Po-Wen Chiu

List of Publications by Citations

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	Graphene annealing: how clean can it be?. *Nano Letters*, **2012**, 12, 414-9	11.5	675
96	Controllable graphene N-doping with ammonia plasma. *Applied Physics Letters*, **2010**, 96, 133110	3.4	413
95	Single-Layer ReS□Two-Dimensional Semiconductor with Tunable In-Plane Anisotropy. *ACS Nano*, **2015**, 9, 11249-57	16.7	286
94	Clean transfer of graphene for isolation and suspension. *ACS Nano*, **2011**, 5, 2362-8	16.7	241
93	V2O5 nanofibre sheet actuators. *Nature Materials*, **2003**, 2, 316-9	27	230
92	Interconnection of carbon nanotubes by chemical functionalization. *Applied Physics Letters*, **2002**, 80, 3811-3813	3.4	172
91	Structural and Chemical Dynamics of Pyridinic-Nitrogen Defects in Graphene. *Nano Letters*, **2015**, 15, 7408-13	11.5	157
90	Three-fold rotational defects in two-dimensional transition metal dichalcogenides. *Nature Communications*, **2015**, 6, 6736	17.4	149
89	High mobility flexible graphene field-effect transistors with self-healing gate dielectrics. *ACS Nano*, **2012**, 6, 4469-74	16.7	146
88	Metal-Free Growth of Nanographene on Silicon Oxides for Transparent Conducting Applications. *Advanced Functional Materials*, **2012**, 22, 2123-2128	15.6	142
87	Twisting bilayer graphene superlattices. *ACS Nano*, **2013**, 7, 2587-94	16.7	139
86	Growth and electrical transport of germanium nanowires. *Journal of Applied Physics*, **2001**, 90, 5747-5751	2.5	135
85	High-Mobility InSe Transistors: The Role of Surface Oxides. *ACS Nano*, **2017**, 11, 7362-7370	16.7	132
84	Flexible ferroelectric element based on van der Waals heteroepitaxy. *Science Advances*, **2017**, 3, e1700121	14.3	130
83	Remote catalyzation for direct formation of graphene layers on oxides. *Nano Letters*, **2012**, 12, 1379-84	11.5	130
82	Magnetotransport at domain walls in BiFeO3. *Physical Review Letters*, **2012**, 108, 067203	7.4	120
81	Chemical functionalization of single walled carbon nanotubes. *Current Applied Physics*, **2002**, 2, 497-501	2.6	102

80	Tuning of Charge Densities in Graphene by Molecule Doping. *Advanced Functional Materials*, **2011**, 21, 2687-2692	15.6	91
79	van der Waal Epitaxy of Flexible and Transparent VO2 Film on Muscovite. *Chemistry of Materials*, **2016**, 28, 3914-3919	9.6	84
78	Heteroepitaxy of FeO/Muscovite: A New Perspective for Flexible Spintronics. *ACS Applied Materials & Interfaces*, **2016**, 8, 33794-33801	9.5	83
77	Ferroelectric control of the conduction at the LaAlO3/SrTiO3 heterointerface. *Advanced Materials*, **2013**, 25, 3357-64	24	78
76	Gigahertz flexible graphene transistors for microwave integrated circuits. *ACS Nano*, **2014**, 8, 7663-70	16.7	76
75	Van der Waals epitaxy of functional MoO2 film on mica for flexible electronics. *Applied Physics Letters*, **2016**, 108, 253104	3.4	68
74	Nonlinear Behavior in the Thermopower of Doped Carbon Nanotubes Due to Strong, Localized States. *Nano Letters*, **2003**, 3, 839-842	11.5	66
73	Exploring the Single Atom Spin State by Electron Spectroscopy. *Physical Review Letters*, **2015**, 115, 206803	7.4	63
72	Intralayer and interlayer electron-phonon interactions in twisted graphene heterostructures. *Nature Communications*, **2018**, 9, 1221	17.4	63
71	Oxide Heteroepitaxy for Flexible Optoelectronics. *ACS Applied Materials & Interfaces*, **2016**, 8, 32401-32407	9.5	62
70	Temperature-induced change from p to n conduction in metallofullerene nanotube peapods. *Applied Physics Letters*, **2001**, 79, 3845-3847	3.4	61
69	Fully Transparent Resistive Memory Employing Graphene Electrodes for Eliminating Undesired Surface Effects. *Proceedings of the IEEE*, **2013**, 101, 1732-1739	14.3	56
68	A novel artificial synapse with dual modes using bilayer graphene as the bottom electrode. *Nanoscale*, **2017**, 9, 9275-9283	7.7	55
67	Stable 1T Tungsten Disulfide Monolayer and Its Junctions: Growth and Atomic Structures. *ACS Nano*, **2018**, 12, 12080-12088	16.7	51
66	Robust room temperature valley polarization in monolayer and bilayer WS2. *Nanoscale*, **2016**, 8, 6035-42	7.7	50
65	In situ observation of step-edge in-plane growth of graphene in a STEM. *Nature Communications*, **2014**, 5, 4055	17.4	45
64	Photogating WS Photodetectors Using Embedded WSe Charge Puddles. *ACS Nano*, **2020**, 14, 4559-4566	16.7	40
63	In Situ Tuning of Switching Window in a Gate-Controlled Bilayer Graphene-Electrode Resistive Memory Device. *Advanced Materials*, **2015**, 27, 7767-74	24	40

62	Growth and Raman spectra of single-crystal trilayer graphene with different stacking orientations. *ACS Nano*, **2014**, 8, 10766-73	16.7	39
61	Direct growth of self-crystallized graphene and graphite nanoballs with Ni vapor-assisted growth: from controllable growth to material characterization. *Scientific Reports*, **2014**, 4, 4739	4.9	37
60	Fast growth of large-grain and continuous MoS films through a self-capping vapor-liquid-solid method. *Nature Communications*, **2020**, 11, 3682	17.4	36
59	High-Performance Organic Light-Emitting Diode with Substitutionally Boron-Doped Graphene Anode. *ACS Applied Materials & Interfaces*, **2017**, 9, 14998-15004	9.5	35
58	Surface Oxidation Doping to Enhance Photogenerated Carrier Separation Efficiency for Ultrahigh Gain Indium Selenide Photodetector. *ACS Photonics*, **2017**, 4, 2930-2936	6.3	34
57	Scalable graphite/copper bishell composite for high-performance interconnects. *ACS Nano*, **2014**, 8, 275-82	16.7	33
56	End-Bonded Metal Contacts on WSe Field-Effect Transistors. *ACS Nano*, **2019**, 13, 8146-8154	16.7	30
55	Ultrafast and low temperature synthesis of highly crystalline and patternable few-layers tungsten diselenide by laser irradiation assisted selenization process. *ACS Nano*, **2015**, 9, 4346-53	16.7	30
54	Band-structure modulation in carbon nanotube T junctions. *Physical Review Letters*, **2004**, 92, 246802	7.4	30
53	Layer-dependent optical conductivity in atomic thin WSby reflection contrast spectroscopy. *ACS Applied Materials & Interfaces*, **2014**, 6, 16020-6	9.5	28
52	Unexpected Huge Dimerization Ratio in One-Dimensional Carbon Atomic Chains. *Nano Letters*, **2017**, 17, 494-500	11.5	27
51	Transition from direct tunneling to field emission in carbon nanotube intramolecular junctions. *Applied Physics Letters*, **2008**, 92, 042107	3.4	27
50	Ultrafast Monolayer In/Gr-WS-Gr Hybrid Photodetectors with High Gain. *ACS Nano*, **2019**, 13, 3269-3279	16.7	26
49	All-carbon field emission device by direct synthesis of graphene and carbon nanotube. *Diamond and Related Materials*, **2013**, 31, 42-46	3.5	24
48	Scalable van der Waals Heterojunctions for High-Performance Photodetectors. *ACS Applied Materials & Interfaces*, **2017**, 9, 36181-36188	9.5	23
47	Origin of van Hove singularities in twisted bilayer graphene. *Carbon*, **2015**, 90, 138-145	10.4	23
46	Attenuation of electromagnetic waves by carbon nanotube composites. *Physica E: Low-Dimensional Systems and Nanostructures*, **2008**, 40, 2425-2429	3	23
45	Design of Core-Shell Quantum Dots-3D WS Nanowall Hybrid Nanostructures with High-Performance Bifunctional Sensing Applications. *ACS Nano*, **2020**, 14, 12668-12678	16.7	23

44	Temperature dependence of conductance character in nanotube peapods. *Applied Physics A: Materials Science and Processing*, **2003**, 76, 463-467	2.6	21
43	Graphene-Transition Metal Dichalcogenide Heterojunctions for Scalable and Low-Power Complementary Integrated Circuits. *ACS Nano*, **2020**, 14, 985-992	16.7	20
42	Postsynthesis of h-BN/Graphene Heterostructures Inside a STEM. *Small*, **2016**, 12, 252-9	11	20
41	Transparent Antiradiative Ferroelectric Heterostructure Based on Flexible Oxide Heteroepitaxy. *ACS Applied Materials & Interfaces*, **2018**, 10, 30574-30580	9.5	19
40	High-performance and high-sensitivity applications of graphene transistors with self-assembled monolayers. *Biosensors and Bioelectronics*, **2016**, 77, 1008-15	11.8	17
39	Gating electron-hole asymmetry in twisted bilayer graphene. *ACS Nano*, **2014**, 8, 6962-9	16.7	17
38	Characterization of graphene grown on bulk and thin film nickel. *Langmuir*, **2011**, 27, 13748-53	4	17
37	Gigahertz Field-Effect Transistors with CMOS-Compatible Transfer-Free Graphene. *ACS Applied Materials & Interfaces*, **2019**, 11, 6336-6343	9.5	16
36	Conduction control at ferroic domain walls via external stimuli. *Nanoscale*, **2014**, 6, 10524-9	7.7	16
35	Cathodic plasma□nduced syntheses of graphene nanosheet/MnO2/WO3 architectures and their use in supercapacitors. *Electrochimica Acta*, **2020**, 342, 136043	6.7	15
34	High-Mobility InSe Transistors: The Nature of Charge Transport. *ACS Applied Materials & Interfaces*, **2019**, 11, 35969-35976	9.5	13
33	Twisted bilayer graphene photoluminescence emission peaks at van Hove singularities. *Journal of Physics Condensed Matter*, **2018**, 30, 175302	1.8	13
32	Substitutional boron-doping of carbon nanotubes. *Current Applied Physics*, **2002**, 2, 473-477	2.6	13
31	A Graphene-Based Filament Transistor with Sub-10 mVdec□ Subthreshold Swing. *Advanced Electronic Materials*, **2018**, 4, 1700608	6.4	12
30	Carbon nanotube nanocontact in T-junction structures. *Applied Physics Letters*, **2007**, 91, 102109	3.4	11
29	Inverse paired-pulse facilitation in neuroplasticity based on interface-boosted charge trapping layered electronics. *Nano Energy*, **2020**, 77, 105258	17.1	9
28	Hybrid ZnO NR/graphene structures as advanced optoelectronic devices with high transmittance. *Nanoscale Research Letters*, **2013**, 8, 350	5	8
27	Raman Excitation Profile of the G-band Enhancement in Twisted Bilayer Graphene. *Brazilian Journal of Physics*, **2017**, 47, 589-593	1.2	8

26	High-performance carbon nanotube network transistors for logic applications. *Applied Physics Letters*, **2008**, 92, 063511	3.4	8
25	Probing interlayer coupling in twisted single-crystal bilayer graphene by Raman spectroscopy. *Journal of Raman Spectroscopy*, **2014**, 45, 912-917	2.3	7
24	Scalable T-Gate Aligned Gr□WS2□r Radio-Frequency Field-Effect Transistors. *ACS Applied Electronic Materials*, **2020**, 2, 3898-3905	4	6
23	Scanning Moir□Fringe Method: A Superior Approach to Perceive Defects, Interfaces, and Distortion in 2D Materials. *ACS Nano*, **2020**, 14, 6034-6042	16.7	6
22	Characterization of Graphene and Transition Metal Dichalcogenide at the Atomic Scale. *Journal of the Physical Society of Japan*, **2015**, 84, 121005	1.5	5
21	Modifying optical properties of GaN nanowires by Ga2O3 overgrowth. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2012**, 30, 011802	1.3	5
20	Fabrication and characteristics of ultrashort-channel carbon nanotube field-effect transistors. *Applied Physics Letters*, **2008**, 92, 152111	3.4	4
19	Photoactive Electro-Controlled Visual Perception Memory for Emulating Synaptic Metaplasticity and Hebbian Learning. *Advanced Functional Materials*, **2021**, 31, 2105345	15.6	4
18	Tailoring point electron sources of individual carbon nanotubes. *Applied Physics Letters*, **2010**, 97, 073119	3.4	3
17	Mimic Drug Dosage Modulation for Neuroplasticity Based on Charge-Trap Layered Electronics. *Advanced Functional Materials*, **2021**, 31, 2005182	15.6	3
16	Formation of Highly Doped Nanostripes in 2D Transition Metal Dichalcogenides via a Dislocation Climb Mechanism. *Advanced Materials*, **2021**, 33, e2007819	24	3
15	Effect of adsorbents on electronic transport in graphene **2014**, 265-291		2
14	Oxidation and Degradation of WS Monolayers Grown by NaCl-Assisted Chemical Vapor Deposition: Mechanism and Prevention. *Nanoscale*, **2021**, 13, 16629-16640	7.7	2
13	Two-dimensional iodine-monofluoride epitaxy on WSe2. *Npj 2D Materials and Applications*, **2021**, 5,	8.8	2
12	Rational Design on Wrinkle-Less Transfer of Transition Metal Dichalcogenide Monolayer by Adjustable Wettability-Assisted Transfer Method. *Advanced Functional Materials*,2104978	15.6	2
11	On-Wafer FinFET-Based EUV/eBeam Detector Arrays for Advanced Lithography Processes. *IEEE Transactions on Electron Devices*, **2020**, 67, 2406-2413	2.9	1
10	A Graphene/Polycrystalline Silicon Photodiode and Its Integration in a Photodiode-Oxide-Semiconductor Field Effect Transistor. *Micromachines*, **2020**, 11,	3.3	1
9	Memory Devices: In Situ Tuning of Switching Window in a Gate-Controlled Bilayer Graphene-Electrode Resistive Memory Device (Adv. Mater. 47/2015). *Advanced Materials*, **2015**, 27, 7766-7766	24	1

8	Enhanced hot luminescence at van Hove singularities in twisted bilayer graphene **2017**,		1
7	Carbon nanotube T junctions: formation and properties. *Journal of Nanoscience and Nanotechnology*, **2008**, 8, 88-98	1.3	1
6	Nearly Epitaxial Low-Resistive Co Germanide Formed by Atomic Layer Deposited Cobalt and Laser Thermal Annealing. *IEEE Electron Device Letters*, **2020**, 41, 272-275	4.4	1
5	Resonance Raman enhancement by the intralayer and interlayer electron-phonon processes in twisted bilayer graphene. *Scientific Reports*, **2021**, 11, 17206	4.9	1
4	Embedment of Multiple Transition Metal Impurities into WS Monolayer for Bandstructure Modulation. *Small*, **2021**, 17, e2007171	11	0
3	Artificial mechanoreceptor based on van der Waals stacking structure. *Matter*, **2021**, 4, 1598-1610	12.7	0
2	Defect Engineering for Graphene Tunable Doping. *Materials Research Society Symposia Proceedings*, **2011**, 1283, 1		
1	Co Silicide With Low Contact Resistivity Formed by Atomic Layer Deposited Cobalt and Subsequent Annealing. *IEEE Electron Device Letters*, **2020**, 41, 139-142	4.4	