

Po-Wen Chiu

List of Publications by Year in Descending Order

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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.

97
papers

5,500
citations

37
h-index

73
g-index

105
ext. papers

6,225
ext. citations

10.2
avg, IF

5.58
L-index

#	Paper	IF	Citations
97	Embedment of Multiple Transition Metal Impurities into WS Monolayer for Bandstructure Modulation. <i>Small</i> , 2021 , 17, e2007171	11	0
96	Artificial mechanoreceptor based on van der Waals stacking structure. <i>Matter</i> , 2021 , 4, 1598-1610	12.7	0
95	Photoactive Electro-Controlled Visual Perception Memory for Emulating Synaptic Metaplasticity and Hebbian Learning. <i>Advanced Functional Materials</i> , 2021 , 31, 2105345	15.6	4
94	Mimic Drug Dosage Modulation for Neuroplasticity Based on Charge-Trap Layered Electronics. <i>Advanced Functional Materials</i> , 2021 , 31, 2005182	15.6	3
93	Oxidation and Degradation of WS Monolayers Grown by NaCl-Assisted Chemical Vapor Deposition: Mechanism and Prevention. <i>Nanoscale</i> , 2021 , 13, 16629-16640	7.7	2
92	Formation of Highly Doped Nanostripes in 2D Transition Metal Dichalcogenides via a Dislocation Climb Mechanism. <i>Advanced Materials</i> , 2021 , 33, e2007819	24	3
91	Two-dimensional iodine-monofluoride epitaxy on WSe ₂ . <i>Npj 2D Materials and Applications</i> , 2021 , 5,	8.8	2
90	Resonance Raman enhancement by the intralayer and interlayer electron-phonon processes in twisted bilayer graphene. <i>Scientific Reports</i> , 2021 , 11, 17206	4.9	1
89	Scalable T-Gate Aligned Gr ₁ WS ₂ Gr Radio-Frequency Field-Effect Transistors. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 3898-3905	4	6
88	On-Wafer FinFET-Based EUV/eBeam Detector Arrays for Advanced Lithography Processes. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 2406-2413	2.9	1
87	Cathodic plasma-induced syntheses of graphene nanosheet/MnO ₂ /WO ₃ architectures and their use in supercapacitors. <i>Electrochimica Acta</i> , 2020 , 342, 136043	6.7	15
86	A Graphene/Polycrystalline Silicon Photodiode and Its Integration in a Photodiode-Oxide-Semiconductor Field Effect Transistor. <i>Micromachines</i> , 2020 , 11,	3.3	1
85	Photogating WS Photodetectors Using Embedded WSe Charge Puddles. <i>ACS Nano</i> , 2020 , 14, 4559-4566	16.7	40
84	Graphene-Transition Metal Dichalcogenide Heterojunctions for Scalable and Low-Power Complementary Integrated Circuits. <i>ACS Nano</i> , 2020 , 14, 985-992	16.7	20
83	Co Silicide With Low Contact Resistivity Formed by Atomic Layer Deposited Cobalt and Subsequent Annealing. <i>IEEE Electron Device Letters</i> , 2020 , 41, 139-142	4.4	
82	Nearly Epitaxial Low-Resistive Co Germanide Formed by Atomic Layer Deposited Cobalt and Laser Thermal Annealing. <i>IEEE Electron Device Letters</i> , 2020 , 41, 272-275	4.4	1
81	Fast growth of large-grain and continuous MoS films through a self-capping vapor-liquid-solid method. <i>Nature Communications</i> , 2020 , 11, 3682	17.4	36

80	Inverse paired-pulse facilitation in neuroplasticity based on interface-boosted charge trapping layered electronics. <i>Nano Energy</i> , 2020 , 77, 105258	17.1	9
79	Design of Core-Shell Quantum Dots-3D WS Nanowall Hybrid Nanostructures with High-Performance Bifunctional Sensing Applications. <i>ACS Nano</i> , 2020 , 14, 12668-12678	16.7	23
78	Scanning Moiré Fringe Method: A Superior Approach to Perceive Defects, Interfaces, and Distortion in 2D Materials. <i>ACS Nano</i> , 2020 , 14, 6034-6042	16.7	6
77	High-Mobility InSe Transistors: The Nature of Charge Transport. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 35969-35976	9.5	13
76	Gigahertz Field-Effect Transistors with CMOS-Compatible Transfer-Free Graphene. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 6336-6343	9.5	16
75	End-Bonded Metal Contacts on WSe Field-Effect Transistors. <i>ACS Nano</i> , 2019 , 13, 8146-8154	16.7	30
74	Ultrafast Monolayer In/Gr-WS-Gr Hybrid Photodetectors with High Gain. <i>ACS Nano</i> , 2019 , 13, 3269-3279	16.7	26
73	Intralayer and interlayer electron-phonon interactions in twisted graphene heterostructures. <i>Nature Communications</i> , 2018 , 9, 1221	17.4	63
72	A Graphene-Based Filament Transistor with Sub-10 mVdec ⁻¹ Subthreshold Swing. <i>Advanced Electronic Materials</i> , 2018 , 4, 1700608	6.4	12
71	Twisted bilayer graphene photoluminescence emission peaks at van Hove singularities. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 175302	1.8	13
70	Transparent Antiradiative Ferroelectric Heterostructure Based on Flexible Oxide Heteroepitaxy. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 30574-30580	9.5	19
69	Stable 1T Tungsten Disulfide Monolayer and Its Junctions: Growth and Atomic Structures. <i>ACS Nano</i> , 2018 , 12, 12080-12088	16.7	51
68	A novel artificial synapse with dual modes using bilayer graphene as the bottom electrode. <i>Nanoscale</i> , 2017 , 9, 9275-9283	7.7	55
67	Flexible ferroelectric element based on van der Waals heteroepitaxy. <i>Science Advances</i> , 2017 , 3, e1700121	14.3	130
66	High-Performance Organic Light-Emitting Diode with Substitutionally Boron-Doped Graphene Anode. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 14998-15004	9.5	35
65	Unexpected Huge Dimerization Ratio in One-Dimensional Carbon Atomic Chains. <i>Nano Letters</i> , 2017 , 17, 494-500	11.5	27
64	Surface Oxidation Doping to Enhance Photogenerated Carrier Separation Efficiency for Ultrahigh Gain Indium Selenide Photodetector. <i>ACS Photonics</i> , 2017 , 4, 2930-2936	6.3	34
63	Scalable van der Waals Heterojunctions for High-Performance Photodetectors. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 36181-36188	9.5	23

62	Raman Excitation Profile of the G-band Enhancement in Twisted Bilayer Graphene. <i>Brazilian Journal of Physics</i> , 2017 , 47, 589-593	1.2	8
61	High-Mobility InSe Transistors: The Role of Surface Oxides. <i>ACS Nano</i> , 2017 , 11, 7362-7370	16.7	132
60	Enhanced hot luminescence at van Hove singularities in twisted bilayer graphene 2017 ,		1
59	Heteroepitaxy of FeO/Muscovite: A New Perspective for Flexible Spintronics. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 33794-33801	9.5	83
58	Oxide Heteroepitaxy for Flexible Optoelectronics. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 32401-32407	9.3	72
57	van der Waal Epitaxy of Flexible and Transparent VO ₂ Film on Muscovite. <i>Chemistry of Materials</i> , 2016 , 28, 3914-3919	9.6	84
56	High-performance and high-sensitivity applications of graphene transistors with self-assembled monolayers. <i>Biosensors and Bioelectronics</i> , 2016 , 77, 1008-15	11.8	17
55	Robust room temperature valley polarization in monolayer and bilayer WS ₂ . <i>Nanoscale</i> , 2016 , 8, 6035-42	7.7	50
54	Van der Waals epitaxy of functional MoO ₂ film on mica for flexible electronics. <i>Applied Physics Letters</i> , 2016 , 108, 253104	3.4	68
53	Postsynthesis of h-BN/Graphene Heterostructures Inside a STEM. <i>Small</i> , 2016 , 12, 252-9	11	20
52	Origin of van Hove singularities in twisted bilayer graphene. <i>Carbon</i> , 2015 , 90, 138-145	10.4	23
51	Ultrafast and low temperature synthesis of highly crystalline and patternable few-layers tungsten diselenide by laser irradiation assisted selenization process. <i>ACS Nano</i> , 2015 , 9, 4346-53	16.7	30
50	Three-fold rotational defects in two-dimensional transition metal dichalcogenides. <i>Nature Communications</i> , 2015 , 6, 6736	17.4	149
49	Single-Layer ReS ₂ Two-Dimensional Semiconductor with Tunable In-Plane Anisotropy. <i>ACS Nano</i> , 2015 , 9, 11249-57	16.7	286
48	Characterization of Graphene and Transition Metal Dichalcogenide at the Atomic Scale. <i>Journal of the Physical Society of Japan</i> , 2015 , 84, 121005	1.5	5
47	Structural and Chemical Dynamics of Pyridinic-Nitrogen Defects in Graphene. <i>Nano Letters</i> , 2015 , 15, 7408-13	11.5	157
46	Exploring the Single Atom Spin State by Electron Spectroscopy. <i>Physical Review Letters</i> , 2015 , 115, 206803	9.3	63
45	Memory Devices: In Situ Tuning of Switching Window in a Gate-Controlled Bilayer Graphene-Electrode Resistive Memory Device (Adv. Mater. 47/2015). <i>Advanced Materials</i> , 2015 , 27, 7766-7766	24	1

44	In Situ Tuning of Switching Window in a Gate-Controlled Bilayer Graphene-Electrode Resistive Memory Device. <i>Advanced Materials</i> , 2015 , 27, 7767-74	24	40
43	Direct growth of self-crystallized graphene and graphite nanoballs with Ni vapor-assisted growth: from controllable growth to material characterization. <i>Scientific Reports</i> , 2014 , 4, 4739	4.9	37
42	Effect of adsorbents on electronic transport in graphene 2014 , 265-291		2
41	Conduction control at ferroic domain walls via external stimuli. <i>Nanoscale</i> , 2014 , 6, 10524-9	7.7	16
40	Gating electron-hole asymmetry in twisted bilayer graphene. <i>ACS Nano</i> , 2014 , 8, 6962-9	16.7	17
39	Layer-dependent optical conductivity in atomic thin WS ₂ by reflection contrast spectroscopy. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 16020-6	9.5	28
38	Probing interlayer coupling in twisted single-crystal bilayer graphene by Raman spectroscopy. <i>Journal of Raman Spectroscopy</i> , 2014 , 45, 912-917	2.3	7
37	Growth and Raman spectra of single-crystal trilayer graphene with different stacking orientations. <i>ACS Nano</i> , 2014 , 8, 10766-73	16.7	39
36	Scalable graphite/copper bishell composite for high-performance interconnects. <i>ACS Nano</i> , 2014 , 8, 275-287	16.7	33
35	Gigahertz flexible graphene transistors for microwave integrated circuits. <i>ACS Nano</i> , 2014 , 8, 7663-70	16.7	76
34	In situ observation of step-edge in-plane growth of graphene in a STEM. <i>Nature Communications</i> , 2014 , 5, 4055	17.4	45
33	All-carbon field emission device by direct synthesis of graphene and carbon nanotube. <i>Diamond and Related Materials</i> , 2013 , 31, 42-46	3.5	24
32	Fully Transparent Resistive Memory Employing Graphene Electrodes for Eliminating Undesired Surface Effects. <i>Proceedings of the IEEE</i> , 2013 , 101, 1732-1739	14.3	56
31	Hybrid ZnO NR/graphene structures as advanced optoelectronic devices with high transmittance. <i>Nanoscale Research Letters</i> , 2013 , 8, 350	5	8
30	Twisting bilayer graphene superlattices. <i>ACS Nano</i> , 2013 , 7, 2587-94	16.7	139
29	Ferroelectric control of the conduction at the LaAlO ₃ /SrTiO ₃ heterointerface. <i>Advanced Materials</i> , 2013 , 25, 3357-64	24	78
28	High mobility flexible graphene field-effect transistors with self-healing gate dielectrics. <i>ACS Nano</i> , 2012 , 6, 4469-74	16.7	146
27	Modifying optical properties of GaN nanowires by Ga ₂ O ₃ overgrowth. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2012 , 30, 011802	1.3	5

26	Remote catalyzation for direct formation of graphene layers on oxides. <i>Nano Letters</i> , 2012 , 12, 1379-84	11.5	130
25	Magnetotransport at domain walls in BiFeO ₃ . <i>Physical Review Letters</i> , 2012 , 108, 067203	7.4	120
24	Graphene annealing: how clean can it be?. <i>Nano Letters</i> , 2012 , 12, 414-9	11.5	675
23	Metal-Free Growth of Nanographene on Silicon Oxides for Transparent Conducting Applications. <i>Advanced Functional Materials</i> , 2012 , 22, 2123-2128	15.6	142
22	Clean transfer of graphene for isolation and suspension. <i>ACS Nano</i> , 2011 , 5, 2362-8	16.7	241
21	Tuning of Charge Densities in Graphene by Molecule Doping. <i>Advanced Functional Materials</i> , 2011 , 21, 2687-2692	15.6	91
20	Characterization of graphene grown on bulk and thin film nickel. <i>Langmuir</i> , 2011 , 27, 13748-53	4	17
19	Defect Engineering for Graphene Tunable Doping. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1283, 1		
18	Tailoring point electron sources of individual carbon nanotubes. <i>Applied Physics Letters</i> , 2010 , 97, 073119	3.4	3
17	Controllable graphene N-doping with ammonia plasma. <i>Applied Physics Letters</i> , 2010 , 96, 133110	3.4	413
16	Fabrication and characteristics of ultrashort-channel carbon nanotube field-effect transistors. <i>Applied Physics Letters</i> , 2008 , 92, 152111	3.4	4
15	Carbon nanotube T junctions: formation and properties. <i>Journal of Nanoscience and Nanotechnology</i> , 2008 , 8, 88-98	1.3	1
14	Transition from direct tunneling to field emission in carbon nanotube intramolecular junctions. <i>Applied Physics Letters</i> , 2008 , 92, 042107	3.4	27
13	High-performance carbon nanotube network transistors for logic applications. <i>Applied Physics Letters</i> , 2008 , 92, 063511	3.4	8
12	Attenuation of electromagnetic waves by carbon nanotube composites. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008 , 40, 2425-2429	3	23
11	Carbon nanotube nanocontact in T-junction structures. <i>Applied Physics Letters</i> , 2007 , 91, 102109	3.4	11
10	Band-structure modulation in carbon nanotube T junctions. <i>Physical Review Letters</i> , 2004 , 92, 246802	7.4	30
9	Temperature dependence of conductance character in nanotube peapods. <i>Applied Physics A: Materials Science and Processing</i> , 2003 , 76, 463-467	2.6	21

8	V2O5 nanofibre sheet actuators. <i>Nature Materials</i> , 2003 , 2, 316-9	27	230
7	Nonlinear Behavior in the Thermopower of Doped Carbon Nanotubes Due to Strong, Localized States. <i>Nano Letters</i> , 2003 , 3, 839-842	11.5	66
6	Substitutional boron-doping of carbon nanotubes. <i>Current Applied Physics</i> , 2002 , 2, 473-477	2.6	13
5	Chemical functionalization of single walled carbon nanotubes. <i>Current Applied Physics</i> , 2002 , 2, 497-501	2.6	102
4	Interconnection of carbon nanotubes by chemical functionalization. <i>Applied Physics Letters</i> , 2002 , 80, 3811-3813	3.4	172
3	Growth and electrical transport of germanium nanowires. <i>Journal of Applied Physics</i> , 2001 , 90, 5747-5751	1.5	135
2	Temperature-induced change from p to n conduction in metallofullerene nanotube peapods. <i>Applied Physics Letters</i> , 2001 , 79, 3845-3847	3.4	61
1	Rational Design on Wrinkle-Less Transfer of Transition Metal Dichalcogenide Monolayer by Adjustable Wettability-Assisted Transfer Method. <i>Advanced Functional Materials</i> , 2104978	15.6	2