Qing Wan

List of Publications by Citations

107 papers	4,163 citations	31 h-index	62 g-index
114 ext. papers	5,011 ext. citations	6.5 avg, IF	5.77 L-index

#	Paper	IF	Citations
107	Artificial synapse network on inorganic proton conductor for neuromorphic systems. *Nature Communications*, **2014**, 5, 3158	17.4	495
106	Freestanding Artificial Synapses Based on Laterally Proton-Coupled Transistors on Chitosan Membranes. *Advanced Materials*, **2015**, 27, 5599-604	24	263
105	An Artificial Sensory Neuron with Tactile Perceptual Learning. *Advanced Materials*, **2018**, 30, e1801291	24	216
104	A MoS /PTCDA Hybrid Heterojunction Synapse with Efficient Photoelectric Dual Modulation and Versatility. *Advanced Materials*, **2019**, 31, e1806227	24	203
103	2D MoS Neuromorphic Devices for Brain-Like Computational Systems. *Small*, **2017**, 13, 1700933	11	200
102	Proton-Conducting Graphene Oxide-Coupled Neuron Transistors for Brain-Inspired Cognitive Systems. *Advanced Materials*, **2016**, 28, 3557-63	24	181
101	Flexible Metal Oxide/Graphene Oxide Hybrid Neuromorphic Transistors on Flexible Conducting Graphene Substrates. *Advanced Materials*, **2016**, 28, 5878-85	24	123
100	Printed Neuromorphic Devices Based on Printed Carbon Nanotube Thin-Film Transistors. *Advanced Functional Materials*, **2017**, 27, 1604447	15.6	112
99	Electric-double-layer transistors for synaptic devices and neuromorphic systems. *Journal of Materials Chemistry C*, **2018**, 6, 5336-5352	7.1	110
98	Artificial Synapses Based on in-Plane Gate Organic Electrochemical Transistors. *ACS Applied Materials & Interfaces*, **2016**, 8, 26169-26175	9.5	100
97	Spatiotemporal Information Processing Emulated by Multiterminal Neuro-Transistor Networks. *Advanced Materials*, **2019**, 31, e1900903	24	96
96	Theoretical investigation of the negative differential resistance in squashed C60 molecular device. *Applied Physics Letters*, **2008**, 92, 263304	3.4	94
95	Energy-Efficient Artificial Synapses Based on Flexible IGZO Electric-Double-Layer Transistors. *IEEE Electron Device Letters*, **2015**, 36, 198-200	4.4	82
94	Coplanar Multigate MoS Electric-Double-Layer Transistors for Neuromorphic Visual Recognition. *ACS Applied Materials & Interfaces*, **2018**, 10, 25943-25948	9.5	74
93	A Sub-10 nm Vertical Organic/Inorganic Hybrid Transistor for Pain-Perceptual and Sensitization-Regulated Nociceptor Emulation. *Advanced Materials*, **2020**, 32, e1906171	24	74
92	Artificial Synaptic Devices Based on Natural Chicken Albumen Coupled Electric-Double-Layer Transistors. *Scientific Reports*, **2016**, 6, 23578	4.9	72
91	Long-Term Synaptic Plasticity Emulated in Modified Graphene Oxide Electrolyte Gated IZO-Based Thin-Film Transistors. *ACS Applied Materials & Interfaces*, **2016**, 8, 30281-30286	9.5	68

90	Flexible Neuromorphic Architectures Based on Self-Supported Multiterminal Organic Transistors. *ACS Applied Materials & Interfaces*, **2018**, 10, 26443-26450	9.5	66
89	Gas sensors based on semiconducting nanowire field-effect transistors. *Sensors*, **2014**, 14, 17406-29	3.8	64
88	Short-Term Synaptic Plasticity Regulation in Solution-Gated Indium-Gallium-Zinc-Oxide Electric-Double-Layer Transistors. *ACS Applied Materials & Interfaces*, **2016**, 8, 9762-8	9.5	63
87	Light Stimulated IGZO-Based Electric-Double-Layer Transistors For Photoelectric Neuromorphic Devices. *IEEE Electron Device Letters*, **2018**, 39, 897-900	4.4	61
86	Flexible Sensory Platform Based on Oxide-based Neuromorphic Transistors. *Scientific Reports*, **2015** , 5, 18082	4.9	60
85	Optoelectronic Properties of Printed Photogating Carbon Nanotube Thin Film Transistors and Their Application for Light-Stimulated Neuromorphic Devices. *ACS Applied Materials & Interfaces*, **2019**, 11, 12161-12169	9.5	54
84	Short-Term Plasticity and Synaptic Filtering Emulated in Electrolyte-Gated IGZO Transistors. *IEEE Electron Device Letters*, **2016**, 37, 299-302	4.4	49
83	Indium-tin-oxide thin film transistor biosensors for label-free detection of avian influenza virus H5N1. *Analytica Chimica Acta*, **2013**, 773, 83-88	6.6	49
82	Low-voltage transparent electric-double-layer ZnO-based thin-film transistors for portable transparent electronics. *Applied Physics Letters*, **2010**, 96, 043114	3.4	42
81	Oxide-based Synaptic Transistors Gated by Sol-Gel Silica Electrolytes. *ACS Applied Materials & Interfaces*, **2016**, 8, 3050-5	9.5	41
80	Flexible Proton-Gated Oxide Synaptic Transistors on Si Membrane. *ACS Applied Materials & Interfaces*, **2016**, 8, 21770-5	9.5	41
79	Flexible protonic/electronic coupled neuron transistors self-assembled on paper substrates for logic applications. *Applied Physics Letters*, **2013**, 102, 093509	3.4	35
78	Laterally Coupled Dual-Gate Oxide-Based Transistors on Sodium Alginate Electrolytes. *IEEE Electron Device Letters*, **2014**, 35, 1257-1259	4.4	34
77	Time-Tailoring van der Waals Heterostructures for Human Memory System Programming. *Advanced Science*, **2019**, 6, 1901072	13.6	31
76	Multifunctional Logic Demonstrated in a Flexible Multigate Oxide-Based Electric-Double-Layer Transistor on Paper Substrate. *Advanced Electronic Materials*, **2017**, 3, 1600509	6.4	30
75	Hodgkin□Huxley Artificial Synaptic Membrane Based on Protonic/Electronic Hybrid Neuromorphic Transistors. *Advanced Biology*, **2018**, 2, 1700198	3.5	30
74	Low-voltage transparent SnO2 nanowire transistors gated by microporous SiO2 solid-electrolyte with improved polarization response. *Journal of Materials Chemistry*, **2010**, 20, 8010		30
73	Activity Dependent Synaptic Plasticity Mimicked on Indium-Tin-Oxide Electric-Double-Layer Transistor. *ACS Applied Materials & Interfaces*, **2017**, 9, 37064-37069	9.5	28

72	Junctionless Flexible Oxide-Based Thin-Film Transistors on Paper Substrates. *IEEE Electron Device Letters*, **2012**, 33, 65-67	4.4	28
71	Solution-Processed, Electrolyte-Gated InO Flexible Synaptic Transistors for Brain-Inspired Neuromorphic Applications. *ACS Applied Materials & Interfaces*, **2020**, 12, 1061-1068	9.5	27
70	Proton Conducting Graphene Oxide/Chitosan Composite Electrolytes as Gate Dielectrics for New-Concept Devices. *Scientific Reports*, **2016**, 6, 34065	4.9	26
69	Low-Voltage Organic/Inorganic Hybrid Transparent Thin-Film Transistors Gated by Chitosan-Based Proton Conductors. *IEEE Electron Device Letters*, **2011**, 32, 1549-1551	4.4	25
68	Flexible Vertical Photogating Transistor Network with an Ultrashort Channel for In-Sensor Visual Nociceptor. *Advanced Functional Materials*, **2021**, 31, 2104327	15.6	25
67	Oxide Synaptic Transistors Coupled With Triboelectric Nanogenerators for Bio-Inspired Tactile Sensing Application. *IEEE Electron Device Letters*, **2020**, 41, 617-620	4.4	24
66	Flexible IZO Homojunction TFTs With Graphene Oxide/Chitosan Composite Gate Dielectrics on Paper Substrates. *IEEE Electron Device Letters*, **2018**, 39, 363-366	4.4	24
65	Optoelectronic In-Ga-Zn-O Memtransistors for Artificial Vision System. *Advanced Functional Materials*, **2020**, 30, 2002325	15.6	24
64	An Optically Modulated Organic Schottky-Barrier Planar-Diode-Based Artificial Synapse. *Advanced Optical Materials*, **2020**, 8, 2000153	8.1	23
63	Low-Cost pH Sensors Based on Low-Voltage Oxide-Based Electric-Double-Layer Thin Film Transistors. *IEEE Electron Device Letters*, **2014**, 35, 482-484	4.4	23
62	Ferromagnetic and metallic properties of the semihydrogenated GaN sheet. *Physica Status Solidi (B): Basic Research*, **2011**, 248, 1442-1445	1.3	23
61	Flexible Indium-Tin-Oxide Homojunction Thin-Film Transistors with Two In-Plane Gates on Cellulose-Nanofiber-Soaked Papers. *Advanced Electronic Materials*, **2019**, 5, 1900235	6.4	22
60	Laterally Coupled IZO-Based Transistors on Free-Standing Proton Conducting Chitosan Membranes. *IEEE Electron Device Letters*, **2014**, 35, 838-840	4.4	21
59	Recent Advances in Electric-Double-Layer Transistors for Bio-Chemical Sensing Applications. *Sensors*, **2019**, 19,	3.8	20
58	One-Volt Oxide Thin-Film Transistors on Paper Substrates Gated by $hbox{SiO}_{2}$-Based Solid Electrolyte With Controllable Operation Modes. *IEEE Transactions on Electron Devices*, **2010**, 57, 2258-2263	2.9	20
57	Biodegradable oxide synaptic transistors gated by a biopolymer electrolyte. *Journal of Materials Chemistry C*, **2016**, 4, 7744-7750	7.1	18
56	Junctionless in-plane-gate transparent thin-film transistors. *Applied Physics Letters*, **2011**, 99, 193502	3.4	18
55	Investigation of Ge nanocrytals in a metal-insulator-semiconductor structure with a HfO2SiO2 stack as the tunnel dielectric. *Applied Physics Letters*, **2005**, 86, 113105	3.4	18

54	Flexible Low-Voltage Electric-Double-Layer TFTs Self-Assembled on Paper Substrates. *IEEE Electron Device Letters*, **2011**, 32, 518-520	4.4	16
53	Controllable light transmission through cascaded metal films perforated with periodic hole arrays. *Applied Physics Letters*, **2008**, 93, 221909	3.4	15
52	Indium□allium□inc□xide Schottky Synaptic Transistors for Silent Synapse Conversion Emulation. *IEEE Electron Device Letters*, **2019**, 40, 139-142	4.4	15
51	Dual in-plane-gate oxide-based thin-film transistors with tunable threshold voltage. *Applied Physics Letters*, **2011**, 99, 113504	3.4	14
50	Recent Progress on Emerging Transistor-Based Neuromorphic Devices. *Advanced Intelligent Systems*, **2021**, 3, 2000210	6	14
49	Simulation of Laterally Coupled InGaZnO4-Based Electric-Double-Layer Transistors for Synaptic Electronics. *IEEE Electron Device Letters*, **2015**, 36, 204-206	4.4	13
48	Low-Voltage Junctionless Oxide-Based Thin-Film Transistors Self-Assembled by a Gradient Shadow Mask. *IEEE Electron Device Letters*, **2012**, 33, 1720-1722	4.4	13
47	Multiple enhanced transmission bands through compound periodic array of rectangular holes. *Journal of Applied Physics*, **2009**, 106, 093108	2.5	13
46	Neuromorphic Simulation of Proton Conductors Laterally Coupled Oxide-Based Transistors With Multiple in-Plane Gates. *IEEE Electron Device Letters*, **2017**, 38, 525-528	4.4	12
45	Dual Function of Antireflectance and Surface Passivation of Atomic-Layer-Deposited $hbox{Al}_{2}hbox{O}_{3}$ Films. *IEEE Electron Device Letters*, **2012**, 33, 1753-1755	4.4	12
44	Vertical low-voltage oxide transistors gated by microporous SiO2/LiCl composite solid electrolyte with enhanced electric-double-layer capacitance. *Applied Physics Letters*, **2010**, 97, 052104	3.4	12
43	Indium-Zinc-Oxide Neuron Thin Film Transistors Laterally Coupled by Sodium Alginate Electrolytes. *IEEE Transactions on Electron Devices*, **2016**, 63, 3958-3963	2.9	12
42	Low-Voltage Oxide-Based Synaptic Transistors for Spiking Humidity Detection. *IEEE Electron Device Letters*, **2019**, 40, 459-462	4.4	11
41	Low-Voltage Oxide-Based Electric-Double-Layer TFTs Gated by Stacked $hbox{SiO}_{2}$ Electrolyte/Chitosan Hybrid Dielectrics. *IEEE Electron Device Letters*, **2012**, 33, 848-850	4.4	11
40	Flexible Low-Voltage IGZO Thin-Film Transistors With Polymer Electret Gate Dielectrics on Paper Substrates. *IEEE Electron Device Letters*, **2019**, 40, 224-227	4.4	11
39	pH-dependent plasticity regulation in proton/electron hybrid oxide-based synaptic transistors. *Applied Surface Science*, **2019**, 481, 1412-1417	6.7	10
38	Nanogranular SiO2 proton gated silicon layer transistor mimicking biological synapses. *Applied Physics Letters*, **2016**, 108, 253503	3.4	10
37	A Photoelectric Spiking Neuron for Visual Depth Perception.. *Advanced Materials*, **2022**, e2201895	24	10

36	Schottky contact on ultra-thin silicon nanomembranes under light illumination. *Nanotechnology*, **2014**, 25, 485201	3.4	9
35	Synergistic Modulation of Synaptic Plasticity in IGZO-Based Photoelectric Neuromorphic TFTs. *IEEE Transactions on Electron Devices*, **2021**, 68, 1659-1663	2.9	9
34	Flexible Low-Voltage In2ZnO Homojunction TFTs With Beeswax Gate Dielectric on Paper Substrates. *IEEE Electron Device Letters*, **2016**, 37, 287-290	4.4	8
33	Multiterminal Ionic Synaptic Transistor With Artificial Blink Reflex Function. *IEEE Electron Device Letters*, **2021**, 42, 351-354	4.4	8
32	Proton induced multilevel storage capability in self-assembled indium-zinc-oxide thin-film transistors. *Applied Physics Letters*, **2013**, 103, 113503	3.4	7
31	Transparent In-Plane-Gate Junctionless Oxide-Based TFTs Directly Written by Laser Scribing. *IEEE Electron Device Letters*, **2012**, 33, 1723-1725	4.4	7
30	Electrostatic modification of oxide semiconductors by electric double layers of microporous SiO2-based solid electrolyte. *Journal of Applied Physics*, **2011**, 109, 054501	2.5	7
29	Freestanding Dual-Gate Oxide-Based Neuromorphic Transistors for Flexible Artificial Nociceptors. *IEEE Transactions on Electron Devices*, **2021**, 68, 415-420	2.9	7
28	Schmitt Triggers With Adjustable Hysteresis Window Based on Indium Tungsten-Oxide Electric-Double-Layer TFTs. *IEEE Electron Device Letters*, **2019**, 40, 1205-1208	4.4	6
27	Low-Voltage Electric-Double-Layer TFTs on $ hbox{SiO}_{2}$-Covered Paper Substrates. *IEEE Electron Device Letters*, **2011**, 32, 1543-1545	4.4	6
26	Flexible Oxide-Based Schottky Neuromorphic TFTs With Configurable Spiking Dynamic Functions. *IEEE Transactions on Electron Devices*, **2020**, 67, 5216-5220	2.9	6
25	Indium gallium zinc oxide thin-film transistors: Materials, devices, and applications. *Journal of Semiconductors*, **2021**, 42, 031101	2.3	6
24	Neuromorphic Devices for Bionic Sensing and Perception. *Frontiers in Neuroscience*, **2021**, 15, 690950	5.1	6
23	Improving the Blue Response and Efficiency of Multicrystalline Silicon Solar Cells by Surface Nanotexturing. *IEEE Electron Device Letters*, **2016**, 37, 306-309	4.4	5
22	Acoustic phonon transport in a four-channel quantum structure. *Journal of Applied Physics*, **2009**, 105, 104515	2.5	5
21	Chitosan-Based Electrolyte Gated Low Voltage Oxide Transistor With a Coplanar Modulatory Terminal. *IEEE Electron Device Letters*, **2017**, 38, 322-325	4.4	5
20	A Spiking Stochastic Neuron Based on Stacked InGaZnO Memristors. *Advanced Electronic Materials*,2100618	6.4	5
19	Flexible Dual-Gate MoS Neuromorphic Transistors on Freestanding Proton-Conducting Chitosan Membranes. *IEEE Transactions on Electron Devices*, **2021**, 68, 3119-3123	2.9	5

18	Indium-Gallium-Zinc-Oxide Based Photoelectric Neuromorphic Transistors for Modulable Photoexcited Corneal Nociceptor Emulation. *Advanced Electronic Materials*, **2021**, 7, 2100487	6.4	5
17	Degenerately Mo-doped In2O3 nanowire arrays on In2O3 microwires with metallic behaviors. *Journal of Applied Physics*, **2009**, 106, 024312	2.5	4
16	Emerging Devices for Biologically Accurate Neuron. *ACS Applied Electronic Materials*, **2020**, 2, 389-397	4	4
15	Freestanding Multi-Gate Amorphous Oxide-Based TFTs on Graphene Oxide Enhanced Electrolyte Membranes. *IEEE Electron Device Letters*, **2020**, 41, 1360-1363	4.4	4
14	Dopamine Detection Based on Low-Voltage Oxide Homojunction Electric-Double-Layer Thin-Film Transistors. *IEEE Electron Device Letters*, **2016**, 1-1	4.4	4
13	Realization of size controllable graphene micro/nanogap with a micro/nanowire mask method for organic field-effect transistors. *Applied Physics Letters*, **2011**, 99, 103301	3.4	3
12	Optimization of chitosan gated electric double layer transistors by combining nanoparticle incorporation and acid doping. *RSC Advances*, **2016**, 6, 109803-109808	3.7	3
11	High-Performance Amorphous InGaZnO Thin-Film Transistor Gated by HfAlOx Dielectric With Ultralow Subthreshold Swing. *IEEE Transactions on Electron Devices*, **2021**, 68, 6154-6158	2.9	3
10	IGZO-based neuromorphic transistors with temperature-dependent synaptic plasticity and spiking logics. *Science China Information Sciences*, **2022**, 65, 1	3.4	2
9	Toward memristive in-memory computing: principles and applications. *Frontiers of Optoelectronics*, **2022**, 15,	2.8	2
8	Flexible ITO-Based TFTs on Paper Substrates **2018**,		1
7	Artificial Reflex Arc: An Environment-Adaptive Neuromorphic Camouflage Device. *IEEE Electron Device Letters*, **2021**, 42, 1224-1227	4.4	1
6	HfZrOx-based capacitive synapses with highly linear and symmetric multilevel characteristics for neuromorphic computing. *Applied Physics Letters*, **2022**, 120, 113504	3.4	1
5	Freestanding multi-gate IZO-based neuromorphic transistors on composite electrolyte membranes. *Flexible and Printed Electronics*, **2021**, 6, 044008	3.1	1
4	Photoelectric Synapse Based on InGaZnO Nanofibers for High Precision Neuromorphic Computing. *IEEE Electron Device Letters*, **2022**, 1-1	4.4	0
3	Synaptic plasticity and classical conditioning mimicked in single indium-tungsten-oxide based neuromorphic transistor*. *Chinese Physics B*, **2021**, 30, 058102	1.2	0
2	Neuromorphic Perceptual Systems with Emerging Devices **2022**, 217-233		
1	Multiterminal Neuromorphic Devices with Cognitive Behaviors **2022**, 91-123		