

# Mengkun Liu

## List of Publications by Year in descending order

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79  
papers

4,560  
citations

147726

31  
h-index

98753

67  
g-index

84  
all docs

84  
docs citations

84  
times ranked

6680  
citing authors

#	ARTICLE	IF	CITATIONS
1	Scattering-type scanning near-field optical microscopy with Akiyama piezo-probes. Applied Physics Letters, 2022, 120, .	1.5	7
2	Simulation of Scanning Near-Field Optical Microscopy Spectra of 1D Plasmonic Graphene Junctions. Optics Express, 2022, 30, 9000-9007.	1.7	1
3	Nano-spectroscopy of excitons in atomically thin transition metal dichalcogenides. Nature Communications, 2022, 13, 542.	5.8	23
4	Rapid simulations of hyperspectral near-field images of three-dimensional heterogeneous surfaces " part II. Optics Express, 2022, 30, 11228.	1.7	12
5	Scattering-type Scanning Near-Field Optical Microscopy of Polymer-Coated Gold Nanoparticles. ACS Omega, 2022, 7, 11353-11362.	1.6	9
6	Active control of micrometer plasmon propagation in suspended graphene. Nature Communications, 2022, 13, 1465.	5.8	31
7	Tunable Planar Focusing Based on Hyperbolic Phonon Polaritons in $\text{In}_2\text{Te}_3$ . Advanced Materials, 2022, 34, e2105590.	11.1	32
8	Broadband terahertz time-domain polarimetry based on air plasma filament emissions and spinning electro-optic sampling in GaP. Applied Physics Letters, 2022, 120, 181107.	1.5	10
9	Robust and tunable Weyl phases by coherent infrared phonons in $\text{ZrTe}_5$ . Npj Computational Materials, 2022, 8, .	3.5	2
10	A near-field study of $\text{VO}_2/(100)\text{TiO}_2$ film and its crack-induced strain relief. Applied Physics Letters, 2022, 121, .	1.5	3
11	Partially Metal-Coated Tips for Near-Field Nanospectroscopy. Physical Review Applied, 2021, 15, .	1.5	3
12	Effect of sample anisotropy on scanning near-field optical microscope images. Journal of Applied Physics, 2021, 129, .	1.1	3
13	Probing subwavelength in-plane anisotropy with antenna-assisted infrared nano-spectroscopy. Nature Communications, 2021, 12, 2649.	5.8	9
14	Laser-Induced Cooperative Transition in Molecular Electronic Crystal. Advanced Materials, 2021, 33, e2103000.	11.1	6
15	Hybrid Machine Learning for Scanning Near-Field Optical Spectroscopy. ACS Photonics, 2021, 8, 2987-2996.	3.2	22
16	Terahertz response of monolayer and few-layer $\text{WTe}_2$ at the nanoscale. Nature Communications, 2021, 12, 5594.	5.8	29
17	Validity of Machine Learning in the Quantitative Analysis of Complex Scanning Near-Field Optical Microscopy Signals Using Simulated Data. Physical Review Applied, 2021, 15, .	1.5	13
18	Laser-Induced Cooperative Transition in Molecular Electronic Crystal (Adv. Mater. 39/2021). Advanced Materials, 2021, 33, .	11.1	0

#	ARTICLE	IF	CITATIONS
19	Rapid simulations of hyperspectral near-field images of three-dimensional heterogeneous surfaces. <i>Optics Express</i> , 2021, 29, 39648.	1.7	12
20	Deep Learning Analysis of Polaritonic Wave Images. <i>ACS Nano</i> , 2021, 15, 18182-18191.	7.3	10
21	Nanotextured Dynamics of a Light-Induced Phase Transition in VO <sub>2</sub> . <i>Nano Letters</i> , 2021, 21, 9052-9060.	4.5	14
22	Nanoimaging and Nanospectroscopy of Polaritons with Time Resolved s-SNOM. <i>Advanced Optical Materials</i> , 2020, 8, 1901042.	3.6	22
23	A rewritable optical storage medium of silk proteins using near-field nano-optics. <i>Nature Nanotechnology</i> , 2020, 15, 941-947.	15.6	51
24	Joule heating in Boltzmann theory of metals. <i>Physical Review B</i> , 2020, 102, .	1.1	3
25	Scattering of Quasistatic Plasmons From One-Dimensional Junctions of Graphene: Transfer Matrices, Fresnel Relations, and Nonlocality. <i>Physical Review Applied</i> , 2020, 14, .	1.5	4
26	THz Near-Field Imaging of Extreme Subwavelength Metal Structures. <i>ACS Photonics</i> , 2020, 7, 687-694.	3.2	58
27	Moiré engineering of electronic phenomena in correlated oxides. <i>Nature Physics</i> , 2020, 16, 631-635.	6.5	40
28	Polariton Spectroscopy: Nanoimaging and Nanospectroscopy of Polaritons with Time Resolved s-SNOM (Advanced Optical Materials 5/2020). <i>Advanced Optical Materials</i> , 2020, 8, 2070019.	3.6	3
29	Ultrafast photoexcitation dynamics of ZnTe crystals by femtosecond optical pump-probe and terahertz emission spectroscopy. <i>Microwave and Optical Technology Letters</i> , 2020, 62, 2656-2661.	0.9	2
30	Simultaneous scanning near-field optical and X-ray diffraction microscopy for correlative nanoscale structure-property characterization. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 1790-1796.	1.0	3
31	A Multibeam Interference Model for Analyzing Complex Near-Field Images of Polaritons in 2D van der Waals Microstructures. <i>Advanced Functional Materials</i> , 2019, 29, 1904662.	7.8	10
32	Modal Birefringence: Tunable Modal Birefringence in a Low-Loss Van Der Waals Waveguide (Adv.) <i>Tj ETQq0 0 0 rgBT/Overlock 10 Tf 5</i>	11.1	1
33	Structural, transport, and ultrafast dynamic properties of V <sub>1-x</sub> Nb <sub>x</sub> O <sub>2</sub> thin films. <i>Physical Review B</i> , 2019, 99, .	1.1	2
34	Tunable Modal Birefringence in a Low-Loss Van Der Waals Waveguide. <i>Advanced Materials</i> , 2019, 31, e1807788.	11.1	27
35	Phase-Change Hyperbolic Heterostructures for Nanopolaritonics: A Case Study of hBN/VO <sub>2</sub> . <i>Advanced Materials</i> , 2019, 31, e1900251.	11.1	43
36	Photo-induced charge density distribution in metal surfaces and its extraction with apertureless near-field optics. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 24LT01.	0.7	6



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55	Probing optical anisotropy of nanometer-thin van der waals microcrystals by near-field imaging. Nature Communications, 2017, 8, 1471.	5.8	74
56	Nanoscale electrodynamic of strongly correlated quantum materials. Reports on Progress in Physics, 2017, 80, 014501.	8.1	58
57	Near-field spectroscopic investigation of dual-band heavy fermion metamaterials. Nature Communications, 2017, 8, 2262.	5.8	24
58	Cooperative photoinduced metastable phase control in strained manganite films. Nature Materials, 2016, 15, 956-960.	13.3	118
59	An ultrafast plasmonic tuning knob. Nature Photonics, 2016, 10, 210-211.	15.6	2
60	Nanoscale probing of electron-regulated structural transitions in silk proteins by near-field IR imaging and nano-spectroscopy. Nature Communications, 2016, 7, 13079.	5.8	78
61	Active Optical Metasurfaces Based on Defect-Engineered Phase-Transition Materials. Nano Letters, 2016, 16, 1050-1055.	4.5	186
62	Phase transition in bulk single crystals and thin films of $V_2O_5$ by dynamic conductivity scaling on photoexcited. Physical Review B, 2015, 91, .	1.1	88
63	Dynamic conductivity scaling on photoexcited $V_2O_5$ thin films. Physical Review B, 2015, 92, .	1.1	42
64	A review of non-linear terahertz spectroscopy with ultrashort tabletop-laser pulses. Journal of Modern Optics, 2015, 62, 1447-1479.	0.6	119
65	Symmetry breaking and geometric confinement in VO <sub>2</sub> : Results from a three-dimensional infrared nano-imaging. Applied Physics Letters, 2014, 104, 121905.	1.5	36
66	Ultrafast and Nanoscale Plasmonic Phenomena in Exfoliated Graphene Revealed by Infrared Pump-Probe Nanoscopy. Nano Letters, 2014, 14, 894-900.	4.5	158
67	Ultrafast Dynamics of Surface Plasmons in InAs by Time-Resolved Infrared Nanospectroscopy. Nano Letters, 2014, 14, 4529-4534.	4.5	92
68	Nonlinear Terahertz Metamaterials via Field-Enhanced Carrier Dynamics in GaAs. Physical Review Letters, 2013, 110, 217404.	2.9	105
69	THz spectroscopy of VO <sub>2</sub> epitaxial films: controlling the anisotropic properties through strain engineering. New Journal of Physics, 2012, 14, 083026.	1.2	46
70	Terahertz-field-induced insulator-to-metal transition in vanadium dioxide metamaterial. Nature, 2012, 487, 345-348.	13.7	1,046
71	Silk-Based Conformal, Adhesive, Edible Food Sensors. Advanced Materials, 2012, 24, 1067-1072.	11.1	335
72	Large strain-induced conductivity anisotropy in VO <sub>2</sub> thin films, probed by THz spectroscopy. , 2011, , .		0

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73	Rapid Transfer-Based Micropatterning and Dry Etching of Silk Microstructures. <i>Advanced Materials</i> , 2011, 23, 2015-2019.	11.1	47
74	Metamaterials on Paper as a Sensing Platform. <i>Advanced Materials</i> , 2011, 23, 3197-3201.	11.1	210
75	Biaxial Strain in Graphene Adhered to Shallow Depressions. <i>Nano Letters</i> , 2010, 10, 6-10.	4.5	193
76	Performance enhancement of terahertz metamaterials on ultrathin substrates for sensing applications. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	158
77	Radiation torque on a spherical birefringent particle in the long wave length limit: analytical calculation. <i>Optics Express</i> , 2005, 13, 5192.	1.7	8
78	Radiation torque on a birefringent sphere caused by an electromagnetic wave. <i>Physical Review E</i> , 2005, 72, 056610.	0.8	31
79	Terahertz nano-imaging of metal-insulator transition in $\text{Cd(2)Os(2)O(7)}$ . <i>Europhysics Letters</i> , 0, , .	0.7	0