

A subthermionic tunnel field-effect transistor with an a

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Citation Report

#	ARTICLE	IF	CITATIONS
7	Designing band-to-band tunneling field-effect transistors with 2D semiconductors for next-generation low-power VLSI. , 2015, , .		18
8	Flat transistor defies the limit. Nature, 2015, 526, 51-52.	13.7	4
9	The end of the start for population sequencing. Nature, 2015, 526, 52-53.	13.7	62
10	Electrical contacts to two-dimensional semiconductors. Nature Materials, 2015, 14, 1195-1205.	13.3	1,318
11	Electron Confinement at the Si/MoS <sub>2</sub> Heterosheet Interface. Advanced Materials Interfaces, 2016, 3, 1500619.	1.9	28
12	Low-Voltage and High-Performance Multilayer MoS <sub>2</sub> Field-Effect Transistors with Graphene Electrodes. ACS Applied Materials & Interfaces, 2016, 8, 34699-34705.	4.0	26
13	Strain and electric-field tunable valley states in 2D van der Waals MoTe <sub>2</sub> /WTe <sub>2</sub> heterostructures. Journal of Physics Condensed Matter, 2016, 28, 505003.	0.7	13
14	Strain-engineering the anisotropic electrical conductance in ReS <sub>2</sub> monolayer. Applied Physics Letters, 2016, 108, .	1.5	53
15	2D materials advances: from large scale synthesis and controlled heterostructures to improved characterization techniques, defects and applications. 2D Materials, 2016, 3, 042001.	2.0	408
16	Band engineering in transition metal dichalcogenides: Stacked versus lateral heterostructures. Applied Physics Letters, 2016, 108, .	1.5	151
17	Highly-mismatched InAs/InSe heterojunction diodes. Applied Physics Letters, 2016, 109, .	1.5	10
18	Two-dimensional van der Waals materials. Physics Today, 2016, 69, 38-44.	0.3	381
19	2D-2D tunneling field-effect transistors using WSe <sub>2</sub> /SnSe <sub>2</sub> heterostructures. Applied Physics Letters, 2016, 108, .	1.5	252
20	High current density 2D/3D MoS <sub>2</sub> /GaN Esaki tunnel diodes. Applied Physics Letters, 2016, 109, .	1.5	65
21	Chemical trends of Schottky barrier behavior on monolayer hexagonal B, Al, and Ga nitrides. Journal of Applied Physics, 2016, 120, .	1.1	13
22	Impact of pipeline in the power performance of tunnel transistor circuits. , 2016, , .		2
23	Prospects of ultra-thin nanowire gated 2D-FETs for next-generation CMOS technology. , 2016, , .		3
24	Effect of band-tails on the subthreshold performance of 2D tunnel-FETs. , 2016, , .		14

#	ARTICLE	IF	CITATIONS
25	Strain Engineering for Transition Metal Dichalcogenides Based Field Effect Transistors. ACS Nano, 2016, 10, 4712-4718.	7.3	112
26	High-Efficiency Selective Electron Tunnelling in a Heterostructure Photovoltaic Diode. Nano Letters, 2016, 16, 3600-3606.	4.5	14
27	Assessment of confinement-induced band-to-band tunneling leakage in the FinEHBTFFET. , 2016, , .		6
28	Multilayer ReS <sub>2</sub> lateral p-n homojunction for photoemission and photodetection. Applied Physics Express, 2016, 9, 055201.	1.1	19
29	Atomistic Simulations of Tunneling FETs. , 2016, , 111-149.		1
30	The Electron-Hole Bilayer TFET: Dimensionality Effects and Optimization. IEEE Transactions on Electron Devices, 2016, 63, 2603-2609.	1.6	20
31	Switching Behavior Constraint in the Heterogate Electron-Hole Bilayer Tunnel FET: The Combined Interplay Between Quantum Confinement Effects and Asymmetric Configurations. IEEE Transactions on Electron Devices, 2016, 63, 2570-2576.	1.6	7
32	Atomic-Monolayer MoS <sub>2</sub> Band-to-Band Tunneling Field-Effect Transistor. Small, 2016, 12, 5676-5683.	5.2	41
33	Atomically-thin layered films for device applications based upon 2D TMDC materials. Thin Solid Films, 2016, 616, 482-501.	0.8	104
34	Two-dimensional van der Waals nanosheet devices for future electronics and photonics. Nano Today, 2016, 11, 626-643.	6.2	71
35	Operation and Design of van der Waals Tunnel Transistors: A 3-D Quantum Transport Study. IEEE Transactions on Electron Devices, 2016, 63, 4388-4394.	1.6	31
36	An Ultra-Short Channel Monolayer MoS <sub>2</sub> FET Defined By the Curvature of a Thin Nanowire. IEEE Electron Device Letters, 2016, 37, 1497-1500.	2.2	31
37	Near-Infrared Photoresponse of One-Sided Abrupt MAPbI <sub>3</sub> /TiO <sub>2</sub> Heterojunction through a Tunneling Process. Advanced Functional Materials, 2016, 26, 8545-8554.	7.8	23
38	An artificial metalloenzyme with the kinetics of native enzymes. Science, 2016, 354, 102-106.	6.0	296
39	MoS <sub>2</sub> transistors with 1-nanometer gate lengths. Science, 2016, 354, 99-102.	6.0	1,140
40	Impact of edge states on device performance of phosphorene heterojunction tunneling field effect transistors. Nanoscale, 2016, 8, 18180-18186.	2.8	20
41	Vertical MoS <sub>2</sub> / h BN/MoS <sub>2</sub> interlayer tunneling field effect transistor. Solid-State Electronics, 2016, 126, 96-103.	0.8	21
42	III-V/Ge MOS device technologies for low power integrated systems. Solid-State Electronics, 2016, 125, 82-102.	0.8	41

#	ARTICLE	IF	CITATIONS
43	Synthesis, properties and applications of 2D layered $M\text{X}_2$ ( $M = \text{Ga, In; X} = \text{S, Se, Te}$ ) Tj ETQq0.0.0 rgBT /Overlock 10	2.8	142
44	Silicene nanoribbons on transition metal dichalcogenide substrates: Effects on electronic structure and ballistic transport. Nano Research, 2016, 9, 3394-3406.	5.8	8
45	Dirac fermions induced in strained zigzag phosphorus nanotubes and their applications in field effect transistors. Physical Chemistry Chemical Physics, 2016, 18, 32521-32527.	1.3	3
46	Abrupt current switching in graphene bilayer tunnel transistors enabled by van Hove singularities. Scientific Reports, 2016, 6, 24654.	1.6	24
47	Advances in 2D Materials for Electronic Devices. Semiconductors and Semimetals, 2016, 95, 221-277.	0.4	8
48	The influence of interfacial tensile strain on the charge transport characteristics of $\text{MoS}_2$ -based vertical heterojunction devices. Nanoscale, 2016, 8, 17598-17607.	2.8	15
49	Impact of inelastic phonon scattering in the OFF state of Tunnel-field-effect transistors. Journal of Computational Electronics, 2016, 15, 1240-1247.	1.3	10
50	Quantum Mechanical Confinement in the Fin Electron-Hole Bilayer Tunnel Field-Effect Transistor. IEEE Transactions on Electron Devices, 2016, , 1-7.	1.6	3
51	Nonlocal transistor based on pure crossed Andreev reflection in a EuO-graphene/superconductor hybrid structure. Physical Review B, 2016, 93, .	1.1	29
52	Van der Waals heterostructures and devices. Nature Reviews Materials, 2016, 1, .	23.3	1,897
53	Two-dimensional semiconductors for transistors. Nature Reviews Materials, 2016, 1, .	23.3	1,020
54	III-V Tunnel Field-Effect Transistor. , 2016, , 137-168.		0
55	Steep slope transistors: Tunnel FETs and beyond. , 2016, , .		16
56	Comparative Analysis of Projected Tunnel and CMOS Transistors for Different Logic Application Areas. IEEE Transactions on Electron Devices, 2016, 63, 5012-5020.	1.6	13
57	Advances in steep-slope tunnel FETs. , 2016, , .		2
58	Trap Assisted Tunneling and Its Effect on Subthreshold Swing of Tunnel FETs. IEEE Transactions on Electron Devices, 2016, 63, 4380-4387.	1.6	93
59	Mobility enhancement and hysteresis phenomenon in $\text{WSe}_2$ FETs. , 2016, , .		1
60	Highâ€œCurrentâ€œDensity Verticalâ€œTunneling Transistors from Graphene/Highly Doped Silicon Heterostructures. Advanced Materials, 2016, 28, 4120-4125.	11.1	43

#	ARTICLE	IF	CITATIONS
61	Spatial metrology of dopants in silicon with exact lattice site precision. <i>Nature Nanotechnology</i> , 2016, 11, 763-768.	15.6	45
62	Incoherent transport in NEMO5: realistic and efficient scattering on phonons. <i>Journal of Computational Electronics</i> , 2016, 15, 1123-1129.	1.3	19
63	Bipolar Junction Transistors in Two-Dimensional $WSe_2$ with Large Current and Photocurrent Gains. <i>Nano Letters</i> , 2016, 16, 4355-4360.	4.5	50
64	InN/InGaN complementary heterojunction-enhanced tunneling field-effect transistor with enhanced subthreshold swing and tunneling current. <i>Superlattices and Microstructures</i> , 2016, 93, 144-152.	1.4	15
65	Design Rules for High Performance Tunnel Transistors From 2-D Materials. <i>IEEE Journal of the Electron Devices Society</i> , 2016, 4, 260-265.	1.2	21
66	High Luminescence Efficiency in $MoS_2$ Grown by Chemical Vapor Deposition. <i>ACS Nano</i> , 2016, 10, 6535-6541.	7.3	140
67	Heterostructures based on two-dimensional layered materials and their potential applications. <i>Materials Today</i> , 2016, 19, 322-335.	8.3	469
68	A density functional theory study of electronic properties of substitutional alloying of monolayer $MoS_2$ and $CeS_2$ surface models. <i>Computational and Theoretical Chemistry</i> , 2016, 1084, 98-102.	1.1	4
69	T-CNTFET with Gate-Drain Overlap and Two Different Gate Metals: A Novel Structure with Increased Saturation Current. <i>ECS Journal of Solid State Science and Technology</i> , 2016, 5, M3032-M3036.	0.9	16
70	A potentiometric biosensor for rapid on-site disease diagnostics. <i>Biosensors and Bioelectronics</i> , 2016, 79, 669-678.	5.3	81
71	Functional silicene and stanene nanoribbons compared to graphene: electronic structure and transport. <i>2D Materials</i> , 2016, 3, 015001.	2.0	18
72	Substrate induced changes in atomically thin 2-dimensional semiconductors: Fundamentals, engineering, and applications. <i>Applied Physics Reviews</i> , 2017, 4, 011301.	5.5	97
73	Gate-all-around junctionless silicon transistors with atomically thin nanosheet channel (0.65 nm) and record sub-threshold slope (43 mV/dec). <i>Applied Physics Letters</i> , 2017, 110, .	1.5	26
74	Tunneling field effect transistor integrated with black phosphorus- $MoS_2$ junction and ion gel dielectric. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	79
75	Sub-10 nm Nanopattern Architecture for 2D Material Field-Effect Transistors. <i>Nano Letters</i> , 2017, 17, 1065-1070.	4.5	172
76	Effects of annealing on top-gated $MoS_2$ transistors with $HfO_2$ dielectric. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2017, 35, .	0.6	31
77	Compact Modeling of Distributed Effects in 2-D Vertical Tunnel FETs and Their Impact on DC and RF Performances. <i>IEEE Journal on Exploratory Solid-State Computational Devices and Circuits</i> , 2017, 3, 18-26.	1.1	6
78	Ferroelectric FET for nonvolatile memory application with two-dimensional $MoSe_2$ channels. <i>2D Materials</i> , 2017, 4, 025036.	2.0	85

#	ARTICLE	IF	CITATIONS
79	Eliminating Overerase Behavior by Designing Energy Band in High-Speed Charge-Trap Memory Based on WSe <sub>2</sub> . Small, 2017, 13, 1604128.	5.2	39
80	Spatially composition-modulated two-dimensional WS <sub>2</sub> Se <sub>2</sub> (1-x) nanosheets. Nanoscale, 2017, 9, 4707-4712.	2.8	39
81	Various and Tunable Transport Properties of WSe <sub>2</sub> Transistor Formed by Metal Contacts. Small, 2017, 13, 1604319.	5.2	17
82	Investigation of GaAsBi/GaAsN Type-II Staggered Heterojunction TFETs with the Analytical Model. IEEE Transactions on Electron Devices, 2017, 64, 1541-1547.	1.6	10
83	Centimeter-Scale Nearly Single-Crystal Monolayer MoS <sub>2</sub> via Self-Limiting Vapor Deposition Epitaxy. Journal of Physical Chemistry C, 2017, 121, 4703-4707.	1.5	12
84	Sub-100 mV Computing With Electro-Mechanical Relays. IEEE Transactions on Electron Devices, 2017, 64, 1323-1329.	1.6	26
85	Design, synthesis and electrocatalytic properties of coaxial and layer-tunable MoS <sub>2</sub> nanofragments/TiO <sub>2</sub> nanorod arrays. Chemical Communications, 2017, 53, 5461-5464.	2.2	17
86	Direct growth of MoS <sub>2</sub> single crystals on polyimide substrates. 2D Materials, 2017, 4, 021028.	2.0	39
87	Point defects in MoS <sub>2</sub> : Comparison between first-principles simulations and electron spin resonance experiments. Applied Surface Science, 2017, 416, 853-857.	3.1	15
88	A Steep-Slope Transistor Combining Phase-Change and Band-to-Band-Tunneling to Achieve a sub-Unity Body Factor. Scientific Reports, 2017, 7, 355.	1.6	46
89	Selective-area growth and controlled substrate coupling of transition metal dichalcogenides. 2D Materials, 2017, 4, 025083.	2.0	36
90	Material Constraints and Scaling of 2-D Vertical Heterostructure Interlayer Tunnel Field-Effect Transistors. IEEE Transactions on Electron Devices, 2017, 64, 2714-2720.	1.6	7
91	Large-Area 2D/3D MoS <sub>2</sub> -MoO <sub>3</sub> Heterostructures with Thermally Stable Exciton and Intriguing Electrical Transport Behaviors. Advanced Electronic Materials, 2017, 3, 1600335.	2.6	25
92	Electrical characterization of two-dimensional materials and their heterostructures. IOP Conference Series: Materials Science and Engineering, 2017, 198, 012002.	0.3	5
93	Theoretical investigation of the phonon-assisted tunneling in TFET with an indirect band gap semiconductor. Superlattices and Microstructures, 2017, 111, 319-325.	1.4	2
94	Electrostatic Doping in Semiconductor Devices. IEEE Transactions on Electron Devices, 2017, 64, 3044-3055.	1.6	104
95	Progress on Electronic and Optoelectronic Devices of 2D Layered Semiconducting Materials. Small, 2017, 13, 1604298.	5.2	65
96	Graphene and related two-dimensional materials: Structure-property relationships for electronics and optoelectronics. Applied Physics Reviews, 2017, 4, .	5.5	476

#	ARTICLE	IF	CITATIONS
97	Charge Trapping Mechanism Leading to Sub-60-mV/decade-Swing FETs. IEEE Transactions on Electron Devices, 2017, 64, 2789-2796.	1.6	29
98	Three fundamental devices in one: a reconfigurable multifunctional device in two-dimensional WSe <sub>2</sub> . Nanotechnology, 2017, 28, 265203.	1.3	9
99	On the drain bias dependence of long-channel silicon-on-insulator-based tunnel field-effect transistors. Japanese Journal of Applied Physics, 2017, 56, 04CD04.	0.8	2
100	(Invited) 2D/3D Tunnel-FET: Toward Green Transistors and Sensors. ECS Transactions, 2017, 77, 185-189.	0.3	4
101	Strain modulation on graphene/ZnO nanowire mixed-dimensional van der Waals heterostructure for high-performance photosensor. Nano Research, 2017, 10, 3476-3485.	5.8	41
102	Investigation of chemical vapour deposition MoS <sub>2</sub> field effect transistors on SiO <sub>2</sub> and ZrO <sub>2</sub> substrates. Nanotechnology, 2017, 28, 164004.	1.3	19
103	A high performance Ge/Si 0.5 Ge 0.5 /Si heterojunction dual sources tunneling transistor with a U-shaped channel. Superlattices and Microstructures, 2017, 106, 8-19.	1.4	10
104	Devices and applications of van der Waals heterostructures. Journal of Semiconductors, 2017, 38, 031005.	2.0	30
105	Precisely Aligned Monolayer MoS <sub>2</sub> Epitaxially Grown on hBN basal Plane. Small, 2017, 13, 1603005.	5.2	91
106	A direct atomic layer deposition method for growth of ultra-thin lubricant tungsten disulfide films. Science China Technological Sciences, 2017, 60, 51-57.	2.0	14
107	Doping two-dimensional materials: ultra-sensitive sensors, band gap tuning and ferromagnetic monolayers. Nanoscale Horizons, 2017, 2, 72-80.	4.1	85
108	Characteristics of Interlayer Tunneling Field-Effect Transistors Computed by a DFT-Bardeen Method. Journal of Electronic Materials, 2017, 46, 1378-1389.	1.0	5
109	A Continuous Compact DC Model for Dual-Independent-Gate FinFETs. IEEE Journal of the Electron Devices Society, 2017, 5, 23-31.	1.2	6
110	InAs/InGaAsSb/GaSb Nanowire Tunnel Field-Effect Transistors. IEEE Transactions on Electron Devices, 2017, 64, 4746-4751.	1.6	53
111	Interface dipole and band bending in the hybrid heterojunction $\text{MoS}_2/\text{GaN}$ . Physical Review B, 2017, 96, .	1.1	57
112	Atomic-Monolayer Two-Dimensional Lateral Quasi-Heterojunction Bipolar Transistors with Resonant Tunneling Phenomenon. ACS Nano, 2017, 11, 11015-11023.	7.3	45
113	Annealed Ag contacts to MoS <sub>2</sub> field-effect transistors. Journal of Applied Physics, 2017, 122, .	1.1	53
114	Scalable van der Waals Heterojunctions for High-Performance Photodetectors. ACS Applied Materials & Interfaces, 2017, 9, 36181-36188.	4.0	29

#	ARTICLE	IF	CITATIONS
115	Gate-controlled reversible rectifying behaviour in tunnel contacted atomically-thin MoS <sub>2</sub> transistor. Nature Communications, 2017, 8, 970.	5.8	68
116	Transport in vertically stacked hetero-structures from 2D materials. Journal of Physics: Conference Series, 2017, 864, 012053.	0.3	7
117	A sub-thermionic MoS <sub>2</sub> FET with tunable transport. Applied Physics Letters, 2017, 111, .	1.5	32
118	A Simple Method for Synthesis of High-Quality Millimeter-Scale 1Tâ€² Transition-Metal Telluride and Near-Field Nanooptical Properties. Advanced Materials, 2017, 29, 1700704.	11.1	101
119	Black phosphorus transistors with van der Waals-type electrical contacts. Nanoscale, 2017, 9, 14047-14057.	2.8	76
120	Tunable and laser-reconfigurable 2D heterocrystals obtained by epitaxial stacking of crystallographically incommensurate Bi <sub>2</sub> Se <sub>3</sub> and MoS <sub>2</sub> atomic layers. Science Advances, 2017, 3, e1601741.	4.7	39
121	Multicontrol Over Graphene-Molecule Heterojunctions. ACS Omega, 2017, 2, 5824-5830.	1.6	2
122	Tuning Excitonic Properties of Monolayer MoS <sub>2</sub> with Microsphere Cavity by High-Throughput Chemical Vapor Deposition Method. Small, 2017, 13, 1701694.	5.2	35
123	Designing artificial 2D crystals with site and size controlled quantum dots. Scientific Reports, 2017, 7, 9965.	1.6	16
124	MoS <sub>2</sub> -Based Mixed-Dimensional van der Waals Heterostructures: A New Platform for Excellent and Controllable Microwave-Absorption Performance. ACS Applied Materials & Interfaces, 2017, 9, 34243-34255.	4.0	131
125	Tunneling field effect transistors based on in-plane and vertical layered phosphorus heterostructures. Chinese Physics B, 2017, 26, 097401.	0.7	7
126	High-energy electronic excitations in a bulk MoS <sub>2</sub> single crystal. Physical Review B, 2017, 96, .	1.1	9
127	Vertical versus Lateral Two-Dimensional Heterostructures: On the Topic of Atomically Abrupt p/n-Junctions. Nano Letters, 2017, 17, 4787-4792.	4.5	69
128	Progress of Large-Scale Synthesis and Electronic Device Application of Two-Dimensional Transition Metal Dichalcogenides. Small, 2017, 13, 1700098.	5.2	54
129	Hybrid graphene tunneling photoconductor with interface engineering towards fast photoresponse and high responsivity. Npj 2D Materials and Applications, 2017, 1, .	3.9	77
130	Covalent bonding-assisted nanotransfer lithography for the fabrication of plasmonic nano-optical elements. Nanoscale, 2017, 9, 14335-14346.	2.8	28
131	Tunneling Photocurrent Assisted by Interlayer Excitons in Staggered van der Waals Hetero-Bilayers. Advanced Materials, 2017, 29, 1701512.	11.1	51
132	Tunable SnSe <sub>2</sub> /WSe <sub>2</sub> Heterostructure Tunneling Field Effect Transistor. Small, 2017, 13, 1701478.	5.2	170



#	ARTICLE	IF	CITATIONS
133	A review of selected topics in physics based modeling for tunnel field-effect transistors. Semiconductor Science and Technology, 2017, 32, 083005.	1.0	69
134	The prospects of two-dimensional materials for ultimately scaled CMOS. , 2017, , .		2
135	Intrinsic p-type W-based transition metal dichalcogenide by substitutional Ta-doping. Applied Physics Letters, 2017, 111, .	1.5	26
136	Photodoping-Driven Crossover in the Low-Frequency Noise of MoS <sub>2</sub> Transistors. Physical Review Applied, 2017, 7, .	1.5	6
137	Device performance tuning of Ge gate-all-around tunneling field effect transistors by means of GeSn: Potential and challenges. , 2017, , .		2
138	Modulation of Quantum Tunneling <i>via</i> a Vertical Two-Dimensional Black Phosphorus and Molybdenum Disulfide <i>n</i> Junction. ACS Nano, 2017, 11, 9143-9150.	7.3	164
139	Highly Enhanced Photoluminescence of Monolayer MoS <sub>2</sub> with Self-Assembled Au Nanoparticle Arrays. Advanced Materials Interfaces, 2017, 4, 1700739.	1.9	41
140	Comparative investigation of electronic transport across three-dimensional nanojunctions. Physical Review B, 2017, 95, .	1.1	2
141	Investigations on Field-Effect Transistors Based on Two-Dimensional Materials. Annalen Der Physik, 2017, 529, 1700087.	0.9	16
142	van der Waals Layered Materials: Opportunities and Challenges. ACS Nano, 2017, 11, 11803-11830.	7.3	394
143	Vertical charge transport through transition metal dichalcogenides – a quantitative analysis. Nanoscale, 2017, 9, 19108-19113.	2.8	18
144	First principles investigation of tunnel FETs based on nanoribbons from topological two-dimensional materials. Nanoscale, 2017, 9, 19390-19397.	2.8	24
145	Low sub-threshold swing realization with contacts of graphene/h-BN/MoS <sub>2</sub> heterostructures in MoS <sub>2</sub> transistors. Applied Physics Letters, 2017, 111, .	1.5	27
146	Subthreshold Slope of Vertical Graphene Interlayer Tunnel Transistor. Nano, 2017, 12, 1750069.	0.5	0
147	Rapid Wafer-Scale Growth of Polycrystalline 2H-MoS <sub>2</sub> by Pulsed Metal-Organic Chemical Vapor Deposition. Chemistry of Materials, 2017, 29, 6279-6288.	3.2	68
148	Characterization of wafer-scale MoS <sub>2</sub> and WSe <sub>2</sub> 2D films by spectroscopic ellipsometry. Current Applied Physics, 2017, 17, 1329-1334.	1.1	26
149	Development of electronic devices based on two-dimensional materials. FlatChem, 2017, 3, 43-63.	2.8	23
150	Mixed-dimensional van der Waals heterostructures. Nature Materials, 2017, 16, 170-181.	13.3	1,220

#	ARTICLE	IF	CITATIONS
151	Band Alignment of 2D Transition Metal Dichalcogenide Heterojunctions. <i>Advanced Functional Materials</i> , 2017, 27, 1603756.	7.8	74
152	Room temperature 2D memristive transistor with optical short-term plasticity. , 2017, , .		4
153	Silicon nanodevices for intelligent communications. , 2017, , .		0
154	Computational study of gate-induced drain leakage in 2D-semiconductor field-effect transistors. , 2017, , .		4
155	How to derive the highest mobility from 2D FETs – A first-principle study. , 2017, , .		1
156	Tunneling transistors based on MoS <sub>2</sub> /MoTe <sub>2</sub> Van der Waals heterostructures. , 2017, , .		2
157	High on-current and low threshold GaSb-InAs heterostructure dual-material DG tunnel-FET. , 2017, , .		2
158	A new device architecture based on two dimensional van der Waals heterostructures. , 2017, , .		0
159	Proposal and demonstration of oxide-semiconductor/(Si, SiGe, Ge) bilayer tunneling field effect transistor with type-II energy band alignment. , 2017, , .		10
160	Exploring logic architectures suitable for TFETs devices. , 2017, , .		1
161	Low dimensional (0D, 1D, 2D) devices for future electronics. , 2017, , .		0
162	Electronic Transport in Two-Dimensional Materials. <i>Annual Review of Physical Chemistry</i> , 2018, 69, 299-325.	4.8	217
163	Investigation of Novel Te precursor (i-C3H7)2Te for MoTe2 Fabrication. <i>MRS Advances</i> , 2018, 3, 321-326.	0.5	1
164	Coherent, atomically thin transition-metal dichalcogenide superlattices with engineered strain. <i>Science</i> , 2018, 359, 1131-1136.	6.0	247
165	Spatially controlled doping of two-dimensional SnS <sub>2</sub> through intercalation for electronics. <i>Nature Nanotechnology</i> , 2018, 13, 294-299.	15.6	269
166	Deep Subthreshold TFT Operation and Design Window for Analog Gain Stages. <i>IEEE Journal of the Electron Devices Society</i> , 2018, 6, 195-200.	1.2	16
167	Advanced analytical modeling of double-gate Tunnel-FETs – A performance evaluation. <i>Solid-State Electronics</i> , 2018, 141, 31-39.	0.8	9
168	Self-Aligned and Scalable Growth of Monolayer WSe <sub>2</sub> – MoS <sub>2</sub> Lateral Heterojunctions. <i>Advanced Functional Materials</i> , 2018, 28, 1706860.	7.8	48

#	ARTICLE	IF	CITATIONS
169	Contact engineering for 2D materials and devices. <i>Chemical Society Reviews</i> , 2018, 47, 3037-3058.	18.7	561
170	Analysis of the Heterogate Electron-Hole Bilayer Tunneling Field-Effect Transistor With Partially Doped Channels: Effects on Tunneling Distance Modulation and Occupancy Probabilities. <i>IEEE Transactions on Electron Devices</i> , 2018, 65, 339-346.	1.6	4
171	The intrinsic interface properties of the top and edge 1T/2H $\text{MoS}_2$ contact: A first-principles study. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	19
172	Cross-Plane Carrier Transport in Van der Waals Layered Materials. <i>Small</i> , 2018, 14, e1703808.	5.2	15
173	Ohmic contacts between monolayer $\text{WSe}_2$ and two-dimensional titanium carbides. <i>Carbon</i> , 2018, 135, 125-133.	5.4	55
174	Atomically thin $\text{p}^n$ junctions based on two-dimensional materials. <i>Chemical Society Reviews</i> , 2018, 47, 3339-3358.	18.7	231
175	Formation of Ge-GeS core-shell nanostructures via solid-state sulfurization of Ge nanowires. <i>CrystEngComm</i> , 2018, 20, 2193-2200.	1.3	3
176	Reconfigurable Diodes Based on Vertical $\text{WSe}_2$ Transistors with van der Waals Bonded Contacts. <i>Advanced Materials</i> , 2018, 30, e1707200.	11.1	31
177	A semi-floating gate memory based on van der Waals heterostructures for quasi-non-volatile applications. <i>Nature Nanotechnology</i> , 2018, 13, 404-410.	15.6	324
178	Electrical metal contacts to atomically thin 2H-phase $\text{MoTe}_2$ grown by metal-organic chemical vapor deposition. <i>Current Applied Physics</i> , 2018, 18, 843-846.	1.1	11
179	Epitaxial growth of single-orientation high-quality $\text{MoS}_2$ monolayers. <i>2D Materials</i> , 2018, 5, 035012.	2.0	65
180	$\text{WSe}_2/\text{GeSe}$ heterojunction photodiode with giant gate tunability. <i>Nano Energy</i> , 2018, 49, 103-108.	8.2	73
181	Dramatic Impact of Dimensionality on the Electrostatics of P-N Junctions and Its Sensing and Switching Applications. <i>IEEE Nanotechnology Magazine</i> , 2018, 17, 293-298.	1.1	32
182	First-principles study of charge and magnetic ordering in monolayer $\text{NbSe}_2$ . <i>Physical Review B</i> , 2018, 97, .	1.3	38
183	Tuning Electronic Structure of Single Layer $\text{MoS}_2$ through Defect and Interface Engineering. <i>ACS Nano</i> , 2018, 12, 2569-2579.	7.3	203
184	The band structure of the quasi-one-dimensional layered semiconductor $\text{TiS}_3(001)$ . <i>Applied Physics Letters</i> , 2018, 112, .	1.5	38
185	Vertical and In-Plane Current Devices Using $\text{NbS}_2/\text{n-MoS}_2$ van der Waals Schottky Junction and Graphene Contact. <i>Nano Letters</i> , 2018, 18, 1937-1945.	4.5	86
186	Band offset and electron affinity of MBE-grown $\text{SnSe}_2$ . <i>Applied Physics Letters</i> , 2018, 112, .	1.5	13

#	ARTICLE	IF	CITATIONS
187	2D Layered Materials-Based van der Waals Heterostructures for Optoelectronics. <i>Advanced Functional Materials</i> , 2018, 28, 1706587.	7.8	279
188	Chemical Vapor Deposition Growth and Applications of Two-Dimensional Materials and Their Heterostructures. <i>Chemical Reviews</i> , 2018, 118, 6091-6133.	23.0	1,000
189	Magnitude of the current in 2D interlayer tunneling devices. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 055703.	0.7	2
190	A Novel Reconfigurable Sub-0.25-V Digital Logic Family Using the Electron-Hole Bilayer TFET. <i>IEEE Journal of the Electron Devices Society</i> , 2018, 6, 2-7.	1.2	11
191	Band edge states, intrinsic defects, and dopants in monolayer HfS <sub>2</sub> and SnS <sub>2</sub> . <i>Applied Physics Letters</i> , 2018, 112, .	1.5	22
192	Tailoring the charge carrier in few layers MoS <sub>2</sub> field-effect transistors by Au metal adsorbate. <i>Applied Surface Science</i> , 2018, 437, 70-74.	3.1	20
193	Resonant Raman and Exciton Coupling in High-Quality Single Crystals of Atomically Thin Molybdenum Diselenide Grown by Vapor-Phase Chalcogenization. <i>ACS Nano</i> , 2018, 12, 740-750.	7.3	34
194	Steep-slope hysteresis-free negative capacitance MoS <sub>2</sub> transistors. <i>Nature Nanotechnology</i> , 2018, 13, 24-28.	15.6	422
195	Low-dimensional materials-based field-effect transistors. <i>Journal of Materials Chemistry C</i> , 2018, 6, 924-941.	2.7	24
196	Impact of momentum mismatch on 2D van der Waals tunnel field-effect transistors. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 055102.	1.3	7
197	Epitaxial Single-Layer MoS <sub>2</sub> on GaN with Enhanced Valley Helicity. <i>Advanced Materials</i> , 2018, 30, 1703888.	11.1	80
198	The ambipolar evolution of a high-performance WSe <sub>2</sub> transistor assisted by a ferroelectric polymer. <i>Nanotechnology</i> , 2018, 29, 105202.	1.3	20
199	Tunneling Diode Based on WSe <sub>2</sub> /SnS <sub>2</sub> Heterostructure Incorporating High Detectivity and Responsivity. <i>Advanced Materials</i> , 2018, 30, 1703286.	11.1	293
200	One-pot growth of two-dimensional lateral heterostructures via sequential edge-epitaxy. <i>Nature</i> , 2018, 553, 63-67.	13.7	394
201	A Study of Vertical Transport through Graphene toward Control of Quantum Tunneling. <i>Nano Letters</i> , 2018, 18, 682-688.	4.5	13
202	Low-temperature, plasma assisted, cyclic synthesis of MoS <sub>2</sub> . <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2018, 36, .	0.6	6
203	High carrier mobility low-voltage ZnO thin film transistors fabricated at a low temperature via solution processing. <i>Ceramics International</i> , 2018, 44, 11751-11756.	2.3	30
204	Simulation study of short-channel effects of tunnel field-effect transistors. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 04FD04.	0.8	3

#	ARTICLE	IF	CITATIONS
205	Preparation and adsorption property of hollow MoS <sub>2</sub> microspheres composed of nanoflakes. Research on Chemical Intermediates, 2018, 44, 4353-4364.	1.3	14
206	Tunneling Transistors Based on MoS <sub>2</sub> /MoTe <sub>2</sub> Van der Waals Heterostructures. IEEE Journal of the Electron Devices Society, 2018, 6, 1048-1055.	1.2	33
207	Sensitivity Challenge of Steep Transistors. IEEE Transactions on Electron Devices, 2018, 65, 1633-1639.	1.6	19
208	Near-zero hysteresis and near-ideal subthreshold swing in h-BN encapsulated single-layer MoS <sub>2</sub> field-effect transistors. 2D Materials, 2018, 5, 031001.	2.0	104
209	A Graphene-Based Filament Transistor with Sub-10 mVdec <sup>-1</sup> Subthreshold Swing. Advanced Electronic Materials, 2018, 4, 1700608.	2.6	21
210	Sub-10Ånm graphene nano-ribbon tunnel field-effect transistor. Carbon, 2018, 126, 588-593.	5.4	46
211	Impact of the RTA-level architecture on the power performance of tunnel transistor circuits. International Journal of Circuit Theory and Applications, 2018, 46, 647-655.	1.3	3
212	Large scale 2D/3D hybrids based on gallium nitride and transition metal dichalcogenides. Nanoscale, 2018, 10, 336-341.	2.8	38
213	Band alignment at interfaces of synthetic few-monolayer MoS <sub>2</sub> with SiO <sub>2</sub> from internal photoemission. APL Materials, 2018, 6, .	2.2	17
214	Two-step synthesis and characterization of vertically stacked SnS <sub>2</sub> /WS <sub>2</sub> and SnS <sub>2</sub> /MoS <sub>2</sub> heterojunctions. Physical Chemistry Chemical Physics, 2018, 20, 889-897.	1.3	28
215	Laminated bilayer MoS <sub>2</sub> with weak interlayer coupling. Nanoscale, 2018, 10, 1145-1152.	2.8	17
216	Suppression of ambipolar current in tunnel FETs using drain-pocket: Proposal and analysis. Superlattices and Microstructures, 2018, 113, 261-270.	1.4	68
217	Vertically-Stacked Nanowire/FinFETs and Following 2D FETs for Logic Chips. , 2018, , .		0
218	Interfacial Thermal Conductivity of 2D Layered Materials: An Atomistic Approach. , 2018, , .		4
219	Graphene-based in-plane heterostructures for atomically thin electronics. New Carbon Materials, 2018, 33, 481-492.	2.9	8
220	Scaling Effect on Device Performance in Graphene Tunnel Field Effect Transistors. , 2018, , .		1
221	Optical Nano-Imaging of 2D Transition Metal Dichalcogenides. , 2018, , .		0
222	Inorganic semiconductor biointerfaces. Nature Reviews Materials, 2018, 3, 473-490.	23.3	154

#	ARTICLE	IF	CITATIONS
223	Low-Dimensional-Structure Devices for Future Electronics Behaviors. , 2018, , .		0
224	High-performance transistors based on monolayer CVD MoS <sub>2</sub> grown on molten glass. Applied Physics Letters, 2018, 113, .	1.5	36
225	Nonequilibrium Greenâ€™s function method: Transport and band tail predictions in transition metal dichalcogenides. , 2018, , .		0
226	Design Guidelines and Limitations of Multilayer Two-dimensional Vertical Tunneling FETs for UltraLow Power Logic Applications. , 2018, , .		0
228	Recent Advances in Synthesis and Applications of 2D Junctions. Small, 2018, 14, e1801606.	5.2	19
229	Synthesis and properties of graphene and its 2D inorganic analogues with potential applications. Bulletin of Materials Science, 2018, 41, 1.	0.8	4
230	Highly Responsive, Polarization Sensitive, Self-Biased Single GeO <sub>2</sub> -Ge Nanowire Device for Broadband and Low Power Photodetectors. ACS Photonics, 2018, 5, 4170-4178.	3.2	36
231	Bandgap modulated phosphorene based gate drain underlap double-gate TFET. AIP Advances, 2018, 8, .	0.6	3
232	Electrical-Equivalent van der Waals Gap for Two-Dimensional Bilayers. Physical Review Applied, 2018, 10, .	1.5	5
233	A Missing Active Deviceâ€™Trancitor for a New Paradigm of Electronics. IEEE Access, 2018, 6, 46962-46967.	2.6	0
234	Charge carrier injection and transport engineering in two-dimensional transition metal dichalcogenides. Chemical Science, 2018, 9, 7727-7745.	3.7	70
236	Efficient Charge Separation in 2D Janus van der Waals Structures with Built-in Electric Fields and Intrinsic pâ€™n Doping. Journal of Physical Chemistry C, 2018, 122, 24520-24526.	1.5	79
237	Vertical-Tunnel Field-Effect Transistor Based on a Siliconâ€™MoS <sub>2</sub> Three-Dimensionalâ€™Two-Dimensional Heterostructure. ACS Applied Materials & Interfaces, 2018, 10, 40212-40218.	4.0	34
238	Impact of Synthesized MoS <sub>2</sub> Wafer-Scale Quality on Fermi Level Pinning in Vertical Schottky-Barrier Heterostructures. ACS Applied Materials & Interfaces, 2018, 10, 39860-39871.	4.0	5
239	Investigation on Mo <sub>1-x</sub> W <sub>x</sub> S <sub>2</sub> fabricated by co-sputtering and post-deposition sulfurization with (C <sub>4</sub> H <sub>9</sub> ) <sub>2</sub> S <sub>2</sub> . Japanese Journal of Applied Physics, 2018, 57, 06HB04.	0.8	2
240	Highâ€™Performance Waferâ€™Scale MoS <sub>2</sub> Transistors toward Practical Application. Small, 2018, 14, e1803465.	5.2	88
241	Spatially and Precisely Controlled Large-Scale and Persistent Optical Gating in a TiOxâ€™MoS <sub>2</sub> Heterostructure. ACS Applied Materials & Interfaces, 2018, 10, 38319-38325.	4.0	2
242	Operation Mechanism of a MoS <sub>2</sub> /BP Heterojunction FET. Nanomaterials, 2018, 8, 797.	1.9	11

#	ARTICLE	IF	CITATIONS
243	Optimization and Scaling of Ge-Pocket TFET. IEEE Transactions on Electron Devices, 2018, 65, 5289-5294.	1.6	31
244	Solution-Processed Bi <sub>2</sub> S <sub>3</sub> Photoresistor Film To Mitigate a Trade-off between Morphology and Electronic Properties. Journal of Physical Chemistry Letters, 2018, 9, 5392-5399.	2.1	20
245	n-Type Doping Effect of CVD-Grown Multilayer MoSe <sub>2</sub> Thin Film Transistors by Two-Step Functionalization. Advanced Electronic Materials, 2018, 4, 1800308.	2.6	25
246	Synthetic Lateral Metal-Semiconductor Heterostructures of Transition Metal Disulfides. Journal of the American Chemical Society, 2018, 140, 12354-12358.	6.6	85
247	Vertical-tunneling field-effect transistor based on MoTe <sub>2</sub> /MoS <sub>2</sub> 2D heterojunction. Journal Physics D: Applied Physics, 2018, 51, 475101.	1.3	26
248	2-D Layered Materials for Next-Generation Electronics: Opportunities and Challenges. IEEE Transactions on Electron Devices, 2018, 65, 4109-4121.	1.6	74
249	High-Vacuum Particulate-Free Deposition of Wafer-Scale Mono-, Bi-, and Trilayer Molybdenum Disulfide with Superior Transport Properties. ACS Applied Materials & Interfaces, 2018, 10, 33457-33463.	4.0	7
250	Gate Leakage Tunneling Impact on the InAs/GaSb Heterojunction Electron-Hole Bilayer Tunneling Field-Effect Transistor. IEEE Transactions on Electron Devices, 2018, 65, 4679-4686.	1.6	8
251	Type-II HfS <sub>2</sub> /MoS <sub>2</sub> Heterojunction Transistors. IEICE Transactions on Electronics, 2018, E101.C, 338-342.	0.3	6
252	2D Tunnel Field Effect Transistors (FETs) with a Stable Charge-Transfer Type p <sup>+</sup> WSe <sub>2</sub> Source. Advanced Electronic Materials, 2018, 4, 1800207.	2.6	41
253	Switching Mechanism and the Scalability of Vertical-TFETs. IEEE Transactions on Electron Devices, 2018, 65, 3065-3068.	1.6	29
254	Synergetic photoluminescence enhancement of monolayer MoS <sub>2</sub> via surface plasmon resonance and defect repair. RSC Advances, 2018, 8, 23591-23598.	1.7	10
255	Passivating the sulfur vacancy in monolayer MoS <sub>2</sub> . APL Materials, 2018, 6, .	2.2	53
256	Doping-Free Complementary Logic Gates Enabled by Two-Dimensional Polarity-Controllable Transistors. ACS Nano, 2018, 12, 7039-7047.	7.3	104
257	Perspective: 2D for beyond CMOS. APL Materials, 2018, 6, .	2.2	37
258	Recent Progress and Future Prospects of 2D-Based Photodetectors. Advanced Materials, 2018, 30, e1801164.	11.1	408
259	2D Materials for Smart Life. , 2018, , .		1
260	Engineered Nanomaterial in Electronics and Electrical Industries. , 2018, , 324-364.		13

#	ARTICLE	IF	CITATIONS
261	Synthesis of hexagonal boron nitride heterostructures for 2D van der Waals electronics. <i>Chemical Society Reviews</i> , 2018, 47, 6342-6369.	18.7	114
262	Electronics and Optoelectronics Based on Two-Dimensional Materials. <i>Journal of the Korean Physical Society</i> , 2018, 73, 1-15.	0.3	16
263	Van der Waals Heterostructure Based Field Effect Transistor Application. <i>Crystals</i> , 2018, 8, 8.	1.0	24
264	Nano-optical imaging of monolayer MoSe <sub>2</sub> -WSe <sub>2</sub> lateral heterostructure with subwavelength domains. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018, 36, 05G502.	0.9	20
265	Temperature-dependent electronic charge transport characteristics at MoS <sub>2</sub> /p-type Ge heterojunctions. <i>Journal of Alloys and Compounds</i> , 2018, 757, 221-227.	2.8	24
266	Scalability assessment of Group-IV mono-chalcogenide based tunnel FET. <i>Scientific Reports</i> , 2018, 8, 5993.	1.6	27
267	Three-Dimensional Atomistic Tomography of W-Based Alloyed Two-Dimensional Transition Metal Dichalcogenides. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 30640-30648.	4.0	3
268	Vertical Transistors Based on 2D Materials: Status and Prospects. <i>Crystals</i> , 2018, 8, 70.	1.0	71
269	A general ligand-assisted self-assembly approach to crystalline mesoporous metal oxides. <i>NPG Asia Materials</i> , 2018, 10, 800-809.	3.8	43
270	Novel 2-D Materials for Tunneling FETs: an Ab-initio Study. , 2018, , .		0
271	Research Update: Recent progress on 2D materials beyond graphene: From ripples, defects, intercalation, and valley dynamics to straintronics and power dissipation. <i>APL Materials</i> , 2018, 6, .	2.2	30
272	Impact of source doping on the performance of vertical InAs/InGaAsSb/GaSb nanowire tunneling field-effect transistors. <i>Nanotechnology</i> , 2018, 29, 435201.	1.3	12
273	Independent Band Modulation in 2D van der Waals Heterostructures via a Novel Device Architecture. <i>Advanced Science</i> , 2018, 5, 1800237.	5.6	36
274	Two-Dimensional MX <sub>2</sub> Semiconductors for Sub-5 nm Junctionless Field Effect Transistors. <i>Materials</i> , 2018, 11, 430.	1.3	3
275	Large-Area CVD-Grown MoS <sub>2</sub> Driver Circuit Array for Flexible Organic Light-Emitting Diode Display. <i>Advanced Electronic Materials</i> , 2018, 4, 1800251.	2.6	39
276	Measuring third-order susceptibility tensor elements of monolayer MoS <sub>2</sub> using the optical Kerr effect method. <i>Applied Physics Letters</i> , 2018, 113, 051901.	1.5	4
277	Fringing-field-based 2-D analytical model for a gate-underlap double-gate TFET. <i>Journal of Computational Electronics</i> , 2018, 17, 1567-1577.	1.3	4
278	Direct Chemical Vapor Deposition Growth of Monolayer MoS <sub>2</sub> on TiO <sub>2</sub> Nanorods and Evidence for Doping-Induced Strong Photoluminescence Enhancement. <i>Journal of Physical Chemistry C</i> , 2018, 122, 15017-15025.	1.5	38



#	ARTICLE	IF	CITATIONS
279	Sub-5 nm Monolayer Arsenene and Antimonene Transistors. ACS Applied Materials & Interfaces, 2018, 10, 22363-22371.	4.0	77
280	<i>Ab Initio</i> Simulation of Band-to-Band Tunneling FETs With Single- and Few-Layer 2-D Materials as Channels. IEEE Transactions on Electron Devices, 2018, 65, 4180-4187.	1.6	23
281	Dirac-source field-effect transistors as energy-efficient, high-performance electronic switches. Science, 2018, 361, 387-392.	6.0	226
282	Parameter control for enhanced peak-to-valley current ratio in a MoS <sub>2</sub> /MoTe <sub>2</sub> van der Waals heterostructure. Nanoscale, 2018, 10, 12322-12329.	2.8	25
283	Peculiar alignment and strain of 2D WSe <sub>2</sub> grown by van der Waals epitaxy on reconstructed sapphire surfaces. Nanotechnology, 2019, 30, 465601.	1.3	17
284	Two-Dimensional Transition Metal Dichalcogenides: An Overview. , 2019, , 1-27.		4
285	Boosting the performance of an ultrascaled carbon nanotube junctionless tunnel field-effect transistor using an ungated region: NEGF simulation. Journal of Computational Electronics, 2019, 18, 1222-1228.	1.3	24
286	Conductive AFM of 2D Materials and Heterostructures for Nanoelectronics. Nanoscience and Technology, 2019, , 303-350.	1.5	7
287	Tunnelling-based ternary metal-oxide-semiconductor technology. Nature Electronics, 2019, 2, 307-312.	13.1	79
288	Convection-Flow-Assisted Preparation of a Strong Electron Dopant, Benzyl Viologen, for Surface-Charge Transfer Doping of Molybdenum Disulfide. ChemistryOpen, 2019, 8, 908-914.	0.9	6
289	Carbon Nanomaterials and Two-Dimensional Transition Metal Dichalcogenides (2D TMDCs). Advanced Structured Materials, 2019, , 165-245.	0.3	4
290	WSe <sub>2</sub> (2 <sup>d</sup> ) Te <sub>2</sub> alloys grown by molecular beam epitaxy. 2D Materials, 2019, 6, 045027.	2.0	20
291	Concurrent Subthermionic and Strong Thermionic Transport in Inkjet-Printed Indium Zinc Oxide/Silver Hybrid-Channel Field-Effect Transistors. Advanced Electronic Materials, 2019, 5, 1900401.	2.6	12
292	A Symmetric Tunnel Field-Effect Transistor Based on MoS <sub>2</sub> /Black Phosphorus/MoS <sub>2</sub> Nanolayered Heterostructures. ACS Applied Nano Materials, 2019, 2, 5674-5680.	2.4	27
294	2D Materials for Field-Effect Transistor-Based Biosensors. , 2019, , 329-377.		0
295	Band Structure Engineering of Layered WSe <sub>2</sub> <i>via</i> One-Step Chemical Functionalization. ACS Nano, 2019, 13, 7545-7555.	7.3	21
296	Mechanical peeling of van der Waals heterostructures: Theory and simulations. Extreme Mechanics Letters, 2019, 30, 100501.	2.0	28
297	Efficient Atomistic Simulation of Heterostructure Field-Effect Transistors. IEEE Journal of the Electron Devices Society, 2019, 7, 668-676.	1.2	6

#	ARTICLE	IF	CITATIONS
298	Tunable Negative Differential Resistance in van der Waals Heterostructures at Room Temperature by Tailoring the Interface. ACS Nano, 2019, 13, 8193-8201.	7.3	69
299	Van der Waals Heterostructures for High-Performance Device Applications: Challenges and Opportunities. Advanced Materials, 2020, 32, e1903800.	11.1	304
300	Band-Offset Degradation in van der Waals Heterojunctions. Physical Review Applied, 2019, 12, .	1.5	15
301	The 2D Materials Used for Nanodevice Applications: Utilizing Aggressively Scaled Transistors. IEEE Nanotechnology Magazine, 2019, 13, 39-42.	0.9	0
303	Vapor growth of WSe <sub>2</sub> /WS <sub>2</sub> heterostructures with stacking dependent optical properties. Nano Research, 2019, 12, 3123-3128.	5.8	32
304	Ballistic Quantum Transport of Sub-10 nm 2D Sb <sub>2</sub> Te <sub>2</sub> Se Transistors. Advanced Electronic Materials, 2019, 5, 1900813.	2.6	14
305	Building the Quasi One Dimensional Transistor from 2D Materials. , 2019, , .		3
306	High Hall-Effect Mobility of Large-Area Atomic-Layered Polycrystalline ZrS <sub>2</sub> Film Using UHV RF Magnetron Sputtering and Sulfurization. IEEE Journal of the Electron Devices Society, 2019, 7, 1258-1263.	1.2	17
307	Anderson Localization in 2D Amorphous MoO <sub>3</sub> Monolayers for Electrochemical Ammonia Synthesis. ChemCatChem, 2019, 11, 5412-5416.	1.8	37
308	Adaptive Transport in High Performance (Ion), Steep Sub-Threshold Slope (SS < 60 mV/dec) MoS <sub>2</sub> Transistors. IEEE Nanotechnology Magazine, 2019, 18, 1071-1078.	1.1	2
309	Material design of oxide-semiconductor/group-IV-semiconductor bilayer tunneling field effect transistors. , 2019, , .		1
310	Fabrication and Electrical Characteristics of ZnSnO/Si Bilayer Tunneling Filed-Effect Transistors. IEEE Journal of the Electron Devices Society, 2019, 7, 1201-1208.	1.2	7
311	A Horizontal-Gate Monolayer MoS <sub>2</sub> Transistor Based on Image Force Barrier Reduction. Nanomaterials, 2019, 9, 1245.	1.9	10
312	Graphene and two-dimensional materials for silicon technology. Nature, 2019, 573, 507-518.	13.7	936
313	Tunable electronic structures in BP/MoSSe van der Waals heterostructures by external electric field and strain. Applied Surface Science, 2019, 497, 143809.	3.1	71
314	Semi-quantitative design of black phosphorous field-effect transistor sensors for heavy metal ion detection in aqueous media. Molecular Systems Design and Engineering, 2019, 4, 491-502.	1.7	17
315	A sub-10 nm monolayer ReS <sub>2</sub> transistor for low-power applications. Journal of Materials Chemistry C, 2019, 7, 1604-1611.	2.7	32
316	Symmetric Ultrafast Writing and Erasing Speeds in Quasi-Nonvolatile Memory via van der Waals Heterostructures. Advanced Materials, 2019, 31, e1808035.	11.1	50

#	ARTICLE	IF	CITATIONS
317	Van der Waals Broken-Gap $\pi$ -n Heterojunction Tunnel Diode Based on Black Phosphorus and Rhenium Disulfide. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 8266-8275.	4.0	58
318	Effect of increasing gate capacitance on the performance of a p-MoS <sub>2</sub> /HfS <sub>2</sub> van der Waals heterostructure tunneling field-effect transistor. <i>Japanese Journal of Applied Physics</i> , 2019, 58, SBBH02.	0.8	9
319	Defects coupling impacts on mono-layer WSe <sub>2</sub> tunneling field-effect transistors. <i>Applied Physics Express</i> , 2019, 12, 034001.	1.1	5
320	High-performance field emission based on nanostructured tin selenide for nanoscale vacuum transistors. <i>Nanoscale</i> , 2019, 11, 3129-3137.	2.8	39
321	Drain Current Model for Double Gate Tunnel-FETs with InAs/Si Heterojunction and Source-Pocket Architecture. <i>Nanomaterials</i> , 2019, 9, 181.	1.9	12
322	Extraordinary Radiation Hardness of Atomically Thin MoS <sub>2</sub> . <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 8391-8399.	4.0	34
323	Energy Band Alignment of a Monolayer MoS <sub>2</sub> with SiO <sub>2</sub> and Al <sub>2</sub> O <sub>3</sub> Insulators from Internal Photoemission. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019, 216, 1800616.	0.8	11
324	A field-effect approach to directly profiling the localized states in monolayer MoS <sub>2</sub> . <i>Science Bulletin</i> , 2019, 64, 1049-1055.	4.3	5
325	Ultrahigh Gauge Factor in Graphene/MoS <sub>2</sub> Heterojunction Field Effect Transistor with Variable Schottky Barrier. <i>ACS Nano</i> , 2019, 13, 8392-8400.	7.3	54
326	Electronic Transport and Thermopower in 2D and 3D Heterostructures—A Theory Perspective. <i>Annalen Der Physik</i> , 2019, 531, 1800510.	0.9	9
327	Dynamic structure-properties characterization and manipulation in advanced nanodevices. <i>Materials Today Nano</i> , 2019, 7, 100042.	2.3	17
328	Devices and Circuits Using Novel 2-D Materials: A Perspective for Future VLSI Systems. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2019, 27, 1486-1503.	2.1	30
329	Negative Transconductance Heterojunction Organic Transistors and their Application to Full-Swing Ternary Circuits. <i>Advanced Materials</i> , 2019, 31, e1808265.	11.1	70
330	Bilayer tunneling field effect transistor with oxide-semiconductor and group-IV semiconductor hetero junction: Simulation analysis of electrical characteristics. <i>AIP Advances</i> , 2019, 9, 055001.	0.6	14
331	ZnO/Si and ZnO/Ge bilayer tunneling field effect transistors: Experimental characterization of electrical properties. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	12
332	Nonvolatile Memory (NVM) Operation of Tunnel Field-Effect Transistor (TFET) Using Ferroelectric HfO <sub>2</sub> Sidewall. <i>Journal of Nanoscience and Nanotechnology</i> , 2019, 19, 6061-6065.	0.9	0
333	A Charge Plasma-Based Monolayer Transition Metal Dichalcogenide Tunnel FET. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 2837-2843.	1.6	19
334	Controlling Injection Barriers for Ambipolar 2D Semiconductors via Quasi-van der Waals Contacts. <i>Advanced Science</i> , 2019, 6, 1801841.	5.6	17

#	ARTICLE	IF	CITATIONS
335	Nanoscale electronic devices based on transition metal dichalcogenides. 2D Materials, 2019, 6, 032004.	2.0	51
336	Dynamically controllable polarity modulation of MoTe <sub>2</sub> field-effect transistors through ultraviolet light and electrostatic activation. Science Advances, 2019, 5, eaav3430.	4.7	96
337	Exploring and suppressing the kink effect of black phosphorus field-effect transistors operating in the saturation regime. Nanoscale, 2019, 11, 10420-10428.	2.8	8
338	Modified band alignment at multilayer MoS <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> heterojunctions by nitridation treatment. Journal of Alloys and Compounds, 2019, 793, 599-603.	2.8	10
339	Van der Waals integration before and beyond two-dimensional materials. Nature, 2019, 567, 323-333.	13.7	946
340	Homogenous Tunnel Diode Based on Two-Dimensional Molybdenum Disulfide with Light Induced n <sup>+</sup> Doping. ACS Applied Electronic Materials, 2019, 1, 523-529.	2.0	4
341	Negative transconductance and negative differential resistance in asymmetric narrow bandgap 2D-3D heterostructures. Nanoscale, 2019, 11, 4701-4706.	2.8	20
342	A GaAs Sb /In Ga <sub>0.47</sub> As heterojunction Z-gate TFET with hetero-gate-dielectric. Superlattices and Microstructures, 2019, 129, 282-293.	1.4	8
343	Carrier transport in two-dimensional topological insulator nanoribbons in the presence of vacancy defects. 2D Materials, 2019, 6, 025011.	2.0	18
345	High-Photoresponsive Backward Diode by Two-Dimensional SnS <sub>2</sub> /Silicon Heterostructure. ACS Photonics, 2019, 6, 728-734.	3.2	24
346	Channel layer-dependent optimization of on-state current and subthreshold swing of MoS <sub>2</sub> TFET. , 2019, , .		0
347	Heat exchange with interband tunneling. Journal of Applied Physics, 2019, 126, 165107.	1.1	0
348	Chemical vapor deposition synthesis of two-dimensional freestanding transition metal oxychloride for electronic applications. Science China Information Sciences, 2019, 62, 1.	2.7	5
349	Control of electron tunnelling by fine band engineering of semiconductor potential barriers. Nanoscale, 2019, 11, 21376-21385.	2.8	3
350	Sub-60 mV per decade switching in ion-gel-gated In <sub>2</sub> O <sub>3</sub> transistors with a nano-thick charge trapping layer. Nanoscale, 2019, 11, 21740-21747.	2.8	21
351	A unipolar nonvolatile resistive switching behavior in a layered transition metal oxide. Nanoscale, 2019, 11, 20497-20506.	2.8	24
352	Heteroepitaxial vertical perovskite hot-electron transistors down to the monolayer limit. Nature Communications, 2019, 10, 5312.	5.8	10
353	Oxidized-monolayer tunneling barrier for strong Fermi-level depinning in layered InSe transistors. Npj 2D Materials and Applications, 2019, 3, .	3.9	19

#	ARTICLE	IF	CITATIONS
354	Proposition and analysis of three level interference based molecular transistor. Engineering Research Express, 2019, 1, 025045.	0.8	0
355	Thickness-dependent charge transport in exfoliated indium selenide vertical field-effect transistors. Applied Physics Letters, 2019, 115, 243104.	1.5	5
356	Sub-10 nm tunneling field-effect transistors based on monolayer group IV mono-chalcogenides. Nanoscale, 2019, 11, 23392-23401.	2.8	30
357	Electronic structure and transport properties of 2D RhTeCl: a NEGF-DFT study. Nanoscale, 2019, 11, 20461-20466.	2.8	8
358	Modulation the electronic property of 2D monolayer MoS <sub>2</sub> by amino acid. Applied Materials Today, 2019, 14, 151-158.	2.3	61
359	Complementary Black Phosphorus Tunneling Field-Effect Transistors. ACS Nano, 2019, 13, 377-385.	7.3	103
360	Data-driven and probabilistic learning of the process-structure-property relationship in solution-grown tellurene for optimized nanomanufacturing of high-performance nanoelectronics. Nano Energy, 2019, 57, 480-491.	8.2	44
361	MoS <sub>2</sub> thin films from a (N <i>i&gt;t&lt;/i&gt;Bu)<sub>2</sub>(NMe<sub>2</sub>)<sub>2</sub>Mo and 1-propanethiol atomic layer deposition process. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .</i>	0.9	22
362	A constant loop bandwidth in delta sigma fractional-N PLL synthesizer with phase noise cancellation. The Integration VLSI Journal, 2019, 65, 175-188.	1.3	1
363	A MoS <sub>2</sub> /PTCDA Hybrid Heterojunction Synapse with Efficient Photoelectric Dual Modulation and Versatility. Advanced Materials, 2019, 31, e1806227.	11.1	336
364	Asymmetric finger-shape metallization in Graphene-on-Si solar cells for enhanced carrier trapping. Materials Science in Semiconductor Processing, 2019, 91, 13-21.	1.9	9
365	Impact of MoS <sub>2</sub> layer transfer on electrostatics of MoS <sub>2</sub> /SiO <sub>2</sub> interface. Nanotechnology, 2019, 30, 055702.	1.3	11
366	Alloy Engineered Nitride Tunneling Field-Effect Transistor: A Solution for the Challenge of Heterojunction TFETs. IEEE Transactions on Electron Devices, 2019, 66, 736-742.	1.6	16
367	Maximizing the Current Output in Self-Aligned Grapheneâ€“InAsâ€“Metal Vertical Transistors. ACS Nano, 2019, 13, 847-854.	7.3	23
368	New Floating Gate Memory with Excellent Retention Characteristics. Advanced Electronic Materials, 2019, 5, 1800726.	2.6	48
369	Recent Advances in Lowâ€“Dimensional Heterojunctionâ€“Based Tunnel Field Effect Transistors. Advanced Electronic Materials, 2019, 5, 1800569.	2.6	53
370	High performance tunnel field effect transistors based on in-plane transition metal dichalcogenide heterojunctions. Nanotechnology, 2019, 30, 025201.	1.3	17
371	Atomically thin van der Waals tunnel field-effect transistors and its potential for applications. Nanotechnology, 2019, 30, 105201.	1.3	17

#	ARTICLE	IF	CITATIONS
372	Germanium crystals. , 2019, , 89-127.		5
373	Sub-10â€nm vertical tunneling transistors based on layered black phosphorene homojunction. Applied Surface Science, 2019, 465, 895-901.	3.1	17
374	Tunnel-FET Switching Is Governed by Non-Lorentzian Spectral Line Shape. Proceedings of the IEEE, 2020, 108, 1235-1244.	16.4	7
375	Vertical SnS <sub>2</sub> /Si heterostructure for tunnel diodes. Science China Information Sciences, 2020, 63, 1.	2.7	7
376	MoS <sub>2</sub> /MoTe <sub>2</sub> Heterostructure Tunnel FETs Using Gated Schottky Contacts. Advanced Functional Materials, 2020, 30, 1905970.	7.8	50
377	Antiamibipolar Transistor: A Newcomer for Future Flexible Electronics. Advanced Functional Materials, 2020, 30, 1903724.	7.8	50
378	Insights into Multilevel Resistive Switching in Monolayer MoS <sub>2</sub> . ACS Applied Materials & Interfaces, 2020, 12, 6022-6029.	4.0	54
379	Auâ€InSe van der Waals Schottky junctions with ultralow reverse current and high photosensitivity. Nanoscale, 2020, 12, 4094-4100.	2.8	31
380	Ultralow switching voltage slope based on two-dimensional materials for integrated memory and neuromorphic applications. Nano Energy, 2020, 69, 104472.	8.2	50
381	Schottky Barrier Variable Graphene/Multilayer-MoS <sub>2</sub> Heterojunction Transistor Used to Overcome Short Channel Effects. ACS Applied Materials & Interfaces, 2020, 12, 2854-2861.	4.0	27
382	Sub-50-mV Nanoelectromechanical Switch Without Body Bias. IEEE Transactions on Electron Devices, 2020, 67, 3894-3897.	1.6	11
383	Recent developments in emerging two-dimensional materials and their applications. Journal of Materials Chemistry C, 2020, 8, 387-440.	2.7	501
384	A 10â€nm Asymmetric Grapheneâ€Rhenium Disulfide Fieldâ€Effect Transistor for Highâ€Speed Application. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900450.	0.8	1
385	2D semiconducting materials for electronic and optoelectronic applications: potential and challenge. 2D Materials, 2020, 7, 022003.	2.0	168
386	Ultra-strong anisotropic photo-responsivity of bilayer tellurene: a quantum transport and time-domain first principle study. Nanophotonics, 2020, 9, 1931-1940.	2.9	16
387	Saltâ€Assisted Growth of Pâ€type Cu <sub>9</sub> S <sub>5</sub> Nanoflakes for Pâ€N Heterojunction Photodetectors with High Responsivity. Advanced Functional Materials, 2020, 30, 1908382.	7.8	40
388	Circuit speed oriented device design scheme for GaAsSb/InGaAs double-gate hetero-junction tunnel FETs. Japanese Journal of Applied Physics, 2020, 59, SGG A06.	0.8	2
389	High-Performance Field-Effect Transistor and Logic Gates Based on GaSâ€MoS <sub>2</sub> van der Waals Heterostructure. ACS Applied Materials & Interfaces, 2020, 12, 5106-5112.	4.0	17

#	ARTICLE	IF	CITATIONS
390	A facile route to enhance the mobility of MoTe <sub>2</sub> field effect transistor via chemical doping. Superlattices and Microstructures, 2020, 147, 106698.	1.4	22
391	InGaAs-InP core-shell nanowire/Si junction for vertical tunnel field-effect transistor. Applied Physics Letters, 2020, 117, 123501.	1.5	5
392	Tunnel Field Effect Transistors Based on Two-Dimensional Material Van-der-Waals Heterostructures. , O, , .		1
393	Record-Low Subthreshold-Swing Negative-Capacitance 2D Field-Effect Transistors. Advanced Materials, 2020, 32, e2005353.	11.1	31
394	Phase Transition in a Memristive Suspended MoS <sub>2</sub> Monolayer Probed by Opto- and Electro-Mechanics. ACS Nano, 2020, 14, 13611-13618.	7.3	13
395	DFT coupled with NEGF study of structural, electronic and transport properties of two-dimensional InOBr. Vacuum, 2020, 182, 109745.	1.6	1
396	Lateral Monolayer MoSe <sub>2</sub> -WSe <sub>2</sub> Heterojunctions with Giant Built-in Potentials. Small, 2020, 16, e2002263.	5.2	50
397	Understanding interface properties in 2D heterostructure FETs. Semiconductor Science and Technology, 2020, 35, 103003.	1.0	8
398	Unit cell restricted Bloch functions basis for first-principle transport models: Theory and application. Physical Review B, 2020, 102, .	1.1	19
399	InGaZnO Tunnel and Junction Transistors Based on Vertically Stacked Black Phosphorus/InGaZnO Heterojunctions. Advanced Electronic Materials, 2020, 6, 2000291.	2.6	11
400	Laterally Coupled 2D MoS <sub>2</sub> Synaptic Transistor With Ion Gating. IEEE Electron Device Letters, 2020, 41, 1424-1427.	2.2	16
401	Contact engineering for two-dimensional semiconductors. Journal of Semiconductors, 2020, 41, 071901.	2.0	19
402	Complementary Type Ferroelectric Memory Transistor Circuits with P- and N-Channel MoTe <sub>2</sub> . Advanced Electronic Materials, 2020, 6, 2000479.	2.6	12
403	All 2D Heterostructure Tunnel Field-Effect Transistors: Impact of Band Alignment and Heterointerface Quality. ACS Applied Materials & Interfaces, 2020, 12, 51598-51606.	4.0	35
404	Atomic threshold-switching enabled MoS <sub>2</sub> transistors towards ultralow-power electronics. Nature Communications, 2020, 11, 6207.	5.8	52
405	Impact of Switching Voltage on Complementary Steep-Slope Tunnel Field Effect Transistor Circuits. IEEE Transactions on Electron Devices, 2020, 67, 3876-3882.	1.6	1
406	Intercalation of Two-dimensional Layered Materials. Chemical Research in Chinese Universities, 2020, 36, 584-596.	1.3	21
407	Double Negative Differential Resistance Device Based on Hafnium Disulfide/Pentacene Hybrid Structure. Advanced Science, 2020, 7, 2000991.	5.6	27

#	ARTICLE	IF	CITATIONS
409	Two-dimensional BN buffer for plasma enhanced atomic layer deposition of Al <sub>2</sub> O <sub>3</sub> gate dielectrics on graphene field effect transistors. <i>Scientific Reports</i> , 2020, 10, 14699.	1.6	10
410	A Novel High Schottky Barrier Based Bilateral Gate and Assistant Gate Controlled Bidirectional Tunnel Field Effect Transistor. <i>IEEE Journal of the Electron Devices Society</i> , 2020, 8, 976-980.	1.2	7
411	Normal Strain-Induced Tunneling Behavior Promotion in van der Waals Heterostructures*. <i>Chinese Physics Letters</i> , 2020, 37, 088502.	1.3	5
412	Performance Enhancement of Novel Dopingless TFET Using Raised Source and Recessed Drain. <i>Silicon</i> , 2021, 13, 3981-3990.	1.8	4
413	Excitonic Lasers in Atomically Thin 2D Semiconductors. , 2020, 2, 1328-1342.		12
414	Energy-Efficient Tunneling Field-Effect Transistors for Low-Power Device Applications: Challenges and Opportunities. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 47127-47163.	4.0	51
415	2D TMD Channel Transistors with ZnO Nanowire Gate for Extended Nonvolatile Memory Applications. <i>Advanced Functional Materials</i> , 2020, 30, 2004140.	7.8	24
416	Nonvolatile and Neuromorphic Memory Devices Using Interfacial Traps in Two-Dimensional WSe <sub>2</sub> /MoTe <sub>2</sub> Stack Channel. <i>ACS Nano</i> , 2020, 14, 12064-12071.	7.3	38
417	A Compact Current-Voltage Model for 2-D-Semiconductor-Based Lateral Homo-/Hetero-Junction Tunnel-FETs. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 4473-4481.	1.6	5
418	Valley Resolved Current Components Analysis of Monolayer TMDFETs. , 2020, , .		2
419	Layer-dependent band to band tunneling in WSe <sub>2</sub> /ReS <sub>2</sub> van der Waals heterojunction. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 374001.	1.3	4
420	Monolayer MoSe <sub>2</sub> -Based Tunneling Field Effect Transistor for Ultrasensitive Strain Sensing. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 2140-2146.	1.6	24
421	Band alignment at interfaces of two-dimensional materials: internal photoemission analysis. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 413002.	0.7	10
422	Vertical Tunneling Field Effect Transistor Based on WSe <sub>2</sub> /MoS <sub>2</sub> Heterostructure with Ion Gel Dielectric. <i>Advanced Electronic Materials</i> , 2020, 6, 2000091.	2.6	22
423	WSe <sub>2</sub> /SnSe <sub>2</sub> vdW heterojunction Tunnel FET with subthermionic characteristic and MOSFET co-integrated on same WSe <sub>2</sub> flake. <i>Npj 2D Materials and Applications</i> , 2020, 4, .	3.9	50
424	An in-plane WSe <sub>2</sub> p-n homojunction two-dimensional diode by laser-induced doping. <i>Journal of Materials Chemistry C</i> , 2020, 8, 8393-8398.	2.7	16
425	Modulating Charge Separation with Hexagonal Boron Nitride Mediation in Vertical Van der Waals Heterostructures. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 26213-26221.	4.0	14
427	Enhanced NO <sub>2</sub> Sensitivity in Schottky-Contacted n-Type SnS <sub>2</sub> Gas Sensors. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 26746-26754.	4.0	49



#	ARTICLE	IF	CITATIONS
428	Multi-gate-driven In-Ga-Zn-O memtransistors with a Sub-60 mV/decade subthreshold swing for neuromorphic and memlogic applications. <i>Organic Electronics</i> , 2020, 84, 105810.	1.4	13
429	Charge transport in nnn and npn phosphorene junctions: The use of phosphorene pn junctions as rectifiers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 124, 114239.	1.3	11
430	Emerging Opportunities for Electrostatic Control in Atomically Thin Devices. <i>ACS Nano</i> , 2020, 14, 6498-6518.	7.3	51
431	Atomically Controlled Tunable Doping in High-Performance WSe <sub>2</sub> Devices. <i>Advanced Electronic Materials</i> , 2020, 6, 1901304.	2.6	46
432	High mobility monolayer MoS <sub>2</sub> transistors and its charge transport behaviour under E-beam irradiation. <i>Journal of Materials Science</i> , 2020, 55, 14315-14325.	1.7	15
433	Direct measurements of proximity induced spin polarization in 2D systems. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 343001.	1.3	0
434	Carrier conduction mechanisms of WSe <sub>2</sub> /p-type Ge epilayer heterojunction depending on the measurement temperature and applied bias. <i>Journal of Alloys and Compounds</i> , 2020, 842, 155843.	2.8	14
435	Switching at Less Than 60 mV/Decade with a "Cold" Metal as the Injection Source. <i>Physical Review Applied</i> , 2020, 13, .	1.5	28
436	Intercalation-Induced Disintegrated Layer-By-Layer Growth of Ultrathin Ternary Mo(Te <sub>1-x</sub> S <sub>x</sub> ) <sub>2</sub> Plates. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 30980-30989.	4.0	5
437	Fabrication and Characterization of a Novel Si Line Tunneling TFET With High Drive Current. <i>IEEE Journal of the Electron Devices Society</i> , 2020, 8, 336-340.	1.2	28
438	A comprehensive analysis of Auger generation impacted planar Tunnel FETs. <i>Solid-State Electronics</i> , 2020, 169, 107782.	0.8	2
439	Contact properties of 2D/3D GaSe/Si(111) heterostructure. <i>Applied Surface Science</i> , 2020, 516, 145969.	3.1	3
440	Electrical Contact Barriers between a Three-Dimensional Metal and Layered SnS <sub>2</sub> . <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 15830-15836.	4.0	13
441	Gate-Tunable Semiconductor Heterojunctions from 2D/3D van der Waals Interfaces. <i>Nano Letters</i> , 2020, 20, 2907-2915.	4.5	69
442	p-Channel TFET Operation of Bilayer Structures With Type-II Heterotunneling Junction of Oxide- and Group-IV Semiconductors. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 1880-1886.	1.6	15
443	Semiconductor Quantum Dots for Memories and Neuromorphic Computing Systems. <i>Chemical Reviews</i> , 2020, 120, 3941-4006.	23.0	203
444	Ultrafast 27%GHz cutoff frequency in vertical WSe <sub>2</sub> Schottky diodes with extremely low contact resistance. <i>Nature Communications</i> , 2020, 11, 1574.	5.8	39
445	Physical insight and performance metrics of monolayer MX <sub>2</sub> heterojunction TFETs. <i>Micro and Nano Letters</i> , 2020, 15, 81-85.	0.6	1

#	ARTICLE	IF	CITATIONS
446	Molecular Approach to Electrochemically Switchable Monolayer MoS <sub>2</sub> Transistors. <i>Advanced Materials</i> , 2020, 32, e2000740.	11.1	37
447	Improvement in Electrical Characteristics of ZnSnO/Si Bilayer TFET by W/Al <sub>2</sub> O <sub>3</sub> Gate Stack. <i>IEEE Journal of the Electron Devices Society</i> , 2020, 8, 341-345.	1.2	4
448	Approaching the Design of Energy Recovery Logic Circuits Using TFETs. <i>IEEE Nanotechnology Magazine</i> , 2020, 19, 500-507.	1.1	1
449	Insulators for 2D nanoelectronics: the gap to bridge. <i>Nature Communications</i> , 2020, 11, 3385.	5.8	241
450	Two-dimensional materials for next-generation computing technologies. <i>Nature Nanotechnology</i> , 2020, 15, 545-557.	15.6	521
451	Solution-Grown Large-Sized Single-Crystalline 2D/3D Perovskite Heterostructure for Self-Powered Photodetection. <i>Advanced Optical Materials</i> , 2020, 8, 2000311.	3.6	35
452	Contact Engineering of Layered MoS <sub>2</sub> via Chemically Dipping Treatments. <i>Advanced Functional Materials</i> , 2020, 30, 2000250.	7.8	14
453	Schottky-barrier modulation at germanium/monolayer MoS <sub>2</sub> heterojunction interface: the roles of passivation and interfacial layer. <i>Applied Physics Express</i> , 2020, 13, 021004.	1.1	1
454	Gallium nitride tunneling field-effect transistors exploiting polarization fields. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	7
455	Impact of Transport Anisotropy on the Performance of van der Waals Materials-Based Electron Devices. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 1310-1316.	1.6	8
456	Metal-Insulator Transitions in $\text{I}^2\text{a}^2\text{-Cu V}_2\text{O}_5$ Mediated by Polaron Oscillation and Cation Shuttling. <i>Matter</i> , 2020, 2, 1166-1186.	5.0	9
457	Is negative capacitance FET a steep-slope logic switch?. <i>Nature Communications</i> , 2020, 11, 196.	5.8	91
458	CVD grown bilayer WSe <sub>2</sub> /MoSe <sub>2</sub> heterostructures for high performance tunnel transistors. <i>Japanese Journal of Applied Physics</i> , 2020, 59, SGGH05.	0.8	13
459	Thickness-controlled black phosphorus tunnel field-effect transistor for low-power switches. <i>Nature Nanotechnology</i> , 2020, 15, 203-206.	15.6	139
460	A multiple negative differential resistance heterojunction device and its circuit application to ternary static random access memory. <i>Nanoscale Horizons</i> , 2020, 5, 654-662.	4.1	70
461	Van der Waals Heterostructures with Tunable Tunneling Behavior Enabled by MoO <sub>3</sub> Surface Functionalization. <i>Advanced Optical Materials</i> , 2020, 8, 1901867.	3.6	11
462	Resonant Tunneling Spectroscopy to Probe the Giant Stark Effect in Atomically Thin Materials. <i>Advanced Materials</i> , 2020, 32, e1906942.	11.1	18
463	Status and Future Prospects of CMOS Scaling and Moore's Law - A Personal Perspective. , 2020, , .		18

#	ARTICLE	IF	CITATIONS
464	Exploring conduction mechanism and photoresponse in <i>P-GaN/n-MoS<sub>2</sub></i> heterojunction diode. <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	17
465	Tunneling spectroscopy of localized states of WS <sub>2</sub> barriers in vertical van der Waals heterostructures. <i>Physical Review B</i> , 2020, 101, .	1.1	11
466	Device performance limits and negative capacitance of monolayer GeSe and GeTe tunneling field effect transistors. <i>RSC Advances</i> , 2020, 10, 16071-16078.	1.7	21
467	Monolayer Hexagonal Boron Nitride Tunnel Barrier Contact for Low-Power Black Phosphorus Heterojunction Tunnel Field-Effect Transistors. <i>Nano Letters</i> , 2020, 20, 3963-3969.	4.5	33
468	Evolution of high-frequency Raman modes and their doping dependence in twisted bilayer MoS <sub>2</sub> . <i>Nanoscale</i> , 2020, 12, 17272-17280.	2.8	23
469	Physically Consistent Method for Calculating Trap-Assisted-Tunneling Current Applied to Line Tunneling Field-Effect Transistor. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 2106-2112.	1.6	2
470	A simulation study of the influence of a high-k insulator and source stack on the performance of a double-gate tunnel FET. <i>Journal of Computational Electronics</i> , 2020, 19, 1077-1084.	1.3	7
471	Doping-free complementary WSe <sub>2</sub> circuit via van der Waals metal integration. <i>Nature Communications</i> , 2020, 11, 1866.	5.8	153
472	Engineering of MoS <sub>2</sub> nanoribbons as high-performance materials for biosensing applications. <i>Applied Surface Science</i> , 2021, 540, 148349.	3.1	5
473	Hole-dominated Fowler-Nordheim tunneling in 2D heterojunctions for infrared imaging. <i>Science Bulletin</i> , 2021, 66, 139-146.	4.3	17
474	A novel contact engineering method for transistors based on two-dimensional materials. <i>Journal of Materials Science and Technology</i> , 2021, 69, 15-19.	5.6	10
475	Modulating tunneling width and energy window for high-on-current two-dimensional tunnel field-effect transistors. <i>Nano Energy</i> , 2021, 81, 105642.	8.2	20
476	Wafer-scale vertical van der Waals heterostructures. <i>Information Materials</i> , 2021, 3, 3-21.	8.5	70
477	Ultra-steep Slope Impact Ionization Transistors Based on Graphene/InAs Heterostructures. <i>Small Structures</i> , 2021, 2, 2000039.	6.9	11
478	Tunnel field-effect transistors for sensitive terahertz detection. <i>Nature Communications</i> , 2021, 12, 543.	5.8	52
479	Self-driven SnS <sub>1-x</sub> Se <sub>x</sub> alloy/GaAs heterostructure based unique polarization sensitive photodetectors. <i>Nanoscale</i> , 2021, 13, 15193-15204.	2.8	14
480	Low-Temperature Synthesis of Wafer-Scale MoS <sub>2</sub> WS <sub>2</sub> Vertical Heterostructures by Single-Step Penetrative Plasma Sulfurization. <i>ACS Nano</i> , 2021, 15, 707-718.	7.3	34
481	Abruptly-Switching MoS <sub>2</sub> -Channel Atomic-Threshold-Switching Field-Effect Transistor With AgTi/HfO <sub>2</sub> -Based Threshold Switching Device. <i>IEEE Access</i> , 2021, 9, 116953-116961.	2.6	5

#	ARTICLE	IF	CITATIONS
482	ZrS <sub>2</sub> symmetrical-ambipolar FETs with near-midgap TiN film for both top-gate electrode and Schottky-barrier contact. Japanese Journal of Applied Physics, 2021, 60, SBBH05.	0.8	8
483	Tellurium Nanowire Gate-All-Around MOSFETs for Sub-5 nm Applications. ACS Applied Materials & Interfaces, 2021, 13, 3387-3396.	4.0	30
484	Influence of sample momentum space features on scanning tunnelling microscope measurements. Nanoscale, 2021, 13, 16070-16076.	2.8	1
485	Functional two-dimensional black phosphorus nanostructures towards next-generation devices. Journal of Materials Chemistry A, 2021, 9, 12433-12473.	5.2	73
486	First-Principles-Based Quantum Transport Simulations of Interfacial Point Defect Effects on InAs Nanowire Tunnel FETs. IEEE Transactions on Electron Devices, 2021, 68, 5901-5907.	1.6	5
487	Band Alignment of Graphene/MoS <sub>2</sub> /Fluorine Tin Oxide Heterojunction for Photodetector Application. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000744.	0.8	1
488	Energy-efficient transistors: suppressing the subthreshold swing below the physical limit. Materials Horizons, 2021, 8, 1601-1617.	6.4	28
489	Promises of Main-Group Metal Chalcogenide-Based Broken-Gap van der Waals Heterojunctions for Tunneling Field Effect Transistors. ACS Applied Electronic Materials, 2021, 3, 898-904.	2.0	9
490	ZrOx Negative Capacitance Field-Effect Transistor with Sub-60 Subthreshold Swing Behavior. Nanoscale Research Letters, 2021, 16, 21.	3.1	5
491	A mode-balanced reconfigurable logic gate built in a van der Waals strata. Npj 2D Materials and Applications, 2021, 5, .	3.9	9
492	Van der waals BP/InSe heterojunction for tunneling field-effect transistors. Journal of Materials Science, 2021, 56, 8563-8574.	1.7	13
493	Emerging Opportunities for 2D Semiconductor/Ferroelectric Transistor Structure Devices. Advanced Materials, 2021, 33, e2005620.	11.1	76
494	Atomic-level charge transport mechanism in gate-tunable anti-ambipolar van der Waals heterojunctions. Applied Physics Letters, 2021, 118, .	1.5	8
495	Van der Waals Heterostructures by Design: From 1D and 2D to 3D. Matter, 2021, 4, 552-581.	5.0	83
496	A Steep-Slope MoS <sub>2</sub> /Graphene Dirac-Source Field-Effect Transistor with a Large Drive Current. Nano Letters, 2021, 21, 1758-1764.	4.5	69
497	Ambipolar Photocarrier Doping and Transport in Monolayer WS <sub>2</sub> , by Forming a Graphene/WS <sub>2</sub> /Quantum Dots Heterostructure. IEEE Electron Device Letters, 2021, 42, 371-374.	2.2	2
498	Frequency-specific, valveless flow control in insect-mimetic microfluidic devices. Bioinspiration and Biomimetics, 2021, 16, 036004.	1.5	4
500	Two-Dimensional Cold Electron Transport for Steep-Slope Transistors. ACS Nano, 2021, 15, 5762-5772.	7.3	20

#	ARTICLE	IF	CITATIONS
501	Gate-Tunable Plasmon-Enhanced Photodetection in a Monolayer MoS <sub>2</sub> Phototransistor with Ultrahigh Photoresponsivity. Nano Letters, 2021, 21, 3083-3091.	4.5	68
502	Transparent and Unipolar Nonvolatile Memory Using 2D Vertically Stacked Layered Double Hydroxide. Advanced Materials Interfaces, 2021, 8, 2001990.	1.9	1
503	Exciton-plasmon coupling and giant photoluminescence enhancement in monolayer MoS <sub>2</sub> through hierarchically designed TiO <sub>2</sub> /Au/MoS <sub>2</sub> ternary core-shell heterostructure. Nanotechnology, 2021, 32, 215201.	1.3	8
504	2D MoS <sub>2</sub> Charge Injection Memory Transistors Utilizing Hetero-Stack SiO <sub>2</sub> /HfO <sub>2</sub> Dielectrics and Oxide Interface Traps. Advanced Electronic Materials, 2021, 7, 2100074.	2.6	8
505	Local Electronic Properties of Coherent Single-Layer WS <sub>2</sub> /WSe <sub>2</sub> Lateral Heterostructures. Nano Letters, 2021, 21, 2363-2369.	4.5	17
506	One-Dimensional van der Waals Heterojunction Diode. ACS Nano, 2021, 15, 5600-5609.	7.3	34
507	Fractional exponents of electrical and thermal conductivity of vanadium intercalated layered 2H-NbS <sub>2</sub> bulk crystal. Indian Journal of Physics, 2022, 96, 1335-1339.	0.9	3
508	Materials Science Challenges to Graphene Nanoribbon Electronics. ACS Nano, 2021, 15, 3674-3708.	7.3	108
509	A FinBOX Based Ge FinEHBT FET: Design and Investigation. Silicon, 2022, 14, 2165-2174.	1.8	1
510	2D Silicon-Based Semiconductor Si <sub>2</sub> Te <sub>3</sub> toward Broadband Photodetection. Small, 2021, 17, e2006496.	5.2	19
511	Si/SnS <sub>2</sub> Vertical Heterojunction Tunneling Transistor with Ionic-Liquid Gate for Ultra-Low Power Application. , 2021, , .		0
512	Direct growth of monolayer 1T' 2H MoS <sub>2</sub> heterostructures using KCl-assisted CVD process. 2D Materials, 2021, 8, 025033.	2.0	16
513	Promises and prospects of two-dimensional transistors. Nature, 2021, 591, 43-53.	13.7	548
514	Layer-Controlled Low-Power Tunneling Transistors Based on SnS Homojunction. Advanced Theory and Simulations, 2021, 4, 2000290.	1.3	6
515	Topological electronics. Communications Physics, 2021, 4, .	2.0	76
516	Direct Measurement of Transient Charging and Dipole Alignment Speed in Ferroelectric Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Gate Dielectric Using Graphene FETs. Advanced Electronic Materials, 2021, 7, 2100145.	2.6	5
518	Intrinsic triferroicity in a two-dimensional lattice. Physical Review B, 2021, 103, .	1.1	22
519	Investigation of 6-armchair graphene nanoribbon tunnel FETs. Journal of Computational Electronics, 2021, 20, 1114-1124.	1.3	3

#	ARTICLE	IF	CITATIONS
520	Performance enhancement of charge plasma-based junctionless TFET (JL-TFET) using stimulated n-pocket and heterogeneous gate dielectric. <i>Nanotechnology</i> , 2021, 32, 335206.	1.3	5
521	Temperature associated reliability analysis of a Si/Ge Heterojunction Dopingless Tunnel FET considering Interface Trap Charges. , 2021, , .		1
522	Ultra-low supply voltage crystal quartz oscillator. <i>Review of Scientific Instruments</i> , 2021, 92, 054706.	0.6	0
523	Synthesis of lateral heterostructure of 2D materials for optoelectronic devices: challenges and opportunities. <i>Emergent Materials</i> , 2021, 4, 923-949.	3.2	14
524	Internal photoemission of electrons from 2D semiconductor/3D metal barrier structures. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 295101.	1.3	1
525	Steepâ€Slope Gateâ€Connected Atomic Threshold Switching Fieldâ€Effect Transistor with MoS <sub>2</sub> Channel and Its Application to Infrared Detectable Phototransistors. <i>Advanced Science</i> , 2021, 8, 2100208.	5.6	9
526	Infrared Proximity Sensors Based on Photoâ€Induced Tunneling in van der Waals Integration. <i>Advanced Functional Materials</i> , 2021, 31, 2100966.	7.8	12
527	Probing and pushing the limit of emerging electronic materials via van der Waals integration. <i>MRS Bulletin</i> , 2021, 46, 534-546.	1.7	5
528	A Study on the Effect of the Structural Parameters and Internal Mechanism of a Bilateral Gate-Controlled S/D Symmetric and Interchangeable Bidirectional Tunnel Field Effect Transistor. <i>Nanoscale Research Letters</i> , 2021, 16, 102.	3.1	3
529	Toward high-performance p-type, tin-based perovskite thin film transistors. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	3
530	Negative differential resistance in Si/GaAs tunnel junction formed by single crystalline nanomembrane transfer method. <i>Results in Physics</i> , 2021, 25, 104279.	2.0	3
531	Revealing atomically sharp interfaces of two-dimensional lateral heterostructures by second harmonic generation. <i>2D Materials</i> , 2021, 8, 035051.	2.0	9
532	Strain engineered C <sub>31</sub> field-effect-transistors: a new strategy to break 60ÅmV/decade by using electron injection from intrinsic isolated states. <i>Applied Physics Express</i> , 2021, 14, 074003.	1.1	6
533	The metalâ€insulator phase change in vanadium dioxide and its applications. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	25
534	In-plane Schottky-barrier field-effect transistors with a 4-nm channel based on 1T/2H MoTe <sub>2</sub> and WTe <sub>2</sub> . <i>AIP Advances</i> , 2021, 11, 065316.	0.6	2
535	Defectâ€Engineered nâ€Doping of WSe <sub>2</sub> via Argon Plasma Treatment and Its Application in Fieldâ€Effect Transistors. <i>Advanced Materials Interfaces</i> , 2021, 8, 2100718.	1.9	18
536	Field-driven modulating of In-Sn-O synaptic transistors with a precisely controlled weight update. <i>Applied Materials Today</i> , 2021, 23, 101024.	2.3	5
537	Quantum tunneling in two-dimensional van der Waals heterostructures and devices. <i>Science China Materials</i> , 2021, 64, 2359-2387.	3.5	15

#	ARTICLE	IF	CITATIONS
538	Lattice Defect Engineering Enables Performance-Enhanced MoS <sub>2</sub> Photodetection through a Paraelectric BaTiO <sub>3</sub> Dielectric. ACS Nano, 2021, 15, 13370-13379.	7.3	18
539	Design of negative capacitance tunneling field effect transistor with dual-source U-shape channel, super-steep subthreshold swing and large on-state current. Superlattices and Microstructures, 2021, 155, 106905.	1.4	6
540	Sub-Picosecond Nanodiodes for Low-Power Ultrafast Electronics. Advanced Materials, 2021, 33, e2100874.	11.1	6
541	The Rise of the Xenos: From the Synthesis to the Integration Processes for Electronics and Photonics. Materials, 2021, 14, 4170.	1.3	13
542	Gate-controlled reversible rectifying behavior investigated in a two-dimensional $\text{MoS}_2$ diode. Physical Review B, 2021, 104, .	1.4	6
543	Reconfigurable Tunneling Transistors Heterostructured by an Individual Carbon Nanotube and MoS <sub>2</sub> . Nano Letters, 2021, 21, 6843-6850.	4.5	11
544	A Roadmap for Disruptive Applications and Heterogeneous Integration Using Two-Dimensional Materials: State-of-the-Art and Technological Challenges. Nano Letters, 2021, 21, 6359-6381.	4.5	35
545	Strain-tuning PtSe <sub>2</sub> for high ON-current lateral tunnel field-effect transistors. Applied Physics Letters, 2021, 119, .	1.5	4
546	A high-speed 2D optoelectronic in-memory computing device with 6-bit storage and pattern recognition capabilities. Nano Research, 2022, 15, 2472-2478.	5.8	20
547	2D Metal-Organic Complex Luminescent Crystals. Advanced Functional Materials, 2021, 31, 2106160.	7.8	12
548	Two-dimensional heterostructures and their device applications: progress, challenges and opportunities—review. Journal Physics D: Applied Physics, 2021, 54, 433001.	1.3	30
549	Minimizing the Water Effect in Synthesis of High-Quality Monolayer MoS <sub>2</sub> Nanosheets: Implications for Electronic and Optoelectronic Devices. ACS Applied Nano Materials, 2021, 4, 8094-8100.	2.4	2
550	Sub-10 Ånm two-dimensional transistors: Theory and experiment. Physics Reports, 2021, 938, 1-72.	10.3	80
552	Demonstration of intrinsic STDP learning capability in all-2D multi-state MoS <sub>2</sub> memory and its application in modelling neuromorphic speech recognition. 2D Materials, 2021, 8, 045031.	2.0	8
553	General synthesis of mixed-dimensional van der Waals heterostructures with hexagonal symmetry. Nanotechnology, 2021, 32, 505610.	1.3	1
554	Tunneling Junction as Cold Source: Toward Steep-Slope Field-Effect Transistors Based on Monolayer MoS <sub>2</sub> . IEEE Transactions on Electron Devices, 2021, 68, 4758-4761.	1.6	6
555	Gate energy efficiency and negative capacitance in ferroelectric 2D/2D TFET from cryogenic to high temperatures. Npj 2D Materials and Applications, 2021, 5, .	3.9	16
556	Toward Optimal Heat Transfer of 2D-3D Heterostructures via van der Waals Binding Effects. ACS Applied Materials & Interfaces, 2021, 13, 46055-46064.	4.0	15

#	ARTICLE	IF	CITATIONS
557	Implementing a Ternary Inverter Using Dual-Pocket Tunnel Field-Effect Transistors. IEEE Transactions on Electron Devices, 2021, 68, 5305-5310.	1.6	5
558	Gate-controlled MoTe <sub>2</sub> homojunction for sub-thermionic subthreshold swing tunnel field-effect transistor. Nano Today, 2021, 40, 101263.	6.2	19
559	Impact of NCFET on Neural Network Accelerators. IEEE Access, 2021, 9, 43748-43758.	2.6	1
560	Two-Dimensional (2D) Materials for Next-Generation Nanoelectronics and Optoelectronics: Advances and Trends. Advances in Material Research and Technology, 2021, , 65-96.	0.3	1
561	Deciphering the photocurrent polarity of Bi <sub>2</sub> O <sub>2</sub> Se heterojunction phototransistors to enhance detection performance. Journal of Materials Chemistry C, 0, , .	2.7	6
562	Up-scalable emerging energy conversion technologies enabled by 2D materials: from miniature power harvesters towards grid-connected energy systems. Energy and Environmental Science, 2021, 14, 3352-3392.	15.6	26
563	Switching photodiodes based on (2D/3D) PdSe <sub>2</sub> /Si heterojunctions with a broadband spectral response. Journal of Materials Chemistry C, 2021, 9, 3998-4007.	2.7	24
564	Design and tailoring of two-dimensional Schottky, PN and tunnelling junctions for electronics and optoelectronics. Nanoscale, 2021, 13, 6713-6751.	2.8	30
565	Highly Luminescent 2D-Type Slab Crystals Based on a Molecular Charge-Transfer Complex as Promising Organic Light-Emitting Transistor Materials. Advanced Materials, 2017, 29, 1701346.	11.1	111
566	On the van der Waals Epitaxy of Homo-/Heterostructures of Transition Metal Dichalcogenides. ACS Applied Materials & Interfaces, 2020, 12, 27508-27517.	4.0	22
567	A transverse tunnelling field-effect transistor made from a van der Waals heterostructure. Nature Electronics, 2020, 3, 106-112.	13.1	69
568	Few-layer Phosphorene: An Ideal 2D Material For Tunnel Transistors. Scientific Reports, 2016, 6, 28515.	1.6	90
569	van der Waals coefficients of the multi-layered MoS <sub>2</sub> with alkali metals. Physica Scripta, 2020, 95, 095506.	1.2	3
570	Fundamental limitation of van der Waals homoepitaxy by stacking fault formation in WSe <sub>2</sub> . 2D Materials, 2020, 7, 025027.	2.0	11
571	Electrical characterization of 2D materials-based field-effect transistors. 2D Materials, 2021, 8, 012002.	2.0	111
572	Energy Band Alignment of Few-Monolayer WS <sub>2</sub> and WSe <sub>2</sub> with SiO <sub>2</sub> Using Internal Photoemission Spectroscopy. ECS Journal of Solid State Science and Technology, 2020, 9, 093009.	0.9	4
573	Strain Engineering on the Electronic and Optical Properties of WSSe Bilayer. Nanoscale Research Letters, 2020, 15, 97.	3.1	14
574	Probing nano-heterogeneity and aging effects in lateral 2D heterostructures using tip-enhanced photoluminescence. Optical Materials Express, 2019, 9, 1620.	1.6	33



#	ARTICLE	IF	CITATIONS
575	Hall-effect mobility enhancement of sputtered MoS <sub>2</sub> film by sulfurization even through Al <sub>2</sub> O <sub>3</sub> passivation film simultaneously preventing oxidation. Japanese Journal of Applied Physics, 2020, 59, 105501.	0.8	7
576	Source engineering for bilayer tunnel field-effect transistor with hetero tunnel junction: thickness and impurity concentration. Applied Physics Express, 2020, 13, 074004.	1.1	7
577	Thermal hysteresis controlled reconfigurable MoS <sub>2</sub> nanomechanical resonators. Nanoscale, 2021, 13, 18089-18095.	2.8	14
578	Momentum relaxation effects in 2D-Xene field effect device structures. Journal Physics D: Applied Physics, 2022, 55, 075302.	1.3	6
579	Inkjet-Printed MoS <sub>2</sub> Transistors with Predominantly Intraflake Transport. Small Methods, 2021, 5, e2100634.	4.6	19
580	Tungsten Ditelluride: Synthesis, Structure, and Magnetoresistance Property. Advanced Electronic Materials, 2021, 7, 2000893.	2.6	4
581	2D Cu <sub>9</sub> S <sub>5</sub> /Pt <sub>2</sub> /WSe <sub>2</sub> Double Heterojunction Bipolar Transistor with High Current Gain. Advanced Materials, 2021, 33, e2106537.	11.1	19
582	NEMS Sensors Based on Novel Nanomaterials. , 2022, , 133-185.		1
583	Silicene in the Flatland. Carbon Nanostructures, 2017, , 137-152.	0.1	1
584	Understanding Ageing Mechanisms. , 2020, , 3-34.		0
585	Modeling of MoS <sub>2</sub> Tunnel Field Effect Transistor in Verilog-A for VLSI Circuit Design. , 2021, , .		0
587	Research progress of monolayer two-dimensional atomic crystal materials grown by molecular beam epitaxy in ultra-high vacuum conditions. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 118101.	0.2	5
588	Monolayer MoS <sub>2</sub> Steep-slope Transistors with Record-high Sub-60-mV/decade Current Density Using Dirac-source Electron Injection. , 2020, , .		8
589	The Electronic and Physical Structure Evaluation of MoS <sub>2</sub> (1-x)Te <sub>2x</sub> Alloy Fabricated with Co-Sputtering and Post-Deposition Annealing in Chalcogen Ambient. ECS Journal of Solid State Science and Technology, 2020, 9, 093018.	0.9	1
590	Organic steep-slope nano-FETs: A rational design based on two-dimensional covalent-organic frameworks. Organic Electronics, 2022, 100, 106379.	1.4	1
592	Analytical Current Transport Modeling of Monolayer Molybdenum Disulfide-Based Dual Gate Tunnel Field Effect Transistor. IEEE Nanotechnology Magazine, 2020, 19, 620-627.	1.1	16
593	Analytical Model of Band-to-Band Tunneling in ATLAS-TFET. , 2020, , .		0
594	The gate tunable 2D pn junction driven out-of-equilibrium. Journal of Applied Physics, 2021, 130, .	1.1	1

#	ARTICLE	IF	CITATIONS
595	Novel attributes of a dual pocket tunnel field-effect transistor. Japanese Journal of Applied Physics, 2022, 61, 035001.	0.8	0
596	Van der Waals Superstructure and Twisting in Self-Intercalated Magnet with Near Room-Temperature Perpendicular Ferromagnetism. Nano Letters, 2021, 21, 9517-9525.	4.5	24
597	Scalably Nanomanufactured Atomically Thin Materials-Based Wearable Health Sensors. Small Structures, 2022, 3, 2100120.	6.9	16
598	The Road for 2D Semiconductors in the Silicon Age. Advanced Materials, 2022, 34, e2106886.	11.1	57
599	In-memory computing with emerging nonvolatile memory devices. Science China Information Sciences, 2021, 64, 1.	2.7	31
600	TCAD simulation for transition metal dichalcogenide channel Tunnel FETs consistent with ab-initio based NEGF calculation. , 2020, , .		0
601	Ab-initio quantum transport with a basis of unit-cell restricted Bloch functions and the NEGF formalism. , 2020, , .		0
602	Tribological characteristics of atomic-scale niobium diselenide grown via chemical vapor deposition. Applied Physics Express, 2020, 13, 105004.	1.1	1
603	Investigation of RF/Analog performance of Lg=16nm Planner In <sub>0.80</sub> Ga <sub>0.20</sub> As TFET. , 2021, , .		2
604	Orbital Gating Driven by Giant Stark Effect in Tunneling Phototransistors. Advanced Materials, 2022, 34, e2106625.	11.1	9
605	Ferroelectric gate oxides for negative capacitance transistors. MRS Bulletin, 2021, 46, 930-937.	1.7	12
606	Robust Quantum Oscillation of Dirac Fermions in a Single-Defect Resonant Transistor. ACS Nano, 2021, 15, 20013-20019.	7.3	6
607	Analytical Modeling of Short-Channel TMD TFET Considering Effect of Fringing Field and 2-D Junctions Depletion Regions. IEEE Transactions on Electron Devices, 2022, 69, 843-850.	1.6	4
609	Determination of band alignment in liquid exfoliated few-layer WSe <sub>2</sub> /SiO <sub>2</sub> interface. Materials Letters, 2022, 311, 131600.	1.3	3
610	An ab initio study of the interaction of graphene and silicene with one-, two-, and three-layer planar silicon carbide. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 138, 115120.	1.3	3
612	Charge-Voltage and Capacitance-Voltage Characterizations of Monolayer MoS <sub>2</sub> -Based DG n-TFET. , 2020, , .		1
613	Ultra-Steep-Slope High-Gain MoS <sub>2</sub> Transistors with Atomic Threshold-Switching Gate. Advanced Science, 2022, 9, e2104439.	5.6	14
614	Synergy of Electrostatic and Chemical Doping to Improve the Performance of Junctionless Carbon Nanotube Tunneling Field-Effect Transistors: Ultrascaling, Energy-Efficiency, and High Switching Performance. Nanomaterials, 2022, 12, 462.	1.9	11

#	ARTICLE	IF	CITATIONS
615	Giant Photoresponse Enhancement in Mixed-dimentional Van der Waals Heterostructure through Dielectric Engineering. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	5
616	Functionalized MoS <sub>2</sub> Nanoribbons for Intrinsic Cold-Source Transistors: A Computational Study. <i>ACS Applied Nano Materials</i> , 2022, 5, 1178-1184.	2.4	4
617	Metallic Transport in Monolayer and Multilayer Molybdenum Disulfides by Molecular Surface Charge Transfer Doping. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, , .	4.0	3
618	CdS based chemiresistor with Schottky contact: Toxic gases detection with enhanced sensitivity and selectivity at room temperature. <i>Sensors and Actuators B: Chemical</i> , 2022, 357, 131421.	4.0	15
619	A Steep-Slope Phenomenon by Gate Charge Pumping in a MOSFET. <i>IEEE Electron Device Letters</i> , 2022, 43, 521-524.	2.2	0
620	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges. <i>Chemical Reviews</i> , 2022, 122, 6514-6613.	23.0	187
621	Analytical models for inter-layer tunneling in two-dimensional materials. <i>Japanese Journal of Applied Physics</i> , 2022, 61, SC1022.	0.8	1
622	Giant Negative Differential Resistance Effect Caused by Cutting off Acceptable Quantum States in Carbon Nanotube Tunneling Devices. <i>Advanced Electronic Materials</i> , 2022, 8, .	2.6	3
623	Milimeter-level MoS <sub>2</sub> monolayers and WS <sub>2</sub> -MoS <sub>2</sub> heterojunctions grown on molten glass by pre-chemical vapor deposition. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2022, 71, 048101.	0.2	0
624	Structural, optical and electrical characterization of MoS <sub>2</sub> /TiO <sub>2</sub> heterostructured thin films by chemical bath deposition technique. , 2022, 19, 75-82.		4
625	Tin sulfide-based nanocomposite: synthesis and study of structural, morphological and optical properties. , 2022, 18, 67-74.		2
626	A review of quantum transport in field-effect transistors. <i>Semiconductor Science and Technology</i> , 2022, 37, 043001.	1.0	11
627	Enhanced interband tunneling in two-dimensional tunneling transistors through anisotropic energy dispersion. <i>Physical Review B</i> , 2022, 105, .	1.1	16
628	Emerging Logic Devices beyond CMOS. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 1914-1924.	2.1	5
629	Utilizing trapped charge at bilayer 2D MoS <sub>2</sub> /SiO <sub>2</sub> interface for memory applications. <i>Nanotechnology</i> , 2022, 33, 275201.	1.3	3
630	Challenges and opportunities in 2D heterostructures for electronic and optoelectronic devices. <i>IScience</i> , 2022, 25, 103942.	1.9	38
631	Device simulation of GeSe homojunction and vdW GeSe/GeTe heterojunction TFETs for high-performance application. <i>Journal of Computational Electronics</i> , 2022, 21, 401-410.	1.3	3
632	Valley degree of freedom in two-dimensional van der Waals materials. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 303003.	1.3	10

#	ARTICLE	IF	CITATIONS
633	Modelling and Simulation of Ge Absorber-based Tunnel Field-Effect Phototransistor at 1550nm. IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India), 0, , 1-12.	2.1	1
634	Surface-engineered Mo <sub>2</sub> C: an ideal electrode for 2D semiconductor-based complementary circuit with Schottky-barrier-free contacts. Materials Today Chemistry, 2022, 24, 100790.	1.7	1
635	Ovonic threshold switching device and its application to logic gate function and steep slope in field effect transistors. Surfaces and Interfaces, 2022, 30, 101895.	1.5	3
636	Two-dimensional materials enabled next-generation low-energy compute and connectivity. MRS Bulletin, 2021, 46, 1211-1228.	1.7	8
637	Analytical Modeling of a High-Performance Heterojunction TFET with Tunneling Area Modulation. , 2021, , .		0
638	Molecular Engineering of 2D Nanomaterial Field-Effect Transistor Sensors: Fundamentals and Translation across the Innovation Spectrum. Advanced Materials, 2022, 34, e2106975.	11.1	11
639	Two-Dimensional Field-Effect Transistor Sensors: The Road toward Commercialization. Chemical Reviews, 2022, 122, 10319-10392.	23.0	89
640	Analysis of Low-Frequency 1/f Noise Characteristics for MoTe <sub>2</sub> Ambipolar Field-Effect Transistors. Nanomaterials, 2022, 12, 1325.	1.9	7
641	High performance quantum piezotronic tunneling transistor based on edge states of MoS <sub>2</sub> nanoribbon. Nano Energy, 2022, 98, 107275.	8.2	10
642	Quantum-Engineered Devices Based on 2D Materials for Next-Generation Information Processing and Storage. Advanced Materials, 2023, 35, e2109894.	11.1	22
643	Modeling and simulation of 2-D SixGe(1-x) source dual-gate pocket NTFET. , 2022, 167, 207237.		4
644	The Trend of 2D Transistors toward Integrated Circuits: Scaling Down and New Mechanisms. Advanced Materials, 2022, 34, e2201916.	11.1	37
645	Scalable production of p-MoTe <sub>2</sub> /n-MoS <sub>2</sub> heterostructure array and its application for self-powered photodetectors and CMOS inverters. 2D Materials, 2022, 9, 035015.	2.0	4
646	Selective, Anisotropic, or Consistent Polarized-Photon Out-Coupling of 2D Organic Microcrystals. Angewandte Chemie, 0, , .	1.6	0
647	Epitaxial Integration and Defect Structure of Layered SnSe Films on PbSe/III-V Substrates. Crystal Growth and Design, 0, , .	1.4	5
648	Selective, Anisotropic, or Consistent Polarized-Photon Out-Coupling of 2D Organic Microcrystals. Angewandte Chemie - International Edition, 2022, 61, .	7.2	15
649	Recent progress in nanomaterial-based bioelectronic devices for biocomputing system. Biosensors and Bioelectronics, 2022, 212, 114427.	5.3	10
650	The Bright and Dark Shades of Transparent Conducting Perovskites: From Science to Global Market. Journal of Physics: Conference Series, 2022, 2267, 012030.	0.3	1

#	ARTICLE	IF	CITATIONS
651	A steep-slope tellurium transistor with a native voltage amplifying threshold switch. Applied Physics Letters, 2022, 120, 223502.	1.5	4
652	Carrier Transport Mechanism in Organic Antiamipolar Transistors Unveiled by Operando Photoemission Electron Microscopy. Advanced Materials, 2022, 34, .	11.1	10
654	Metal-Semiconductor Schottky Diodes with Record-High Rectification and Conductance Using Two-Dimensional Monolayer Decoration. , 2022, , .		0
655	Spin-Resolved Visible Optical Spectra and Electronic Characteristics of Defect-Mediated Hexagonal Boron Nitride Monolayer. Crystals, 2022, 12, 906.	1.0	2
656	Topological phase change transistors based on tellurium Weyl semiconductor. Science Advances, 2022, 8, .	4.7	17
657	Steep-slope Schottky diode with cold metal source. Applied Physics Letters, 2022, 120, 243506.	1.5	4
658	Ultra Sensitive and Low Power Consumption Organic Phototransistor Enables Nighttime Illumination Perception for Bionic Mesopic Vision. Laser and Photonics Reviews, 2022, 16, .	4.4	10
659	An Ultralow Power Mixed Dimensional Heterojunction Transistor Based on the Charge Plasma pn Junction. Small, 2022, 18, .	5.2	3
660	Dependence of Tunneling Mechanism on Two-Dimensional Material Parameters: A High-Throughput Study. Physical Review Applied, 2022, 17, .	1.5	13
661	Inducing Strong Light-Matter Coupling and Optical Anisotropy in Monolayer MoS <sub>2</sub> with High Refractive Index Nanowire. ACS Applied Materials & Interfaces, 2022, 14, 31140-31147.	4.0	4
662	Ultralow Power Atomic Scale Tin Transistor with Gate Potential in Millivolt. Advanced Electronic Materials, 0, , 2200225.	2.6	2
663	Memristive, Spintronic, and 2D Materials-Based Devices to Improve and Complement Computing Hardware. Advanced Intelligent Systems, 2022, 4, .	3.3	13
664	Modeling of a vertical tunneling transistor based on Gr-hBN- <i>h</i> BN- <i>h</i> BN borophene heterostructure. Journal of Applied Physics, 2022, 132, 034302.	1.1	3
665	Beyond CMOS. , 2021, , .		2
666	Low-Voltage Organic Field-Effect Transistors: Challenges, Progress, and Prospects. , 2022, 4, 1531-1546.		19
667	Rapid Layer-Number Identification of MoS <sub>2</sub> Nanosheet in MoS <sub>2</sub> /MoO <sub>2</sub> Conformal Heterostructures by Color: Implications for the Fabrication of 2D/3D Heterostructures. ACS Applied Nano Materials, 2022, 5, 11280-11288.	2.4	3
668	Charge transport behaviors in a multi-gated WSe <sub>2</sub> /MoS <sub>2</sub> heterojunction. Applied Physics Letters, 2022, 121, .	1.5	5
669	Lifting on-state currents for GeS-based tunneling field-effect transistors with electrode optimization. Applied Surface Science, 2022, 602, 154297.	3.1	4

#	ARTICLE	IF	CITATIONS
670	Dirac-source diode with sub-unity ideality factor. Nature Communications, 2022, 13, .	5.8	6
671	CNT-molecule-CNT (1D-0D-1D) van der Waals integration ferroelectric memory with 1-nm <sup>2</sup> junction area. Nature Communications, 2022, 13, .	5.8	2
672	Bilayer tungsten diselenide transistors with on-state currents exceeding 1.5â€‰milliamperes per micrometre. Nature Electronics, 2022, 5, 497-504.	13.1	51
673	2D semiconductors for specific electronic applications: from device to system. Npj 2D Materials and Applications, 2022, 6, .	3.9	53
674	Atomic Layer Deposition of Large-Area Polycrystalline Transition Metal Dichalcogenides from 100 Å°C through Control of Plasma Chemistry. Chemistry of Materials, 2022, 34, 7280-7292.	3.2	15
675	Emerging reconfigurable electronic devices based on twoâ€‰dimensional materials: A review. InformaÄnÄ-Materials, 2022, 4, .	8.5	21
676	Electrically Self-Aligned, Reconfigurable Test Structure Using WSe <sub>2</sub> /SnSe <sub>2</sub> Heterojunction for TFET and MOSFET. IEEE Transactions on Electron Devices, 2022, 69, 5377-5381.	1.6	2
677	A MoS <sub>2</sub> /CuO-based hybrid pâ€‰n junction for high-performance self-powered photodetection. Journal of Materials Chemistry C, 2022, 10, 14159-14168.	2.7	5
678	MoS <sub>2</sub> /Si Tunnel Diodes Based on Comprehensive Transfer Technique. Chinese Physics B, 0, , .	0.7	0
679	What happens when transition metal trichalcogenides are interfaced with gold?. Journal of Materials Research, 2023, 38, 52-68.	1.2	9
680	Ferroelectric Nanogapâ€‰Based Steepâ€‰Slope Ambipolar Transistor. Small, 0, , 2203017.	5.2	1
681	Output and Negativeâ€‰Region Characteristics in Organic Antiâ€‰Ambipolar Transistors. Advanced Electronic Materials, 2023, 9, .	2.6	4
682	Van der Waals heterostructure tunnel FET with potential modulation beyond junction region. Science China Information Sciences, 2022, 65, .	2.7	4
683	Microelectronic current-sourcing device based on band-to-band tunneling current. Nanotechnology, 0, , .	1.3	0
684	Ambipolar steep-slope nanotransistors with Janus MoSSe/graphene heterostructures. Nanotechnology, 2023, 34, 015203.	1.3	1
685	Transistors and logic circuits enabled by 2D transition metal dichalcogenides: a state-of-the-art survey. Journal of Materials Chemistry C, 2022, 10, 17002-17026.	2.7	6
686	Neuromorphic Vision Based on van der Waals Heterostructure Materials. , 2022, , 67-79.		0
687	Schottky barrier heights and mechanism of charge transfer at metal-Bi <sub>2</sub> OS <sub>2</sub> interfaces. Science China Materials, 2023, 66, 811-818.	3.5	6

#	ARTICLE	IF	CITATIONS
688	A steep switching WSe <sub>2</sub> impact ionization field-effect transistor. Nature Communications, 2022, 13, .	5.8	7
689	Chemical Vapor Deposition of Quaternary 2D BiCuSeO p-type Semiconductor with Intrinsic Degeneracy. Advanced Materials, 2022, 34, .	11.1	6
690	Challenges for Nanoscale CMOS Logic Based on Two-Dimensional Materials. Nanomaterials, 2022, 12, 3548.	1.9	13
691	Two-dimensional materials based on negative differential transconductance and negative differential resistance for the application of multi-valued logic circuit: a review. Carbon Letters, 2023, 33, 59-76.	3.3	4
692	Heterojunction tunnel triodes based on two-dimensional metal selenide and three-dimensional silicon. Nature Electronics, 2022, 5, 744-751.	13.1	17
693	Electrostatic Doping and Devices. Springer Handbooks, 2023, , 371-389.	0.3	0
694	Flexible Electronics and Bioelectronics Devices. Springer Handbooks, 2023, , 959-1018.	0.3	1
695	2D materials-based nanoscale tunneling field effect transistors: current developments and future prospects. Npj 2D Materials and Applications, 2022, 6, .	3.9	24
696	Harnessing defects for high-performance MoS <sub>2</sub> tunneling field-effect transistors. Materials Research Letters, 2023, 11, 266-273.	4.1	0
697	Heterojunction Tunnel Field-Effect Transistors. Springer Handbooks, 2023, , 867-903.	0.3	0
698	Robust approach towards wearable power efficient transistors with low subthreshold swing. Materials Today Physics, 2023, 30, 100943.	2.9	7
699	A review of the synthesis, fabrication, and recent advances in mixed dimensional heterostructures for optoelectronic devices applications. Applied Materials Today, 2023, 30, 101717.	2.3	6
700	Atomic electronics. , 2022, , .		0
701	Interface Engineering and Device Applications of 2D Ultrathin Film/Ferroelectric Copolymer P(VDF/TrFE). , 2023, 2, .		9
702	An Ultra-steep Slope Two-dimensional Strain Effect Transistor. Nano Letters, 2022, 22, 9252-9259.	4.5	4
703	Robust Subthermionic Topological Transistor Action via Antiferromagnetic Exchange. Physical Review Applied, 2022, 18, .	1.5	5
705	Surface Potential Visualization in Organic Antiamipolar Transistors Using Operando Kelvin Probe Force Microscopy for Understanding the Comprehensive Carrier Transport Mechanism. Advanced Materials Interfaces, 2023, 10, .	1.9	2
706	Multimode transistors and neural networks based on ion-dynamic capacitance. Nature Electronics, 2022, 5, 859-869.	13.1	27

#	ARTICLE	IF	CITATIONS
707	Design Optimization of a Silicon-Germanium Heterojunction Negative Capacitance Gate-All-Around Tunneling Field Effect Transistor based on a Simulation Study. Chinese Physics B, 0, , .	0.7	1
708	Graphene Spin Valves for Spin Logic Devices. Advanced Materials, 2023, 35, .	11.1	12
709	Thickness-dependent semimetal-to-semiconductor transition in two-dimensional GaGeTe. Journal of Applied Physics, 2023, 133, .	1.1	2
710	3 nm Channel MoS <sub>2</sub> Transistors by Electromigration of Metal Interconnection. ACS Applied Electronic Materials, 0, , .	2.0	1
711	Recent Advances in Ferroelectric-Enhanced Low-Dimensional Optoelectronic Devices. Small, 2023, 19, .	5.2	11
712	Ultralow Subthreshold Swing 2D/2D Heterostructure Tunneling Field-Effect Transistor with Ion-Gel Gate Dielectrics. ACS Applied Electronic Materials, 2023, 5, 196-204.	2.0	4
713	2D heterostructures for advanced logic and memory devices. , 2023, , 141-167.		0
714	Efficient computational design of two-dimensional van der Waals heterostructures: Band alignment, lattice mismatch, and machine learning. Physical Review Materials, 2023, 7, .	0.9	9
715	Nanostructures/Graphene/Silicon Junction-Based High-Performance Photodetection Systems: Progress, Challenges, and Future Trends. Advanced Materials Interfaces, 2023, 10, .	1.9	10
716	Synthesis of 2D heterostructures. , 2023, , 55-95.		0
717	Emerging field effect transistor architectures – part I. , 2023, , 63-93.		0
718	Layer-Structured Anisotropic Metal Chalcogenides: Recent Advances in Synthesis, Modulation, and Applications. Chemical Reviews, 2023, 123, 3329-3442.	23.0	23
719	The Controllable Synthesis of High-Quality Two-Dimensional Iron Sulfide with Specific Phases. Small, 2023, 19, .	5.2	2
720	Cold source field-effect transistors: Breaking the 60-mV/decade switching limit at room temperature. Physics Reports, 2023, 1013, 1-33.	10.3	3
721	Investigation of temperature for the stacked Ferroelectric Heterojunction TFET(Fe-HTFET) on box substrate. , 2023, 177, 207546.		1
722	A Polymorphic Memtransistor with Tunable Metallic and Semiconducting Channel. Advanced Materials, 0, , 2209089.	11.1	5
723	Sensing single domains and individual defects in scaled ferroelectrics. Science Advances, 2023, 9, .	4.7	4
724	A Review Article on the usage of Different Materials and Different Device architectures in the Design of Tunnel Field Effect Transistor. , 2022, , .		1



#	ARTICLE	IF	CITATIONS
725	A novel high-low-high Schottky barrier based bidirectional tunnel field effect transistor. Heliyon, 2023, 9, e13809.	1.4	3
726	Multilayer In-Plane Heterostructures Based on Transition Metal Dichalcogenides for Advanced Electronics. ACS Nano, 2023, 17, 6545-6554.	7.3	7
727	Investigations of Vacancy-Assisted Selective Detection of NO <sub>2</sub> Molecules in Vertically Aligned SnS <sub>2</sub> . ACS Sensors, 2023, 8, 1357-1367.	4.0	11
728	Band-to-band tunneling switches based on two-dimensional van der Waals heterojunctions. Applied Physics Reviews, 2023, 10, .	5.5	8
729	Fabrication and applications of van der Waals heterostructures. International Journal of Extreme Manufacturing, 2023, 5, 022007.	6.3	6
730	Graphene Strain-Effect Transistor with Colossal ON/OFF Current Ratio Enabled by Reversible Nanocrack Formation in Metal Electrodes on Piezoelectric Substrates. Nano Letters, 2023, 23, 2536-2543.	4.5	6
731	Design of Energy Efficient Ring Oscillator and Full Adder Circuit using Compact Model of MoS <sub>2</sub> Channel TFET. , 2023, , .		0
736	Recent Advances in 2D Material Theory, Synthesis, Properties, and Applications. ACS Nano, 2023, 17, 9694-9747.	7.3	21
757	Porous crystalline materials for memories and neuromorphic computing systems. Chemical Society Reviews, 2023, 52, 7071-7136.	18.7	14
778	Two-dimensional magnetic materials for spintronic applications. Nano Research, 2024, 17, 743-762.	5.8	2
782	Ab-initio investigation on the low bandgap semiconductor-Sodium rhenium nitride possessing weak exciton. AIP Conference Proceedings, 2024, , .	0.3	0