

List of Publications by Year in
Descending Order

Source: <https://exaly.com/author-pdf/2700364/kai-liu-publications-by-year.pdf>
Version: 2024-04-09

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.
The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

121 papers	7,282 citations	39 h-index	84 g-index
129 ext. papers	8,458 ext. citations	11.2 avg, IF	5.85 L-index

#	Paper	IF	Citations
121	Phase-Change Materials for Intelligent Temperature Regulation. <i>Materials Today Energy</i> , 2021 , 100888	7	2
120	A new opportunity for the emerging tellurium semiconductor: making resistive switching devices. <i>Nature Communications</i> , 2021 , 12, 6081	17.4	5
119	Ultrafast, Kinetically Limited, Ambient Synthesis of Vanadium Dioxides through Laser Direct Writing on Ultrathin Chalcogenide Matrix. <i>ACS Nano</i> , 2021 , 15, 10502-10513	16.7	6
118	Few-Layer MoS ₂ Nanosheet/Carbon Nanotube Composite Films for Long-Lifetime Lithium Storage and Hydrogen Generation. <i>ACS Applied Nano Materials</i> , 2021 , 4, 4754-4762	5.6	6
117	Two-Dimensional Lateral Heterostructures Made by Selective Reaction on a Patterned Monolayer MoS Matrix. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 26143-26151	9.5	1
116	Enhanced photoresponse of TiO ₂ /MoS ₂ heterostructure phototransistors by the coupling of interface charge transfer and photogating. <i>Nano Research</i> , 2021 , 14, 982-991	10	8
115	Grain-Boundary Engineering of Monolayer MoS for Energy-Efficient Lateral Synaptic Devices. <i>Advanced Materials</i> , 2021 , 33, e2102435	24	10
114	Grain-Boundary Engineering of Monolayer MoS ₂ for Energy-Efficient Lateral Synaptic Devices (Adv. Mater. 32/2021). <i>Advanced Materials</i> , 2021 , 33, 2170251	24	
113	Wafer-scale freestanding vanadium dioxide film. <i>Science Advances</i> , 2021 , 7, eabk3438	14.3	6
112	Free-standing hybrid films comprising of ultra-dispersed titania nanocrystals and hierarchical conductive network for excellent high rate performance of lithium storage. <i>Nano Research</i> , 2020 , 14, 2301	10	3
111	Effect of Uniaxial Tensile Strains at Different Orientations on the Characteristics of AlGaN/GaN High-Electron-Mobility Transistors. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 449-454	2.9	3
110	A Garnet-Type Solid-Electrolyte-Based Molten Lithium-Molybdenum-Iron(II) Chloride Battery with Advanced Reaction Mechanism. <i>Advanced Materials</i> , 2020 , 32, e2000960	24	11
109	A flexible, multifunctional, active terahertz modulator with an ultra-low triggering threshold. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 10213-10220	7.1	9
108	Direct laser patterning of two-dimensional lateral transition metal disulfide-oxide-disulfide heterostructures for ultrasensitive sensors. <i>Nano Research</i> , 2020 , 13, 2035-2043	10	8
107	Ionic Sensing Hydrogels: Ultrasensitive, Low-Voltage Operational, and Asymmetric Ionic Sensing Hydrogel for Multipurpose Applications (Adv. Funct. Mater. 12/2020). <i>Advanced Functional Materials</i> , 2020 , 30, 2070080	15.6	1
106	Multiple Regulation over Growth Direction, Band Structure, and Dimension of Monolayer WS ₂ by a Quartz Substrate. <i>Chemistry of Materials</i> , 2020 , 32, 2508-2517	9.6	14
105	High-purity electrolytic lithium obtained from low-purity sources using solid electrolyte. <i>Nature Sustainability</i> , 2020 , 3, 386-390	22.1	23

104	Ultrasensitive, Low-Voltage Operational, and Asymmetric Ionic Sensing Hydrogel for Multipurpose Applications. <i>Advanced Functional Materials</i> , 2020 , 30, 1909616	15.6	16
103	Flexible and free-standing hetero-electrocatalyst of high-valence-cation doped MoS ₂ /MoO ₂ /CNT foam with synergistically enhanced hydrogen evolution reaction catalytic activity. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 14944-14954	13	13
102	Role of the lattice in the light-induced insulator-to-metal transition in vanadium dioxide. <i>Physical Review Research</i> , 2020 , 2,	3.9	3
101	A Review on Anode Side Interface Stability Micromechanisms and Engineering for Garnet Electrolyte-based Solid-state Batteries. <i>Chemical Research in Chinese Universities</i> , 2020 , 36, 351-359	2.2	5
100	Optically Induced Phase Change for Magnetoresistance Modulation. <i>Advanced Quantum Technologies</i> , 2020 , 3, 1900104	4.3	8
99	Solution processed lead-free cesium titanium halide perovskites and their structural, thermal and optical characteristics. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 1591-1597	7.1	28
98	Mesoporous TiO ₂ Spheres as Advanced Anodes for Low-Cost, Safe, and High-Areal-Capacity Lithium-Ion Full Batteries. <i>ACS Applied Nano Materials</i> , 2020 , 3, 1019-1027	5.6	18
97	Bifunctional NbS ₂ -Based Asymmetric Heterostructure for Lateral and Vertical Electronic Devices. <i>ACS Nano</i> , 2020 , 14, 175-184	16.7	32
96	Modulation of the resistive switching of BiFO ₃ thin films through electrical stressing. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 115301	3	6
95	Recent advances for phase-transition materials for actuators. <i>Journal of Applied Physics</i> , 2020 , 128, 101101	10.5	6
94	Solid Electrolytes: A Garnet-Type Solid-Electrolyte-Based Molten Lithium-Molybdenum-Iron(II) Chloride Battery with Advanced Reaction Mechanism (Adv. Mater. 32/2020). <i>Advanced Materials</i> , 2020 , 32, 2070242	24	1
93	A lightly Fe-doped (NiS ₂ /MoS ₂)/carbon nanotube hybrid electrocatalyst film with laser-drilled micropores for stabilized overall water splitting and pH-universal hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 17527-17536	13	33
92	Bioelectronics-Related 2D Materials Beyond Graphene: Fundamentals, Properties, and Applications. <i>Advanced Functional Materials</i> , 2020 , 30, 2003732	15.6	14
91	Infrared micro-detectors with high sensitivity and high response speed using VO ₂ -coated helical carbon nanocoils. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 12095-12103	7.1	16
90	Continuous, Ultra-lightweight, and Multipurpose Super-aligned Carbon Nanotube Tapes Viable over a Wide Range of Temperatures. <i>Nano Letters</i> , 2019 , 19, 6756-6764	11.5	9
89	Synthesis, properties, and applications of large-scale two-dimensional materials by polymer-assisted deposition. <i>Journal of Semiconductors</i> , 2019 , 40, 061003	2.3	4
88	Chemical and structural stability of 2D layered materials. <i>2D Materials</i> , 2019 , 6, 042001	5.9	43
87	MOFs-derived ZnCoBe core-shell nanocages with remarkable oxygen evolution reaction performance. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 17299-17305	13	32

86	Highly Efficient Active All-Dielectric Metasurfaces Based on Hybrid Structures Integrated with Phase-Change Materials: From Terahertz to Optical Ranges. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 14229-14238	9.5	18
85	High-Responsivity Photovoltaic Photodetectors Based on MoTe ₂ /MoSe ₂ van der Waals Heterojunctions. <i>Crystals</i> , 2019 , 9, 315	2.3	11
84	Two-dimensional transition-metal dichalcogenides for electrochemical hydrogen evolution reaction. <i>FlatChem</i> , 2019 , 18, 100140	5.1	16
83	Electric and Light Dual-Gate Tunable MoS Memtransistor. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 43344-43350	9.5	31
82	Evolution of local strain in Ag-deposited monolayer MoS modulated by interface interactions. <i>Nanoscale</i> , 2019 , 11, 22432-22439	7.7	7
81	Watching Dynamic Self-Assembly of Web Buckles in Strained MoS Thin Films. <i>ACS Nano</i> , 2019 , 13, 3106-3116	11.6	17
80	Phase-transition modulated, high-performance dual-mode photodetectors based on WSe ₂ /VO ₂ heterojunctions. <i>Applied Physics Reviews</i> , 2019 , 6, 041407	17.3	27
79	Strain engineering in functional 2-dimensional materials. <i>Journal of Applied Physics</i> , 2019 , 125, 082402	2.5	45
78	Elastic Properties and Fracture Behaviors of Biaxially Deformed, Polymorphic MoTe. <i>Nano Letters</i> , 2019 , 19, 761-769	11.5	31
77	Recent progresses on physics and applications of vanadium dioxide. <i>Materials Today</i> , 2018 , 21, 875-896	21.8	187
76	Reconfigurable Photonic Platforms: A Lithography-Free and Field-Programmable Photonic Metacanvas (Adv. Mater. 5/2018). <i>Advanced Materials</i> , 2018 , 30, 1870034	24	3
75	Substrate modified thermal stability of mono- and few-layer MoS. <i>Nanoscale</i> , 2018 , 10, 3540-3546	7.7	32
74	Free-Standing, Binder-Free Titania/Super-Aligned Carbon Nanotube Anodes for Flexible and Fast-Charging Li-Ion Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2018 , 6, 3426-3433	8.3	22
73	Robust photoluminescence energy of MoS ₂ /graphene heterostructure against electron irradiation. <i>Science China Materials</i> , 2018 , 61, 1351-1359	7.1	6
72	A Lithography-Free and Field-Programmable Photonic Metacanvas. <i>Advanced Materials</i> , 2018 , 30, 1703874	24	60
71	Langmuir-Blodgett self-assembly of ultrathin graphene quantum dot films with modulated optical properties. <i>Nanoscale</i> , 2018 , 10, 19612-19620	7.7	16
70	Probing Evolution of Local Strain at MoS-Metal Boundaries by Surface-Enhanced Raman Scattering. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 40246-40254	9.5	15
69	Photo-driven nanoactuators based on carbon nanocoils and vanadium dioxide bimorphs. <i>Nanoscale</i> , 2018 , 10, 11158-11164	7.7	21

68	An intermediate temperature garnet-type solid electrolyte-based molten lithium battery for grid energy storage. <i>Nature Energy</i> , 2018 , 3, 732-738	62.3	126
67	Substrate induced changes in atomically thin 2-dimensional semiconductors: Fundamentals, engineering, and applications. <i>Applied Physics Reviews</i> , 2017 , 4, 011301	17.3	76
66	A soft non-porous separator and its effectiveness in stabilizing Li metal anodes cycling at 10 mA cm ² observed in situ in a capillary cell. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 4300-4307	13	58
65	Anomalously low electronic thermal conductivity in metallic vanadium dioxide. <i>Science</i> , 2017 , 355, 371-374	34.3	208
64	Pressure-Temperature Phase Diagram of Vanadium Dioxide. <i>Nano Letters</i> , 2017 , 17, 2512-2516	11.5	43
63	SWCNT-MoS ₂ -SWCNT Vertical Point Heterostructures. <i>Advanced Materials</i> , 2017 , 29, 1604469	24	26
62	Flexible, All-Inorganic Actuators Based on Vanadium Dioxide and Carbon Nanotube Bimorphs. <i>Nano Letters</i> , 2017 , 17, 421-428	11.5	70
61	Simple synthesis of a double-shell hollow structured MnO ₂ @TiO ₂ composite as an anode material for lithium ion batteries. <i>RSC Advances</i> , 2017 , 7, 46263-46270	3.7	13
60	Fast synthesis of uniform mesoporous titania submicrospheres with high tap densities for high-volumetric performance Li-ion batteries. <i>Science China Materials</i> , 2017 , 60, 304-314	7.1	13
59	Sintering behavior of garnet-type Li _{6.4} La ₃ Zr _{1.4} Ta _{0.6} O ₁₂ in Li ₂ CO ₃ atmosphere and its electrochemical property. <i>International Journal of Applied Ceramic Technology</i> , 2017 , 14, 921-927	2	20
58	Interfacing 2D Semiconductors with Functional Oxides: Fundamentals, Properties, and Applications. <i>Crystals</i> , 2017 , 7, 265	2.3	13
57	Ultrathin two-dimensional metals with fully exposed (111) facets. <i>Chemical Communications</i> , 2017 , 54, 160-163	5.8	11
56	Mechanical properties of two-dimensional materials and heterostructures. <i>Journal of Materials Research</i> , 2016 , 31, 832-844	2.5	53
55	Observation of Charge Generation and Transfer during CVD Growth of Carbon Nanotubes. <i>Nano Letters</i> , 2016 , 16, 4102-9	11.5	23
54	Crossing Thermal Lubricity and Electronic Effects in Friction: Vanadium Dioxide under the Metal-Insulator Transition. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1500388	4.6	9
53	Modulating Photoluminescence of Monolayer Molybdenum Disulfide by Metal-Insulator Phase Transition in Active Substrates. <i>Small</i> , 2016 , 12, 3976-84	11	24
52	Three Dimensional Sculpturing of Vertical Nanowire Arrays by Conventional Photolithography. <i>Scientific Reports</i> , 2016 , 6, 18886	4.9	7
51	Stress compensation for arbitrary curvature control in vanadium dioxide phase transition actuators. <i>Applied Physics Letters</i> , 2016 , 109, 023504	3.4	14

50	Cycling of a Lithium-Ion Battery with a Silicon Anode Drives Large Mechanical Actuation. <i>Advanced Materials</i> , 2016 , 28, 10236-10243	24	33
49	Magnetoresistance oscillations in topological insulator Bi ₂ Te ₃ nanoscale antidot arrays. <i>Nanotechnology</i> , 2015 , 26, 265301	3.4	2
48	Anisotropic in-plane thermal conductivity of black phosphorus nanoribbons at temperatures higher than 100 K. <i>Nature Communications</i> , 2015 , 6, 8573	17.4	249
47	TiO ₂ -based solar cells sensitized by chemical-bath-deposited few-layer MoS ₂ . <i>Journal of Power Sources</i> , 2015 , 275, 943-949	8.9	25
46	Vibrational spectrum renormalization by enforced coupling across the van der Waals gap between MoS ₂ and WS ₂ monolayers. <i>Physical Review B</i> , 2015 , 92,	3.3	19
45	Self-Passivation of Defects: Effects of High-Energy Particle Irradiation on the Elastic Modulus of Multilayer Graphene. <i>Advanced Materials</i> , 2015 , 27, 6841-7	24	21
44	Directly Metering Light Absorption and Heat Transfer in Single Nanowires Using Metal-Insulator Transition in VO ₂ . <i>Advanced Optical Materials</i> , 2015 , 3, 336-341	8.1	20
43	Fast Adaptive Thermal Camouflage Based on Flexible VO ₂ /Graphene/CNT Thin Films. <i>Nano Letters</i> , 2015 , 15, 8365-70	11.5	180
42	Self-assembly and horizontal orientation growth of VO ₂ nanowires. <i>Scientific Reports</i> , 2014 , 4, 5456	4.9	43
41	Tuning interlayer coupling in large-area heterostructures with CVD-grown MoS ₂ and WS ₂ monolayers. <i>Nano Letters</i> , 2014 , 14, 3185-90	11.5	562
40	Monolayer behaviour in bulk ReS ₂ due to electronic and vibrational decoupling. <i>Nature Communications</i> , 2014 , 5, 3252	17.4	728
39	A specially designed LiFePO ₄ semi-fuel cell: A potential choice for electric vehicle propulsion. <i>RSC Advances</i> , 2014 , 4, 18894	3.7	6
38	Direct observation of nanoscale Peltier and Joule effects at metal-insulator domain walls in vanadium dioxide nanobeams. <i>Nano Letters</i> , 2014 , 14, 2394-400	11.5	27
37	Probing local strain at MX(2)-metal boundaries with surface plasmon-enhanced Raman scattering. <i>Nano Letters</i> , 2014 , 14, 5329-34	11.5	87
36	Elastic properties of chemical-vapor-deposited monolayer MoS ₂ , WS ₂ , and their bilayer heterostructures. <i>Nano Letters</i> , 2014 , 14, 5097-103	11.5	384
35	Powerful, multifunctional torsional micromuscles activated by phase transition. <i>Advanced Materials</i> , 2014 , 26, 1746-50	24	65
34	Mechanically modulated tunneling resistance in monolayer MoS ₂ . <i>Applied Physics Letters</i> , 2013 , 103, 183105	3.4	36
33	Excitation of Surface Plasmon Resonance in Composite Structures Based on Single-Layer Superaligned Carbon Nanotube Films. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 23190-23197	3.8	12

32	High-order ALE method for the Navier-Stokes equations on a moving hybrid unstructured mesh using flux reconstruction method. <i>International Journal of Computational Fluid Dynamics</i> , 2013 , 27, 251-267	1.2	3
31	Axially engineered metal-insulator phase transition by graded doping VO ₂ nanowires. <i>Journal of the American Chemical Society</i> , 2013 , 135, 4850-5	16.4	84
30	Comprehensive study of the metal-insulator transition in pulsed laser deposited epitaxial VO ₂ thin films. <i>Journal of Applied Physics</i> , 2013 , 113, 043707	2.5	105
29	Performance limits of microactuation with vanadium dioxide as a solid engine. <i>ACS Nano</i> , 2013 , 7, 2266-2272	16.7	55
28	Anisotropic interfacial friction of inclined multiwall carbon nanotube array surface. <i>Carbon</i> , 2012 , 50, 5372-5379	10.4	19
27	Giant-amplitude, high-work density microactuators with phase transition activated nanolayer biphases. <i>Nano Letters</i> , 2012 , 12, 6302-8	11.5	124
26	Dense electron system from gate-controlled surface metal-insulator transition. <i>Nano Letters</i> , 2012 , 12, 6272-7	11.5	48
25	Direct identification of metallic and semiconducting single-walled carbon nanotubes in scanning electron microscopy. <i>Nano Letters</i> , 2012 , 12, 4095-101	11.5	53
24	New-type planar field emission display with superaligned carbon nanotube yarn emitter. <i>Nano Letters</i> , 2012 , 12, 2391-6	11.5	81
23	Fabrication and processing of high-strength densely packed carbon nanotube yarns without solution processes. <i>Nanoscale</i> , 2012 , 4, 3389-93	7.7	28
22	Ultra-long, free-standing, single-crystalline vanadium dioxide micro/nanowires grown by simple thermal evaporation. <i>Applied Physics Letters</i> , 2012 , 100, 103111	3.4	93
21	In Situ TEM observation of the gasification and growth of carbon nanotubes using iron catalysts. <i>Nano Research</i> , 2011 , 4, 767-779	10	86
20	Cross-Stacked Superaligned Carbon Nanotube Films for Transparent and Stretchable Conductors. <i>Advanced Functional Materials</i> , 2011 , 21, 2721-2728	15.6	142
19	A polarized infrared thermal detector made from super-aligned multiwalled carbon nanotube films. <i>Nanotechnology</i> , 2011 , 22, 025502	3.4	34
18	Field-effect modulation of conductance in VO ₂ nanobeam transistors with HfO ₂ as the gate dielectric. <i>Applied Physics Letters</i> , 2011 , 99, 062114	3.4	67
17	Field emission behavior study of multiwalled carbon nanotube yarn under the influence of adsorbents. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, 736-739	1.3	11
16	Scratch-resistant, highly conductive, and high-strength carbon nanotube-based composite yarns. <i>ACS Nano</i> , 2010 , 4, 5827-34	16.7	217
15	Highly sensitive surface-enhanced Raman scattering substrate made from superaligned carbon nanotubes. <i>Nano Letters</i> , 2010 , 10, 1747-53	11.5	146

14	Carbon nanotube yarns with high tensile strength made by a twisting and shrinking method. <i>Nanotechnology</i> , 2010 , 21, 045708	3.4	192
13	Flexible, Stretchable, Transparent Conducting Films Made from Superaligned Carbon Nanotubes. <i>Advanced Functional Materials</i> , 2010 , 20, 885-891	15.6	328
12	Periodically striped films produced from super-aligned carbon nanotube arrays. <i>Nanotechnology</i> , 2009 , 20, 335705	3.4	31
11	Fast High-Temperature Response of Carbon Nanotube Film and Its Application as an Incandescent Display. <i>Advanced Materials</i> , 2009 , 21, 3563-3566	24	77
10	Thermal Analysis Study of the Growth Kinetics of Carbon Nanotubes and Epitaxial Graphene Layers on Them. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 9623-9631	3.8	30
9	Controlled fabrication of high-quality carbon nanoscrolls from monolayer graphene. <i>Nano Letters</i> , 2009 , 9, 2565-70	11.5	276
8	Measuring the work function of carbon nanotubes with thermionic method. <i>Nano Letters</i> , 2008 , 8, 647-51	11.5	169
7	Controlled growth of super-aligned carbon nanotube arrays for spinning continuous unidirectional sheets with tunable physical properties. <i>Nano Letters</i> , 2008 , 8, 700-5	11.5	239
6	Controlled Termination of the Growth of Vertically Aligned Carbon Nanotube Arrays. <i>Advanced Materials</i> , 2007 , 19, 975-978	24	35
5	Effect of carbon deposits on the reactor wall during the growth of multi-walled carbon nanotube arrays. <i>Carbon</i> , 2007 , 45, 2379-2387	10.4	23
4	A vapor-liquid-solid model for chemical vapor deposition growth of carbon nanotubes. <i>Journal of Nanoscience and Nanotechnology</i> , 2007 , 7, 1494-504	1.3	31
3	LaB6 tip-modified multiwalled carbon nanotube as high quality field emission electron source. <i>Applied Physics Letters</i> , 2006 , 89, 203112	3.4	36
2	A growth mark method for studying growth mechanism of carbon nanotube arrays. <i>Carbon</i> , 2005 , 43, 2850-2856	10.4	131
1	Reconfigurable Carbon Nanotube Barristor. <i>Advanced Functional Materials</i> , 2107454	15.6	1