Han-Chun Wu

List of Publications by Year
in descending order

114 papers	3,737 citations	125106 35 h-index	169272 56 g-index
114 all docs	114 docs citations	114 times ranked	7810 citing authors

#	Article	IF	Citations
1	CO2-permselective membrane reactor for steam reforming of methane. Journal of Membrane Science, 2022, 641, 119914.	4.1	14
2	POSS-containing polynorbornene with pendant perylene diimide: from a unique supramolecular structure to tunable luminescence properties. Journal of Materials Chemistry C, 2022, 10, 8791-8796.	2.7	2
3	Enhanced Magnetoresistance Effect in Graphene Coupled to a Ferromagnetic Oxide with Charge Orbital Ordering. Spin, 2022, 12, .	0.6	1
4	Phonon scattering mechanism in van der Waals heterostructures comprising of MoS2 and WS2 nanosheets. Materials Today: Proceedings, 2021, 45, 4612-4618.	0.9	3
5	Enhanced interlayer coupling and efficient photodetection response of in-situ grown MoS2â€“WS2 van der Waals heterostructures. Journal of Applied Physics, 2021, 129, .	1.1	13
6	Giant gauge factor of Van der Waals material based strain sensors. Nature Communications, 2021, 12, 2018.	5.8	62
7	Graphene/SnS₂ van der Waals Photodetector with High Photoresponsivity and High Photodetectivity for Broadband 365â€“2240 nm Detection. ACS Applied Materials & Interfaces, 2021, 13, 47198-47207.	4.0	18
8	High response and broadband photodetection by monolayer MoSe2 with vanadium doping and Mo vacancies. Applied Surface Science, 2021, 564, 150399.	3.1	10
9	Efficient Suppression of Charge Recombination in Self-Powered Photodetectors with Band-Aligned Transferred van der Waals Metal Electrodes. ACS Applied Materials & Interfaces, 2021, 13, 61799-61808.	4.0	13
10	Hydrogen production with carbon dioxide capture by dual-phase ceramic-carbonate membrane reactor via steam reforming of methane. Journal of Membrane Science, 2020, 598, 117780.	4.1	44
11	Amplifying photocurrent of graphene on GeSn film by sandwiching a thin oxide between them. Applied Physics Letters, 2020, 117, 152106.	1.5	1
12	Enhanced NO₂ Sensitivity in Schottky-Contacted n-Type SnS₂ Gas Sensors. ACS Applied Materials & Interfaces, 2020, 12, 26746-26754.	4.0	49
13	Photoelectrical properties of graphene/doped GeSn vertical heterostructures. RSC Advances, 2020, 10, 20921-20927.	1.7	3
14	Electrical Contact Barriers between a Three-Dimensional Metal and Layered SnS₂. ACS Applied Materials & Interfaces, 2020, 12, 15830-15836.	4.0	13
15	Prospects and Opportunities of 2D van der Waals Magnetic Systems. Annalen Der Physik, 2020, 532, 1900452.	0.9	76
16	High Spin Hall Conductivity in Largeâ€Area Typeâ€II Dirac Semimetal PtTe₂. Advanced Materials, 2020, 32, e2000513.	11.1	117
17	Highly Sensitive, Selective, Stable, and Flexible NO₂ Sensor Based on GaSe. Advanced Materials Technologies, 2020, 5, 1901085.	3.0	23
18	Sub-millimeter size high mobility single crystal MoSe₂ monolayers synthesized by NaCl-assisted chemical vapor deposition. RSC Advances, 2020, 10, 1580-1587.	1.7	23

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19	Mixed-conducting ceramic-carbonate dual-phase membranes: Gas permeation and counter-permeation. Journal of Membrane Science, 2020, 605, 118093.	4.1	13
20	Raman Spectroscopy of Dispersive Two-Dimensional Materials: A Systematic Study on MoS₂ Solution. Journal of Physical Chemistry C, 2020, 124, 11092-11099.	1.5	8
21	Charge density waves and degenerate modes in exfoliated monolayer 2H-TaS₂. IUCrJ, 2020, 7, 913-919.	1.0	2
22	Surface enhanced Raman scattering on ion-beam-deposited <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si30.svg"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">TiN</mml:mi></mml:mrow><mml:mrow><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:m substrates. Nuclear Instruments & Methods in Physics Research B, 2020, 472, 24-31.	0.6	6
23	High Selectivity Gas Sensing and Charge Transfer of SnSe₂. ACS Sensors, 2019, 4, 2546-2552.	4.0	73
24	Photo-enhanced gas sensing of SnS₂ with nanoscale defects. RSC Advances, 2019, 9, 626-635.	1.7	43
25	Magnetoresistance of Nanoscale Domain Walls Formed in Arrays of Parallel Nanowires. Spin, 2019, 09, 1950004.	0.6	0
26	Strategy for Fabricating Wafer-Scale Platinum Disulfide. ACS Applied Materials & Interfaces, 2019, 11, 8202-8209.	4.0	37
27	Enhanced NO₂ Sensing at Room Temperature with Graphene via Monodisperse Polystyrene Bead Decoration. ACS Omega, 2019, 4, 3812-3819.	1.6	33
28	Correction to â€œEffects of Oxygen Vacancy Orderâ€“Disorder Phase Transition on Air Separation by Perovskite Sorbentsâ€• Industrial & Engineering Chemistry Research, 2019, 58, 505-505.	1.8	0
29	Giant and Linear Piezoâ€Phototronic Response in Layered GaSe Nanosheets. Advanced Electronic Materials, 2018, 4, 1700447.	2.6	14
30	Threshold magnetoresistance in anistropic magnetic 2D transition metal dichalcogenides. Journal of Materials Chemistry C, 2018, 6, 3058-3064.	2.7	9
31	Dimensional construction and morphological tuning of heterogeneous MoS₂/NiS electrocatalysts for efficient overall water splitting. Journal of Materials Chemistry A, 2018, 6, 9833-9838.	5.2	114
32	Asymmetric Modulation on Exchange Field in a Graphene/BiFeO3 Heterostructure by External Magnetic Field. Nano Letters, 2018, 18, 2435-2441.	4.5	22
33	Characteristic modification by inserted metal layer and interface graphene layer in ZnO-based resistive switching structures. Chinese Physics B, 2018, 27, 027104.	0.7	0
34	Discovering the forbidden Raman modes at the edges of layered materials. Science Advances, 2018, 4, eaau6252.	4.7	33
35	CO2 permeation through asymmetric thin tubular ceramic-carbonate dual-phase membranes. Journal of Membrane Science, 2018, 564, 73-81.	4.1	32
36	Simulation and optimization of pressure swing adsorption process for high-temperature air separation by perovskite sorbents. Chemical Engineering Journal, 2018, 354, 62-74.	6.6	43

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37	Competition Between Anti-Phase Boundaries and Charge-Orbital Ordering in Epitaxial Stepped Fe₃O₄(100) Thin Films. Spin, 2017, 07, 1750001.	0.6	1
38	Large positive in-plane magnetoresistance induced by localized states at nanodomain boundaries in graphene. Nature Communications, 2017, 8, 14453.	5.8	27
39	Electronic Coupling between Graphene and Topological Insulator Induced Anomalous Magnetotransport Properties. ACS Nano, 2017, 11, 6277-6285.	7.3	16
40	Investigation of Tip-Enhanced Raman Spectroscopy on a Silver Nanohole Array Substrate. Plasmonics, 2017, 12, 1861-1867.	1.8	8
41	Simultaneous large continuous band gap tunability and photoluminescence enhancement in GaSe nanosheets via elastic strain engineering. Nano Energy, 2017, 32, 157-164.	8.2	41
42	Spin-polarized surface state transport in a topological Kondo insulator SmB6 nanowire. Physical Review B, 2017, 95, .	1.1	9
43	Poisoning Effect of H₂S on CO₂ Permeation of Samarium-Doped-Ceria/Carbonate Dual-Phase Membrane. Industrial & Engineering Chemistry Research, 2017, 56, 14662-14669.	1.8	17
44	General Strategy for Two-Dimensional Transition Metal Dichalcogenides by Ion Exchange. Chemistry of Materials, 2017, 29, 10019-10026.	3.2	18
45	Effects of Oxygen Vacancy Orderâ€“Disorder Phase Transition on Air Separation by Perovskite Sorbents. Industrial & Engineering Chemistry Research, 2017, 56, 6057-6064.	1.8	22
46	Ultra-sensitive graphene based mid-infrared plasmonic bio-chemical sensing using dielectric beads as a medium. Carbon, 2017, 122, 404-410.	5.4	11
47	Magnetic proximity effect in graphene coupled to a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>BiFe</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> nanoplate. Physical Review B, 2017, 95, .	1.1	57
48	Quantum Confinement and Gas Sensing of Mechanically Exfoliated GaSe. Advanced Materials Technologies, 2017, 2, 1600197.	3.0	33
49	Composite Fe3O4â€“W(100) probes for scanning tunneling microscopy. Journal of Applied Physics, 2017, 122, 235301.	1.1	3
50	Anomalous Anisotropic Magnetoresistance of Antiferromagnetic Epitaxial Bimetallic Films: Mn₂Au and Mn₂Au/Fe Bilayers. Advanced Functional Materials, 2016, 26, 5884-5892.	7.8	16
51	Down-conversion luminescence from (Ce, Yb) co-doped oxygen-rich silicon oxides. Journal of Applied Physics, 2016, 119, 123105.	1.1	6
52	Quantitative secondary electron imaging for work function extraction at atomic level and layer identification of graphene. Scientific Reports, 2016, 6, 21045.	1.6	26
53	Gate-Tunable Tunneling Resistance in Graphene/Topological Insulator Vertical Junctions. ACS Nano, 2016, 10, 3816-3822.	7.3	33
54	Surface enhanced Raman scattering of monolayer MX2 with metallic nano particles. Scientific Reports, 2016, 6, 30320.	1.6	31

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55	Probing thermal expansion coefficients of monolayers using surface enhanced Raman scattering. RSC Advances, 2016, 6, 99053-99059.	1.7	20
56	Strong enhancement of ultra-violet emission by Ce doping of ZnO sputtered films. Materials Letters, 2016, 162, 53-55.	1.3	13
57	Spin-dependent transport properties of Fe3O4/MoS2/Fe3O4 junctions. Scientific Reports, 2015, 5, 15984.	1.6	53
58	Influence of anisotropic strain relaxation on the magnetoresistance properties of epitaxial Fe3O4 (110) films. Journal of Applied Physics, 2015, 118, 173903.	1.1	3
59	Enhanced Shubnikovâ€“De Haas Oscillation in Nitrogen-Doped Graphene. ACS Nano, 2015, 9, 7207-7214.	7.3	19
60	Electrical-field-driven metalâ€“insulator transition tuned with self-aligned atomic defects. Nanoscale, 2015, 7, 14055-14061.	2.8	5
61	Nanopatterning and Electrical Tuning of MoS₂ Layers with a Subnanometer Helium Ion Beam. Nano Letters, 2015, 15, 5307-5313.	4.5	171
62	Transport Gap Opening and High Onâ€“Off Current Ratio in Trilayer Graphene with Self-Aligned Nanodomain Boundaries. ACS Nano, 2015, 9, 8967-8975.	7.3	21
63	Zeeman effect on surface electron transport in topological insulator Bi₂Se₃nanoribbons. Nanoscale, 2015, 7, 16687-16694.	2.8	36
64	Magnetic and transport properties of epitaxial stepped Fe3O4(100) thin films. Applied Physics Letters, 2014, 105, 132408.	1.5	11
65	Magnetic moments in graphene with vacancies. Nanoscale, 2014, 6, 8814.	2.8	53
66	Topological Surface State Enhanced Photothermoelectric Effect in Bi₂Se₃ Nanoribbons. Nano Letters, 2014, 14, 4389-4394.	4.5	79
67	Magnetic and transport properties of epitaxial thin film MgFe2O4 grown on MgO (100) by molecular beam epitaxy. Scientific Reports, 2014, 4, 7012.	1.6	24
68	Magnetization States of All-Oxide Spin Valves Controlled by Charge-orbital Ordering of Coupled Ferromagnets. Scientific Reports, 2013, 3, 1830.	1.6	36
69	Correlation between charge-transfer and rotation of C60 on WO2/W(110). Nanoscale, 2013, 5, 3380.	2.8	10
70	Negative differential resistances in graphene double barrier resonant tunneling diodes. Applied Physics Letters, 2013, 102, .	1.5	37
71	Synthesis and Quantum Transport Properties of Bi2Se3 Topological Insulator Nanostructures. Scientific Reports, 2013, 3, 1264.	1.6	95
72	Layer-by-layer assembly of vertically conducting graphene devices. Nature Communications, 2013, 4, 1921.	5.8	95

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73	Ultraviolet Irradiationâ€Controlled Memory Effect in Graphene Fieldâ€Effect Transistors. Small, 2013, 9, 2240-2244.	5.2	16
74	Ballistic collective group delay and its Goosâ€“HÃnchen component in graphene. Journal of Physics Condensed Matter, 2013, 25, 355301.	0.7	9
75	Magnetoresistance in graphene under quantum limit regime. Applied Physics Letters, 2013, 102, .	1.5	19
76	Positive exchange bias in thin film multilayers produced with nano-oxide layer. Applied Physics Letters, 2013, 102, 252406.	1.5	2
77	Synthesis and field emission properties of topological insulator Bi₂Se₃nanoflake arrays. Nanotechnology, 2012, 23, 305704.	1.3	25
78	Transversal magneto-resistance in epitaxial Fe₃O₄ and Fe₃O₄/NiO exchange biased system. Applied Physics Letters, 2012, 101, 052402.	1.5	16
79	Surface plasmon on topological insulator/dielectric interface enhanced ZnO ultraviolet photoluminescence. AIP Advances, 2012, 2, .	0.6	12
80	Mn₂Au: Bodyâ€Centeredâ€Tetragonal Bimetallic Antiferromagnets Grown by Molecular Beam Epitaxy. Advanced Materials, 2012, 24, 6374-6379.	11.1	40
81	Structural and magnetic properties of epitaxial Co2FeAl films grown on MgO substrates for different growth temperatures. Acta Materialia, 2012, 60, 6714-6719.	3.8	18
82	Strain induced exciton fine-structure splitting and shift in bent ZnO microwires. Scientific Reports, 2012, 2, 452.	1.6	64
83	Graphene/ZnO nanowire/graphene vertical structure based fast-response ultraviolet photodetector. Applied Physics Letters, 2012, 100, .	1.5	182
84	Domain wall configuration and magneto-transport properties in dual spin-valve with nanoconstriction. Applied Physics Letters, 2012, 100, 242409.	1.5	2
85	Giant Goos-HÃnchen shift in graphene double-barrier structures. Applied Physics Letters, 2012, 100, 253116.	1.5	56
86	Large Magnetoresistance in Few Layer Graphene Stacks with Current Perpendicular to Plane Geometry. Advanced Materials, 2012, 24, 1862-1866.	11.1	66
87	Temperature dependent coercivity crossover in pseudo-spin-valve magnetic tunnel junctions with perpendicular anisotropy. Applied Physics Letters, 2011, 99, .	1.5	12
88	Strain dependent resistance in chemical vapor deposition grown graphene. Applied Physics Letters, 2011, 99, .	1.5	200
89	Luminescence blue-shift of CdSe nanowires beyond the quantum confinement regime. Applied Physics Letters, 2011, 99, 103103.	1.5	29
90	Memory and Threshold Resistance Switching in Ni/NiO Coreâ€“Shell Nanowires. Nano Letters, 2011, 11, 4601-4606.	4.5	136

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91	Thickness dependence of the effective damping in epitaxial Fe3O4/MgO thin films. Journal of Applied Physics, 2011, 109, 013907.	1.1	27
92	Magnetotransport and Trapping of Magnetic Domain Walls in Spin Valves With Nanoconstrictions. IEEE Transactions on Magnetics, 2011, 47, 2436-2439.	1.2	5
93	Self-assembly and ordering of C60 on the WO2/W(110) surface. Nano Research, 2011, 4, 194-203.	5.8	19
94	Siteâ€Specific Transferâ€Printing of Individual Graphene Microscale Patterns to Arbitrary Surfaces. Advanced Materials, 2011, 23, 3938-3943.	11.1	55
95	Improved performance of ZnO nanowire field-effect transistors via focused ion beam treatment. Nanotechnology, 2011, 22, 375201.	1.3	16
96	Rotational transitions in a C<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>60</mml:mn></mml:msub></mml:math>monolayer on the WO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub><mml:mo>/</mml:mo></mml:mrow></mml:math>W(110) surface. Physical Review B, 2011, 84, .	1.1	16
97	Anomalous magnetization reversal due to proximity effect of antiphase boundaries. Physical Review B, 2011, 84, .	1.1	18
98	Magnetoresistance of Fe3O4-graphene-Fe3O4 junctions. Applied Physics Letters, 2011, 98, 052511.	1.5	17
99	Observation of both classical and quantum magnetoresistance in bilayer graphene. Europhysics Letters, 2011, 94, 57004.	0.7	19
100	From positive to negative magnetoresistance in graphene with increasing disorder. Applied Physics Letters, 2011, 98, .	1.5	69
101	Oxidation of W(110) studied by LEED and STM. Surface Science, 2010, 604, 1548-1551.	0.8	17
102	Gate voltage dependence of weak localization in bilayer graphene. Applied Physics Letters, 2010, 97, 163110.	1.5	16
103	The effect of deposition power on the electrical properties of Al-doped zinc oxide thin films. Applied Physics Letters, 2010, 97, .	1.5	33
104	Probing One Antiferromagnetic Antiphase Boundary and Single Magnetite Domain Using Nanogap Contacts. Nano Letters, 2010, 10, 1132-1136.	4.5	49
105	Ferrimagnetism of the magnetoelectric compound <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Cu</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:msu by<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mtext>S</mml:mtext><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>77</mml:mn></mml:. Physical Review B, 2010, 82, .	1.1	71
106	Inverted magnetoresistance in dual spin valve structures with a synthetic antiferromagnetic free layer. Applied Physics Letters, 2009, 95, 222506.	1.5	2
107	Tunneling interlayer exchange coupling between oxide ferrimagnets: Analysis for Fe3O4/vac/Fe3O4 case. Applied Physics Letters, 2009, 94, 262506.	1.5	11
108	Antiferromagnetic interlayer exchange coupling between Fe3O4 layers across a nonmagnetic MgO dielectric layer. Applied Physics Letters, 2008, 92, .	1.5	57

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109	Magnetic Properties of Ultrathin Magnetite Films Grown by Molecular Beam Epitaxy. IEEE Transactions on Magnetics, 2008, 44, 2628-2631.	1.2	15
110	Concept of a nanowire array magnetoresistance device. Applied Physics Letters, 2008, 92, 023107.	1.5	18
111	Giant magnetic moment in epitaxialFe3O4thin films on MgO(100). Physical Review B, 2008, 77, .	1.1	83
112	Magnetic moment investigations of epitaxial magnetite thin films. Journal of Applied Physics, 2008, 103, 07D715.	1.1	13
113	Giant persistent current in a quantum ring with multiple arms. Physical Review B, 2003, 68, .	1.1	29
114	Rashba spin-orbit effect on traversal time in ferromagnetic/semiconductor/ferromagnetic heterojunction. Journal of Applied Physics, 2003, 93, 5316-5320.	1.1	35