	0.1	2
89	Reflection High-energy Electron Diffraction Study of Nanostructures: From Diffraction Patterns to Surface Pole Figure. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1184, 62.	0.1	1
90	Contact potential induced carrier localization in nanometer-thin Cu/Ru, Cu/Co, and Cu/Mo superlattices. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, .	0.9	1

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91	Voltage-Dependent Barrier Height of Electron Transport through Iron Porphyrin Molecular Junctions. <i>Journal of Physical Chemistry C</i> , 2021, 125, 7350-7357.	1.5	1
92	Morphology and Magnetic Phase Transitions of Monolayer-Range Fe Films on Au(001). <i>Materials Research Society Symposia Proceedings</i> , 1991, 231, 311.	0.1	0
93	High-Resolution Low Energy Electron Diffraction Study of Surface Instabilities and Growth Dynamics. <i>Materials Research Society Symposia Proceedings</i> , 1991, 237, 49.	0.1	0
94	In-Situ Characterization of Growth and Intermixing at a Heteroepitaxial Interface: Fe on Au(001). <i>Materials Research Society Symposia Proceedings</i> , 1993, 318, 13.	0.1	0
95	Fabrication and Imaging of Protein Crossover Structures. <i>Materials Research Society Symposia Proceedings</i> , 2002, 735, 361.	0.1	0
96	Enhanced Layer Coverage of Thin Films by Oblique Angle Deposition. <i>Materials Research Society Symposia Proceedings</i> , 2004, 859, 64.	0.1	0
97	Novel Ultrathin Mg Nanoblades for Hydrogen Storage. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1216, 1.	0.1	0
98	RHEED Pole Figure Measurements of Biaxial Thin Film Growth Front Evolution. <i>Materials Research Society Symposia Proceedings</i> , 2011, 1308, 40201.	0.1	0