

Keji Lai

List of Publications by Year in descending order

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65
papers

5,589
citations

126907

33
h-index

118850

62
g-index

68
all docs

68
docs citations

68
times ranked

8469
citing authors

#	ARTICLE	IF	CITATIONS
1	Aharonovâ€™Bohm interference in topological insulator nanoribbons. <i>Nature Materials</i> , 2010, 9, 225-229.	27.5	727
2	Out-of-Plane Piezoelectricity and Ferroelectricity in Layered In_2Se_3 Nanoflakes. <i>Nano Letters</i> , 2017, 17, 5508-5513.	9.1	567
3	Ambipolar field effect in the ternary topological insulator $(\text{Bi}_x\text{Sb}_{1-x})_2\text{Te}_3$ by composition tuning. <i>Nature Nanotechnology</i> , 2011, 6, 705-709.	31.5	345
4	Toward air-stable multilayer phosphorene thin-films and transistors. <i>Scientific Reports</i> , 2015, 5, 8989.	3.3	344
5	Rapid Surface Oxidation as a Source of Surface Degradation Factor for Bi_2Se_3 . <i>ACS Nano</i> , 2011, 5, 4698-4703.	14.6	320
6	Topological Insulator Nanowires and Nanoribbons. <i>Nano Letters</i> , 2010, 10, 329-333.	9.1	298
7	Impact of grain boundaries on efficiency and stability of organic-inorganic trihalide perovskites. <i>Nature Communications</i> , 2017, 8, 2230.	12.8	220
8	Mesoscopic Percolating Resistance Network in a Strained Manganite Thin Film. <i>Science</i> , 2010, 329, 190-193.	12.6	192
9	Weak Antilocalization in $\text{Bi}_2(\text{Se}_x\text{Te}_{1-x})_3$ Nanoribbons and Nanoplates. <i>Nano Letters</i> , 2012, 12, 1107-1111.	9.1	166
10	Ultrathin Topological Insulator Bi_2Se_3 Nanoribbons Exfoliated by Atomic Force Microscopy. <i>Nano Letters</i> , 2010, 10, 3118-3122.	9.1	163
11	Microwave-to-optical conversion using lithium niobate thin-film acoustic resonators. <i>Optica</i> , 2019, 6, 1498.	9.3	152
12	A native oxide high- ϵ gate dielectric for two-dimensional electronics. <i>Nature Electronics</i> , 2020, 3, 473-478.	26.0	141
13	Phonon renormalization in reconstructed MoS_2 moiré superlattices. <i>Nature Materials</i> , 2021, 20, 1100-1105.	27.5	121
14	Unexpected edge conduction in mercury telluride quantum wells under broken time-reversal symmetry. <i>Nature Communications</i> , 2015, 6, 7252.	12.8	101
15	Thickness-Dependent Dielectric Constant of Few-Layer In_2Se_3 Nanoflakes. <i>Nano Letters</i> , 2015, 15, 8136-8140.	9.1	99
16	Evidence for a higher-order topological insulator in a three-dimensional material built from van der Waals stacking of bismuth-halide chains. <i>Nature Materials</i> , 2021, 20, 473-479.	27.5	98
17	Uncovering edge states and electrical inhomogeneity in MoS_2 field-effect transistors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 8583-8588.	7.1	94
18	Coherent acoustic control of a single silicon vacancy spin in diamond. <i>Nature Communications</i> , 2020, 11, 193.	12.8	92

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19	Nanoscale Electronic Inhomogeneity in In ₂ Se ₃ Nanoribbons Revealed by Microwave Impedance Microscopy. Nano Letters, 2009, 9, 1265-1269.	9.1	91
20	Thermal Oxidation of WSe ₂ Nanosheets Adhered on SiO ₂ /Si Substrates. Nano Letters, 2015, 15, 4979-4984.	9.1	84
21	Carrier density modulation in a germanium heterostructure by ferroelectric switching. Nature Communications, 2015, 6, 6067.	12.8	75
22	Nanoscale microwave microscopy using shielded cantilever probes. Applied Nanoscience (Switzerland), 2011, 1, 13-18.	3.1	73
23	Imaging of Coulomb-Driven Quantum Hall Edge States. Physical Review Letters, 2011, 107, 176809.	7.8	70
24	Phononic Band Structure Engineering for High-Q Gigahertz Surface Acoustic Wave Resonators on Lithium Niobate. Physical Review Applied, 2019, 12, .	3.8	70
25	Mesoscale Imperfections in MoS ₂ Atomic Layers Grown by a Vapor Transport Technique. Nano Letters, 2014, 14, 4682-4686.	9.1	67
26	Hierarchy of Electronic Properties of Chemically Derived and Pristine Graphene Probed by Microwave Imaging. Nano Letters, 2009, 9, 3762-3765.	9.1	58
27	Batch-fabricated cantilever probes with electrical shielding for nanoscale dielectric and conductivity imaging. Journal of Micromechanics and Microengineering, 2012, 22, 115040.	2.6	58
28	Low-energy structural dynamics of ferroelectric domain walls in hexagonal rare-earth manganites. Science Advances, 2017, 3, e1602371.	10.3	52
29	Cryogenic microwave imaging of metal-insulator transition in doped silicon. Review of Scientific Instruments, 2011, 82, 033705.	1.3	41
30	Monolayer 1T-NbSe ₂ as a 2D-correlated magnetic insulator. Science Advances, 2021, 7, eabi6339.	10.3	39
31	Uniform High-k Amorphous Native Oxide Synthesized by Oxygen Plasma for Top-Gated Transistors. Nano Letters, 2020, 20, 7469-7475.	9.1	37
32	Gigahertz topological valley Hall effect in nanoelectromechanical phononic crystals. Nature Electronics, 2022, 5, 157-163.	26.0	37
33	Visualization of Local Conductance in MoS ₂ /WSe ₂ Heterostructure Transistors. Nano Letters, 2019, 19, 1976-1981.	9.1	36
34	Nanoscale Conductivity Imaging of Correlated Electronic States in WSe_2 Moiré Superlattices. Physical Review Letters, 2020, 125, 186803.	7.8	36
35	Lithium-ion electrolytic substrates for sub-1V high-performance transition metal dichalcogenide transistors and amplifiers. Nature Communications, 2020, 11, 3203.	12.8	31
36	Direct Imaging of Nanoscale Conductance Evolution in Ion-Gel-Gated Oxide Transistors. Nano Letters, 2015, 15, 4730-4736.	9.1	28

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37	Emergent Low-Symmetry Phases and Large Property Enhancements in Ferroelectric KNbO ₃ Bulk Crystals. <i>Advanced Materials</i> , 2017, 29, 1700530.	21.0	26
38	Quantitative measurements of nanoscale permittivity and conductivity using tuning-fork-based microwave impedance microscopy. <i>Review of Scientific Instruments</i> , 2018, 89, 043704.	1.3	26
39	Energy-Resolved Photoconductivity Mapping in a Monolayer-Bilayer WSe ₂ Lateral Heterostructure. <i>Nano Letters</i> , 2018, 18, 7200-7206.	9.1	26
40	Direct Imaging of Dynamic Glassy Behavior in a Strained Manganite Film. <i>Physical Review Letters</i> , 2015, 115, 265701.	7.8	24
41	Unveiling defect-mediated carrier dynamics in monolayer semiconductors by spatiotemporal microwave imaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 13908-13913.	7.1	24
42	Microwave Microscopy and Its Applications. <i>Annual Review of Materials Research</i> , 2020, 50, 105-130.	9.3	24
43	Unexpected Giant Microwave Conductivity in a Nominally Silent BiFeO ₃ Domain Wall. <i>Advanced Materials</i> , 2020, 32, 1905132.	21.0	22
44	Electrical control of surface acoustic waves. <i>Nature Electronics</i> , 2022, 5, 348-355.	26.0	22
45	Tailoring Semiconductor Lateral Multijunctions for Giant Photoconductivity Enhancement. <i>Advanced Materials</i> , 2017, 29, 1703680.	21.0	21
46	Visualization of Surface-Acoustic-Wave Potential by Transmission-Mode Microwave Impedance Microscopy. <i>Physical Review Applied</i> , 2018, 9, .	3.8	19
47	Atomic layer deposition of epitaxial ferroelectric barium titanate on Si(001) for electronic and photonic applications. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	19
48	Microwave conductivity of ferroelectric domains and domain walls in a hexagonal rare-earth ferrite. <i>Physical Review B</i> , 2018, 98, .	3.2	16
49	Piezoelectric modulation of nonlinear optical response in BaTiO ₃ thin film. <i>Applied Physics Letters</i> , 2018, 113, 132902.	3.3	13
50	Imaging Acoustic Waves by Microwave Microscopy: Microwave Impedance Microscopy for Visualizing Gigahertz Acoustic Waves. <i>IEEE Microwave Magazine</i> , 2020, 21, 60-71.	0.8	10
51	Superior photo-carrier diffusion dynamics in organic-inorganic hybrid perovskites revealed by spatiotemporal conductivity imaging. <i>Nature Communications</i> , 2021, 12, 5009.	12.8	10
52	Direct Visualization of Gigahertz Acoustic Wave Propagation in Suspended Phononic Circuits. <i>Physical Review Applied</i> , 2021, 16, .	3.8	10
53	Interferometric imaging of nonlocal electromechanical power transduction in ferroelectric domains. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 5338-5342.	7.1	9
54	Electro-optic response in epitaxially stabilized orthorhombic O^3O^2 . <i>Physical Review Materials</i> , 2021, 5, .	2.4	8

