Vincent C Tung

List of Publications by Year
in descending order

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89 papers	16,317 citations	101384 36 h-index	64668 79 g-index
93 all docs	93 docs citations	93 times ranked	22655 citing authors

#	Article	IF	Citations
1	Honeycomb Carbon: A Review of Graphene. Chemical Reviews, 2010, 110, 132-145.	23.0	6,210
2	High-throughput solution processing of large-scale graphene. Nature Nanotechnology, 2009, 4, 25-29.	15.6	1,941
3	Practical Chemical Sensors from Chemically Derived Graphene. ACS Nano, 2009, 3, 301-306.	7.3	1,342
4	Low-Temperature Solution Processing of Grapheneâ^'Carbon Nanotube Hybrid Materials for High-Performance Transparent Conductors. Nano Letters, 2009, 9, 1949-1955.	4.5	960
5	Ultralow contact resistance between semimetal and monolayer semiconductors. Nature, 2021, 593, 211-217.	13.7	579
6	A One-Step, Solvothermal Reduction Method for Producing Reduced Graphene Oxide Dispersions in Organic Solvents. ACS Nano, 2010, 4, 3845-3852.	7.3	565
7	17% Efficient Organic Solar Cells Based on Liquid Exfoliated WS₂ as a Replacement for PEDOT:PSS. Advanced Materials, 2019, 31, e1902965.	11.1	500
8	Graphene oxide as surfactant sheets. Pure and Applied Chemistry, 2010, 83, 95-110.	0.9	373
9	Graphene Oxide Nanocolloids. Journal of the American Chemical Society, 2010, 132, 17667-17669.	6.6	352
10	Surfactant-Free Water-Processable Photoconductive All-Carbon Composite. Journal of the American Chemical Society, 2011, 133, 4940-4947.	6.6	200
11	Mixed-dimensional MXene-hydrogel heterostructures for electronic skin sensors with ultrabroad working range. Science Advances, 2020, 6, .	4.7	182
12	Soft Transfer Printing of Chemically Converted Graphene. Advanced Materials, 2009, 21, 2098-2102.	11.1	177
13	Sticky Interconnect for Solution-Processed Tandem Solar Cells. Journal of the American Chemical Society, 2011, 133, 9262-9265.	6.6	173
14	Printable magnesiumÂion quasi-solid-state asymmetric supercapacitors for flexible solar-charging integrated units. Nature Communications, 2019, 10, 4913.	5.8	162
15	The development of integrated circuits based on two-dimensional materials. Nature Electronics, 2021, 4, 775-785.	13.1	129
16	Regulating Oxygen Substituents with Optimized Redox Activity in Chemically Reduced Graphene Oxide for Aqueous Znâ€ion Hybrid Capacitor. Advanced Functional Materials, 2021, 31, 2007843.	7.8	127
17	Gateâ€Tunable and Multidirectionâ€Switchable Memristive Phenomena in a Van Der Waals Ferroelectric. Advanced Materials, 2019, 31, e1901300.	11.1	121
18	Liquid phase exfoliation of MoS₂ and WS₂ in aqueous ammonia and their application in highly efficient organic solar cells. Journal of Materials Chemistry C, 2020, 8, 5259-5264.	2.7	109

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19	High-Î¹ perovskite membranes as insulators for two-dimensional transistors. Nature, 2022, 605, 262-267.	13.7	109
20	Structurally Deformed MoS₂ for Electrochemically Stable, Thermally Resistant, and Highly Efficient Hydrogen Evolution Reaction. Advanced Materials, 2017, 29, 1703863.	11.1	107
21	Ledge-directed epitaxy of continuously self-aligned single-crystalline nanoribbons of transition metal dichalcogenides. Nature Materials, 2020, 19, 1300-1306.	13.3	104
22	3D Crumpled Ultrathin 1T MoS₂ for Inkjet Printing of Mg-Ion Asymmetric Micro-supercapacitors. ACS Nano, 2020, 14, 7308-7318.	7.3	100
23	Lithiumâ€Ion Desolvation Induced by Nitrate Additives Reveals New Insights into High Performance Lithium Batteries. Advanced Functional Materials, 2021, 31, 2101593.	7.8	100
24	Water Processable Graphene Oxide:Single Walled Carbon Nanotube Composite as Anode Modifier for Polymer Solar Cells. Advanced Energy Materials, 2011, 1, 1052-1057.	10.2	87
25	Towards solution processed all-carbon solar cells: a perspective. Energy and Environmental Science, 2012, 5, 7810.	15.6	87
26	Self-healing flexible/stretchable energy storage devices. Materials Today, 2021, 44, 78-104.	8.3	85
27	Anisotropy in Organic Singleâ€Crystal Photovoltaic Characteristics. Advanced Materials, 2008, 20, 435-438.	11.1	79
28	Optoelectronic Ferroelectric Domainâ€Wall Memories Made from a Single Van Der Waals Ferroelectric. Advanced Functional Materials, 2020, 30, 2004206.	7.8	67
29	The effects of thionyl chloride on the properties of graphene and grapheneâ€“carbon nanotube composites. Journal of Materials Chemistry, 2011, 21, 3391.	6.7	66
30	Hybrid Perovskite Thin Films as Highly Efficient Luminescent Solar Concentrators. Advanced Optical Materials, 2016, 4, 2126-2132.	3.6	62
31	Versatile solution for growing thin films of conducting polymers. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 19673-19678.	3.3	52
32	Graphene Oxide:Singleâ€Walled Carbon Nanotubeâ€Based Interfacial Layer for Allâ€Solutionâ€Processed Multijunction Solar Cells in Both Regular and Inverted Geometries. Advanced Energy Materials, 2012, 2, 299-303.	10.2	50
33	Unusual Activity of Rationally Designed Cobalt Phosphide/Oxide Heterostructure Composite for Hydrogen Production in Alkaline Medium. ACS Nano, 2022, 16, 3906-3916.	7.3	50
34	Two-Dimensional Cs₂AgBiBr₆/WS₂ Heterostructure-Based Photodetector with Boosted Detectivity via Interfacial Engineering. ACS Nano, 2022, 16, 3985-3993.	7.3	49
35	Carbon Nanotube Chirality Determines Efficiency of Electron Transfer to Fullerene in All-Carbon Photovoltaics. Journal of Physical Chemistry Letters, 2013, 4, 2914-2918.	2.1	46
36	Temperature dependent Raman spectroscopy of chemically derived graphene. Applied Physics Letters, 2008, 93, 193119.	1.5	42

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37	Demonstration of the key substrate-dependent charge transfer mechanisms between monolayer MoS2 and molecular dopants. Communications Physics, 2019, 2, .	2.0	38
38	Mo3+ hydride as the common origin of H2 evolution and selective NADH regeneration in molybdenum sulfide electrocatalysts. Nature Catalysis, 2022, 5, 397-404.	16.1	38
39	Graphene oxide based conductive glue as a binder for ultracapacitor electrodes. Journal of Materials Chemistry, 2012, 22, 12993.	6.7	37
40	Low-defect-density WS2 by hydroxide vapor phase deposition. Nature Communications, 2022, 13, .	5.8	37
41	Metalâ€Guided Selective Growth of 2D Materials: Demonstration of a Bottomâ€Up CMOS Inverter. Advanced Materials, 2019, 31, e1900861.	11.1	36
42	Nature inspiring processing route toward high throughput production of perovskite photovoltaics. Journal of Materials Chemistry A, 2016, 4, 6989-6997.	5.2	32
43	Plasmon-Enhanced Solar-Driven Hydrogen Evolution Using Titanium Nitride Metasurface Broadband Absorbers. ACS Photonics, 2021, 8, 3125-3132.	3.2	32
44	Conducting Polyaniline for Antifouling Ultrafiltration Membranes: Solutions and Challenges. Nano Letters, 2021, 21, 3699-3707.	4.5	30
45	Electropolymerization growth of an ultrathin, compact, conductive and microporous (UCCM) polycarbazole membrane for high energy Liâ€“S batteries. Nano Energy, 2020, 73, 104769.	8.2	29
46	Stabilization of the Cubic Crystalline Phase in Organometal Halide Perovskite Quantum Dots via Surface Energy Manipulation. Journal of Physical Chemistry Letters, 2017, 8, 5378-5384.	2.1	27
47	Protection of Lithium Anode by a Highly Porous PVDF Membrane for High-Performance Liâ€“S Battery. ACS Applied Energy Materials, 2020, 3, 2510-2515.	2.5	26
48	Steam-Assisted Chemical Vapor Deposition of Zeolitic Imidazolate Framework. , 2020, 2, 485-491.		26
49	The Schottkyâ€“Mott Rule Expanded for Two-Dimensional Semiconductors: Influence of Substrate Dielectric Screening. ACS Nano, 2021, 15, 14794-14803.	7.3	25
50	Unveiling defect-mediated carrier dynamics in monolayer semiconductors by spatiotemporal microwave imaging. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13908-13913.	3.3	24
51	Electrohydrodynamically Assisted Deposition of Efficient Perovskite Photovoltaics. Advanced Materials Interfaces, 2016, 3, 1500762.	1.9	21
52	Electrochemical Conversion of CO₂ to 2-Bromoethanol in a Membraneless Cell. ACS Energy Letters, 2019, 4, 600-605.	8.8	21
53	Growth of 2H stacked WSe₂ bilayers on sapphire. Nanoscale Horizons, 2019, 4, 1434-1442.	4.1	20
54	Design and Mechanistic Study of Highly Durable Carbon-Coated Cobalt Diphosphide Coreâ€“Shell Nanostructure Electrocatalysts for the Efficient and Stable Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2019, 11, 20752-20761.	4.0	20

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55	Structureâ€“stability relationships for graphene-wrapped fullerene-coated carbon nanotubes. Carbon, 2013, 61, 458-466.	5.4	19
56	Bulky rigid substitutions: A route to high electron mobility and high solid-state luminescence efficiency of perylene diimide. Organic Electronics, 2014, 15, 281-285.	1.4	19
57	Typeâ€I Energy Level Alignment at the PTCDAâ€”Monolayer MoS₂ Interface Promotes Resonance Energy Transfer and Luminescence Enhancement. Advanced Science, 2021, 8, 2100215.	5.6	19
58	Stenciling Graphene, Carbon Nanotubes, and Fullerenes Using Elastomeric Liftâ€Off Membranes. Advanced Materials, 2010, 22, 897-901.	11.1	18
59	Wafer-scale single-orientation 2D layers by atomic edge-guided epitaxial growth. Chemical Society Reviews, 2022, 51, 803-811.	18.7	18
60	Low temperature excitonic spectroscopy and dynamics as a probe of quality in hybrid perovskite thin films. Physical Chemistry Chemical Physics, 2016, 18, 28428-28433.	1.3	16
61	Aberration-corrected STEM imaging of 2D materials: Artifacts and practical applications of threefold astigmatism. Science Advances, 2020, 6, .	4.7	13
62	Two-dimensional plasmonic polarons in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -doped monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math> . Physical Review B, 2021, 103, .	1.1	13
63	Temperatureâ€Dependent Electronic Groundâ€State Charge Transfer in van der Waals Heterostructures. Advanced Materials, 2021, 33, e2008677.	11.1	12
64	Bismuth-based mixed-anion compounds for anode materials in rechargeable batteries. Chemical Communications, 2022, 58, 3354-3357.	2.2	12
65	Direct Growth of Magnetic Non-van der Waals Cr₂X₃ (X = S, Se, and Te) on SiO₂/Si Substrates through the Promotion of KOH. Chemistry of Materials, 2022, 34, 2342-2351.	3.2	11
66	Grapheneâ€based Oxygen Reduction Electrodes for Low Temperature Solid Oxide Fuel Cells. Fuel Cells, 2017, 17, 344-352.	1.5	10
67	Asymmetric cathode membrane with tunable positive charge networks for highly stable Liâ€“S batteries. Energy Storage Materials, 2020, 25, 33-40.	9.5	10
68	Epitaxial Growth and Determination of Band Alignment of Bi₂Te₃â€“WSe₂ Vertical van der Waals Heterojunctions. , 2020, 2, 1351-1359.		9
69	Strain-Directed Layer-By-Layer Epitaxy Toward van der Waals Homo- and Heterostructures. , 2021, 3, 442-453.		9
70	Current Progress and Scalable Approach toward the Synthesis of 2D Metalâ€“Organic Frameworks. Advanced Materials Interfaces, 2022, 9, .	1.9	9
71	High-throughput label-free microcontact printing graphene-based biosensor for valley fever. Colloids and Surfaces B: Biointerfaces, 2018, 170, 219-223.	2.5	6
72	Electrohydrodynamic-assisted Assembly of Hierarchically Structured, 3D Crumpled Nanostructures for Efficient Solar Conversions. Scientific Reports, 2016, 6, 38701.	1.6	5

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73	Additive manufacturing assisted van der Waals integration of 3D/3D hierarchically functional nanostructures. Communications Materials, 2020, 1, .	2.9	5
74	Novel Hybridization Approaches for Graphene-Based Nanocomposites. Science of Advanced Materials, 2015, 7, 1962-1978.	0.1	5
75	Capillarityâ€Assisted Electrostatic Assembly of Hierarchically Functional 3D Graphene: TiO₂ Hybrid Photoanodes. Advanced Materials Interfaces, 2015, 2, 1500292.	1.9	4
76	Flexible all-carbon photovoltaics with improved thermal stability. Journal of Solid State Chemistry, 2015, 224, 94-101.	1.4	3
77	Performance Limits and Potential of Multilayer Grapheneâ€“Tungsten Diselenide Heterostructures. Advanced Electronic Materials, 0, , 2100355.	2.6	2
78	Water Processable Graphene Oxide:Single Walled Carbon Nanotube Composite as Anode Modifier for Polymer Solar Cells (Adv. Energy Mater. 6/2011). Advanced Energy Materials, 2011, 1, 1051-1051.	10.2	1
79	Photoanodes: Capillarityâ€Assisted Electrostatic Assembly of Hierarchically Functional 3D Graphene: TiO₂ Hybrid Photoanodes (Adv. Mater. Interfaces 17/2015). Advanced Materials Interfaces, 2015, 2, .	1.9	1
80	Bioinspired Dimensional Transition: Structurally Deformed MoS₂ for Electrochemically Stable, Thermally Resistant, and Highly Efficient Hydrogen Evolution Reaction (Adv. Mater. 44/2017). Advanced Materials, 2017, 29, .	11.1	1
81	Tuning Excitonic Properties of Pure and Mixed Halide Perovskite Thin Films via Interfacial Engineering. Advanced Materials Interfaces, 2018, 5, 1800209.	1.9	1
82	2D Materials: Metalâ€Guided Selective Growth of 2D Materials: Demonstration of a Bottomâ€Up CMOS Inverter (Adv. Mater. 18/2019). Advanced Materials, 2019, 31, 1970132.	11.1	1
83	All-Carbon Composite for Photovoltaics. Materials Research Society Symposia Proceedings, 2011, 1344, 1.	0.1	0
84	Graphene Oxide:Single-Walled Carbon Nanotube-Based Interfacial Layer for All-Solution-Processed Multijunction Solar Cells in Both Regular and Inverted Geometries (Adv. Energy Mater. 3/2012). Advanced Energy Materials, 2012, 2, 298-298.	10.2	0
85	Photovoltaic and optical properties of perovskite thin films fabricated using Marangoni flow assisted electrospraying. , 2016, , .		0
86	2D Materials Characterization: Should We Rely on HR STEM Imaging?. Microscopy and Microanalysis, 2019, 25, 1638-1639.	0.2	0
87	Van der Waals Heterostructures: Temperatureâ€Dependent Electronic Groundâ€State Charge Transfer in van der Waals Heterostructures (Adv. Mater. 29/2021). Advanced Materials, 2021, 33, 2170229.	11.1	0
88	Electron dynamics in transition metal dichalcogenides utilizing attosecond transient absorption spectroscopy. , 2018, , .		0
89	Aqueous ammonia-based exfoliation of two dimensional MoS2 and WS2 and their application in non-fullerene organic solar cells. , 0, , .		0