Rui Yang

List of Publications by Year
in descending order

49 papers	1,478 citations	516710 16 h-index	501196 28 g-index
49 all docs	49 docs citations	49 times ranked	2187 citing authors

#	Article	IF	Citations
1	Large-Angle, Multifunctional Metagratings Based on Freeform Multimode Geometries. Nano Letters, 2017, 17, 3752-3757.	9.1	398
2	Electrically tunable single- and few-layer MoS ₂ nanoelectromechanical systems with broad dynamic range. Science Advances, 2018, 4, eaao6653.	10.3	126
3	Multilayer MoS2 transistors enabled by a facile dry-transfer technique and thermal annealing. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	1.2	113
4	Ternary content-addressable memory with MoS2 transistors for massively parallel data search. Nature Electronics, 2019, 2, 108-114.	26.0	83
5	Memristive Crossbar Arrays for Storage and Computing Applications. Advanced Intelligent Systems, 2021, 3, 2100017.	6.1	80
6	Tuning Optical Signatures of Single- and Few-Layer MoS₂ by Blown-Bubble Bulge Straining up to Fracture. Nano Letters, 2017, 17, 4568-4575.	9.1	79
7	Resolving and Tuning Mechanical Anisotropy in Black Phosphorus via Nanomechanical Multimode Resonance Spectromicroscopy. Nano Letters, 2016, 16, 5394-5400.	9.1	75
8	Electrical breakdown of multilayer MoS₂ field-effect transistors with thickness-dependent mobility. Nanoscale, 2014, 6, 12383-12390.	5.6	74
9	Large-scale arrays of single- and few-layer MoS₂nanomechanical resonators. Nanoscale, 2016, 8, 10677-10685.	5.6	51
10	Single- and few-layer WTe₂and their suspended nanostructures: Raman signatures and nanomechanical resonances. Nanoscale, 2016, 8, 7854-7860.	5.6	44
11	In-memory computing with ferroelectrics. Nature Electronics, 2020, 3, 237-238.	26.0	32
12	Understanding Interlayer Coupling in TMD-hBN Heterostructure by Raman Spectroscopy. IEEE Transactions on Electron Devices, 2018, 65, 4059-4067.	3.0	26
13	Environmental, thermal, and electrical susceptibility of black phosphorus field effect transistors. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 052202.	1.2	19
14	Analyzing electrostatic modulation of signal transduction efficiency in MoS2 nanoelectromechanical resonators with interferometric readout. Science China Information Sciences, 2022, 65, 1.	4.3	19
15	Silicon carbide (SiC) nanoelectromechanical switches and logic gates with long cycles and robust performance in ambient air and at high temperature. , 2013, , .		18
16	Strain-Modulated Dissipation in Two-Dimensional Molybdenum Disulfide Nanoelectromechanical Resonators. ACS Nano, 2022, 16, 2261-2270.	14.6	17
17	Raman Spectroscopic Probe for Nonlinear MoS₂ Nanoelectromechanical Resonators. Nano Letters, 2022, 22, 5780-5787.	9.1	16
18	Electromechanical coupling and design considerations in single-layer MoS₂ suspended-channel transistors and resonators. Nanoscale, 2015, 7, 19921-19929.	5.6	15

#	Article	IF	Citations
19	Go Unary: A Novel Synapse Coding and Mapping Scheme for Reliable ReRAM-based Neuromorphic Computing. , 2020, , .		14
20	Thermal hysteresis controlled reconfigurable MoS₂ nanomechanical resonators. Nanoscale, 2021, 13, 18089-18095.	5.6	14
21	All-electrical readout of atomically-thin MoS2 nanoelectromechanical resonators in the VHF band. , 2016, , .		13
22	Unary Coding and Variation-Aware Optimal Mapping Scheme for Reliable ReRAM-Based Neuromorphic Computing. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 2495-2507.	2.7	13
23	Single-crystal metal growth on amorphous insulating substrates. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 685-689.	7.1	12
24	Thermoelectric response from grain boundaries and lattice distortions in crystalline gold devices. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 23350-23355.	7.1	10
25	Nanomechanics: emerging opportunities for future computing. Science China Information Sciences, 2021, 64, 1.	4.3	10
26	Dual-gate silicon carbide (SiC) lateral nanoelectromechanical switches. , 2013, , .		9
27	Time-domain AC characterization of silicon carbide (SiC) nanoelectromechanical switches toward high-speed operations. , 2013, , .		9
28	2D molybdenum disulfide (MoS<inf>2</inf>) transistors driving RRAMs with 1T1R configuration. , 2017, , .		9
29	Strain-Modulated Equivalent Circuit Model and Dissipation Model for 2D MoS₂ Nems Resonators. , 2021, , .		9
30	Silicon nanowire and cantilever electromechanical switches with integrated piezoresistive transducers. , 2013, , .		8
31	Smart-cut 6H-silicon carbide (SiC) microdisk torsional resonators with sensitive photon radiation detection. , 2014, , .		7
32	Probing contact-mode characteristics of silicon nanowire electromechanical systems with embedded piezoresistive transducers. Journal of Micromechanics and Microengineering, 2015, 25, 095014.	2.6	6
33	High-performance axicon lenses based on high-contrast, multilayer gratings. APL Photonics, 2018, 3, 011302.	5.7	6
34	Highâ€Throughput Growth of Microscale Gold Bicrystals for Singleâ€Grainâ€Boundary Studies. Advanced Materials, 2019, 31, 1902189.	21.0	6
35	Electrodynamic Force, Casimir Effect, and Stiction Mitigation in Silicon Carbide Nanoelectromechanical Switches. Small, 2020, 16, 2005594.	10.0	6
36	In Situ TEM tensile testing of bicrystals with tailored misorientation angles. Acta Materialia, 2022, 224, 117505.	7.9	6

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37	Local-gate electrical actuation, detection, and tuning of atomic-layer M0S2 nanoelectromechanical resonators. , 2017, , .		5
38	A cantilever-based resonator for reconfigurable nanomechanical computing. Journal of Micromechanics and Microengineering, 2021, 31, 124003.	2.6	5
39	Nanoelectromechanical Memories Based on Nonlinear 2D MoS₂ Resonators. , 2022, , .		5
40	Two-dimensional MoS<inf>2</inf> nanomechanical resonators freelysuspended on microtrenches on flexible substrate. , 2015, , .		4
41	Single- and few-layer transfer-printed CVD MoS2 nanomechanical resonators with enhancement by thermal annealing. , 2016, , .		4
42	Multimode characteristics in mechanically-coupled silicon carbide (SiC) nanowire array resonators. , 2013, , .		1
43	Toward ultralow-power computing at exteme with silicon carbide (SiC) nanoelectromechanical logic. , 2014, , .		1
44	Capacitance-voltage (C-V) characterization in very thin suspended silicon nanowires for NEMS-CMOS integration in 160nm Silicon-on-Insulator (SOI). , 2015, , .		1
45	Toward ultralow-power computing at exteme with silicon carbide (SiC) nanoelectromechanical logic. , 2014, , .		0
46	Detection of Trace Impurity Gradients in Noble Metals by the Photothermoelectric Effect. Journal of Physical Chemistry C, 2021, 125, 17509-17517.	3.1	0
47	Hybrid Nanoelectromechanical Switch and Resistive Memory in Silicon Nanowires by VLSI NEMS. , 2021, , .		0
48	Observation of Tunable Opto-Mechanical Responsivity in Two-Dimensional Semiconducting Nanoelectromechanical Resonators. , 2021, , .		0
49	Self-Terminating Write of Multi-Level Cell ReRAM for Efficient Neuromorphic Computing. , 2022, , .		0