

# Qing Wan

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Photoelectric Synapse Based on InGaZnO Nanofibers for High Precision Neuromorphic Computing. <i>IEEE Electron Device Letters</i> , <b>2022</b> , 1-1	4.4	0
106	IGZO-based neuromorphic transistors with temperature-dependent synaptic plasticity and spiking logics. <i>Science China Information Sciences</i> , <b>2022</b> , 65, 1	3.4	2
105	A Photoelectric Spiking Neuron for Visual Depth Perception.. <i>Advanced Materials</i> , <b>2022</b> , e2201895	2.4	10
104	HfZrOx-based capacitive synapses with highly linear and symmetric multilevel characteristics for neuromorphic computing. <i>Applied Physics Letters</i> , <b>2022</b> , 120, 113504	3.4	1
103	Neuromorphic Perceptual Systems with Emerging Devices <b>2022</b> , 217-233		
102	Multiterminal Neuromorphic Devices with Cognitive Behaviors <b>2022</b> , 91-123		
101	Toward memristive in-memory computing: principles and applications. <i>Frontiers of Optoelectronics</i> , <b>2022</b> , 15,	2.8	2
100	Indium-gallium-zinc-oxide thin-film transistors: Materials, devices, and applications. <i>Journal of Semiconductors</i> , <b>2021</b> , 42, 031101	2.3	6
99	Synaptic plasticity and classical conditioning mimicked in single indium-tungsten-oxide based neuromorphic transistor*. <i>Chinese Physics B</i> , <b>2021</b> , 30, 058102	1.2	0
98	Synergistic Modulation of Synaptic Plasticity in IGZO-Based Photoelectric Neuromorphic TFTs. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 1659-1663	2.9	9
97	Recent Progress on Emerging Transistor-Based Neuromorphic Devices. <i>Advanced Intelligent Systems</i> , <b>2021</b> , 3, 2000210	6	14
96	Flexible Dual-Gate MoS <sub>2</sub> Neuromorphic Transistors on Freestanding Proton-Conducting Chitosan Membranes. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 3119-3123	2.9	5
95	Flexible Vertical Photogating Transistor Network with an Ultrashort Channel for In-Sensor Visual Nociceptor. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2104327	15.6	25
94	Neuromorphic Devices for Bionic Sensing and Perception. <i>Frontiers in Neuroscience</i> , <b>2021</b> , 15, 690950	5.1	6
93	Freestanding Dual-Gate Oxide-Based Neuromorphic Transistors for Flexible Artificial Nociceptors. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 415-420	2.9	7
92	Multiterminal Ionic Synaptic Transistor With Artificial Blink Reflex Function. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 351-354	4.4	8
91	Indium-Gallium-Zinc-Oxide Based Photoelectric Neuromorphic Transistors for Modulable Photoexcited Corneal Nociceptor Emulation. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2100487	6.4	5

90	Artificial Reflex Arc: An Environment-Adaptive Neuromorphic Camouflage Device. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 1224-1227	4.4	1
89	Freestanding multi-gate IZO-based neuromorphic transistors on composite electrolyte membranes. <i>Flexible and Printed Electronics</i> , <b>2021</b> , 6, 044008	3.1	1
88	High-Performance Amorphous InGaZnO Thin-Film Transistor Gated by HfAlO <sub>x</sub> Dielectric With Ultralow Subthreshold Swing. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 6154-6158	2.9	3
87	An Optically Modulated Organic Schottky-Barrier Planar-Diode-Based Artificial Synapse. <i>Advanced Optical Materials</i> , <b>2020</b> , 8, 2000153	8.1	23
86	Oxide Synaptic Transistors Coupled With Triboelectric Nanogenerators for Bio-Inspired Tactile Sensing Application. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 617-620	4.4	24
85	Solution-Processed, Electrolyte-Gated InO Flexible Synaptic Transistors for Brain-Inspired Neuromorphic Applications. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 1061-1068	9.5	27
84	A Sub-10 nm Vertical Organic/Inorganic Hybrid Transistor for Pain-Perceptual and Sensitization-Regulated Nociceptor Emulation. <i>Advanced Materials</i> , <b>2020</b> , 32, e1906171	24	74
83	Emerging Devices for Biologically Accurate Neuron. <i>ACS Applied Electronic Materials</i> , <b>2020</b> , 2, 389-397	4	4
82	Flexible Oxide-Based Schottky Neuromorphic TFTs With Configurable Spiking Dynamic Functions. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 5216-5220	2.9	6
81	Freestanding Multi-Gate Amorphous Oxide-Based TFTs on Graphene Oxide Enhanced Electrolyte Membranes. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 1360-1363	4.4	4
80	Optoelectronic In-Ga-Zn-O Memtransistors for Artificial Vision System. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2002325	15.6	24
79	Time-Tailoring van der Waals Heterostructures for Human Memory System Programming. <i>Advanced Science</i> , <b>2019</b> , 6, 1901072	13.6	31
78	Low-Voltage Oxide-Based Synaptic Transistors for Spiking Humidity Detection. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 459-462	4.4	11
77	Flexible Indium-Tin-Oxide Homojunction Thin-Film Transistors with Two In-Plane Gates on Cellulose-Nanofiber-Soaked Papers. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900235	6.4	22
76	pH-dependent plasticity regulation in proton/electron hybrid oxide-based synaptic transistors. <i>Applied Surface Science</i> , <b>2019</b> , 481, 1412-1417	6.7	10
75	Spatiotemporal Information Processing Emulated by Multiterminal Neuro-Transistor Networks. <i>Advanced Materials</i> , <b>2019</b> , 31, e1900903	24	96
74	Recent Advances in Electric-Double-Layer Transistors for Bio-Chemical Sensing Applications. <i>Sensors</i> , <b>2019</b> , 19,	3.8	20
73	Schmitt Triggers With Adjustable Hysteresis Window Based on Indium Tungsten-Oxide Electric-Double-Layer TFTs. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 1205-1208	4.4	6

72	Optoelectronic Properties of Printed Photogating Carbon Nanotube Thin Film Transistors and Their Application for Light-Stimulated Neuromorphic Devices. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 12161-12169	9.5	54
71	Flexible Low-Voltage IGZO Thin-Film Transistors With Polymer Electret Gate Dielectrics on Paper Substrates. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 224-227	4.4	11
70	IndiumGalliumZincOxide Schottky Synaptic Transistors for Silent Synapse Conversion Emulation. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 139-142	4.4	15
69	A MoS /PTCDA Hybrid Heterojunction Synapse with Efficient Photoelectric Dual Modulation and Versatility. <i>Advanced Materials</i> , <b>2019</b> , 31, e1806227	24	203
68	Flexible IZO Homojunction TFTs With Graphene Oxide/Chitosan Composite Gate Dielectrics on Paper Substrates. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 363-366	4.4	24
67	HodgkinHuxley Artificial Synaptic Membrane Based on Protonic/Electronic Hybrid Neuromorphic Transistors. <i>Advanced Biology</i> , <b>2018</b> , 2, 1700198	3.5	30
66	Light Stimulated IGZO-Based Electric-Double-Layer Transistors For Photoelectric Neuromorphic Devices. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 897-900	4.4	61
65	Coplanar Multigate MoS Electric-Double-Layer Transistors for Neuromorphic Visual Recognition. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 25943-25948	9.5	74
64	Flexible Neuromorphic Architectures Based on Self-Supported Multiterminal Organic Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 26443-26450	9.5	66
63	Electric-double-layer transistors for synaptic devices and neuromorphic systems. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 5336-5352	7.1	110
62	An Artificial Sensory Neuron with Tactile Perceptual Learning. <i>Advanced Materials</i> , <b>2018</b> , 30, e1801291	24	216
61	Flexible ITO-Based TFTs on Paper Substrates <b>2018</b> ,		1
60	Neuromorphic Simulation of Proton Conductors Laterally Coupled Oxide-Based Transistors With Multiple in-Plane Gates. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 525-528	4.4	12
59	Multifunctional Logic Demonstrated in a Flexible Multigate Oxide-Based Electric-Double-Layer Transistor on Paper Substrate. <i>Advanced Electronic Materials</i> , <b>2017</b> , 3, 1600509	6.4	30
58	2D MoS Neuromorphic Devices for Brain-Like Computational Systems. <i>Small</i> , <b>2017</b> , 13, 1700933	11	200
57	Printed Neuromorphic Devices Based on Printed Carbon Nanotube Thin-Film Transistors. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1604447	15.6	112
56	Activity Dependent Synaptic Plasticity Mimicked on Indium-Tin-Oxide Electric-Double-Layer Transistor. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 37064-37069	9.5	28
55	Chitosan-Based Electrolyte Gated Low Voltage Oxide Transistor With a Coplanar Modulatory Terminal. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 322-325	4.4	5

54	Biodegradable oxide synaptic transistors gated by a biopolymer electrolyte. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 7744-7750	7.1	18
53	Long-Term Synaptic Plasticity Emulated in Modified Graphene Oxide Electrolyte Gated IZO-Based Thin-Film Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 30281-30286	9.5	68
52	Artificial Synaptic Devices Based on Natural Chicken Albumen Coupled Electric-Double-Layer Transistors. <i>Scientific Reports</i> , <b>2016</b> , 6, 23578	4.9	72
51	Proton Conducting Graphene Oxide/Chitosan Composite Electrolytes as Gate Dielectrics for New-Concept Devices. <i>Scientific Reports</i> , <b>2016</b> , 6, 34065	4.9	26
50	Improving the Blue Response and Efficiency of Multicrystalline Silicon Solar Cells by Surface Nanotexturing. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 306-309	4.4	5
49	Short-Term Synaptic Plasticity Regulation in Solution-Gated Indium-Gallium-Zinc-Oxide Electric-Double-Layer Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 9762-8	9.5	63
48	Oxide-based Synaptic Transistors Gated by Sol-Gel Silica Electrolytes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 3050-5	9.5	41
47	Short-Term Plasticity and Synaptic Filtering Emulated in Electrolyte-Gated IGZO Transistors. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 299-302	4.4	49
46	Flexible Low-Voltage In <sub>2</sub> N <sub>2</sub> O Homojunction TFTs With Beeswax Gate Dielectric on Paper Substrates. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 287-290	4.4	8
45	Proton-Conducting Graphene Oxide-Coupled Neuron Transistors for Brain-Inspired Cognitive Systems. <i>Advanced Materials</i> , <b>2016</b> , 28, 3557-63	24	181
44	Flexible Metal Oxide/Graphene Oxide Hybrid Neuromorphic Transistors on Flexible Conducting Graphene Substrates. <i>Advanced Materials</i> , <b>2016</b> , 28, 5878-85	24	123
43	Nanogranular SiO <sub>2</sub> proton gated silicon layer transistor mimicking biological synapses. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 253503	3.4	10
42	Optimization of chitosan gated electric double layer transistors by combining nanoparticle incorporation and acid doping. <i>RSC Advances</i> , <b>2016</b> , 6, 109803-109808	3.7	3
41	Dopamine Detection Based on Low-Voltage Oxide Homojunction Electric-Double-Layer Thin-Film Transistors. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 1-1	4.4	4
40	Artificial Synapses Based on in-Plane Gate Organic Electrochemical Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 26169-26175	9.5	100
39	Indium-Zinc-Oxide Neuron Thin Film Transistors Laterally Coupled by Sodium Alginate Electrolytes. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 3958-3963	2.9	12
38	Flexible Proton-Gated Oxide Synaptic Transistors on Si Membrane. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 21770-5	9.5	41
37	Simulation of Laterally Coupled InGaZnO <sub>4</sub> -Based Electric-Double-Layer Transistors for Synaptic Electronics. <i>IEEE Electron Device Letters</i> , <b>2015</b> , 36, 204-206	4.4	13

36	Flexible Sensory Platform Based on Oxide-based Neuromorphic Transistors. <i>Scientific Reports</i> , <b>2015</b> , 5, 18082	4.9	60
35	Freestanding Artificial Synapses Based on Laterally Proton-Coupled Transistors on Chitosan Membranes. <i>Advanced Materials</i> , <b>2015</b> , 27, 5599-604	24	263
34	Energy-Efficient Artificial Synapses Based on Flexible IGZO Electric-Double-Layer Transistors. <i>IEEE Electron Device Letters</i> , <b>2015</b> , 36, 198-200	4.4	82
33	Artificial synapse network on inorganic proton conductor for neuromorphic systems. <i>Nature Communications</i> , <b>2014</b> , 5, 3158	17.4	495
32	Schottky contact on ultra-thin silicon nanomembranes under light illumination. <i>Nanotechnology</i> , <b>2014</b> , 25, 485201	3.4	9
31	Low-Cost pH Sensors Based on Low-Voltage Oxide-Based Electric-Double-Layer Thin Film Transistors. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 482-484	4.4	23
30	Laterally Coupled IZO-Based Transistors on Free-Standing Proton Conducting Chitosan Membranes. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 838-840	4.4	21
29	Gas sensors based on semiconducting nanowire field-effect transistors. <i>Sensors</i> , <b>2014</b> , 14, 17406-29	3.8	64
28	Laterally Coupled Dual-Gate Oxide-Based Transistors on Sodium Alginate Electrolytes. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 1257-1259	4.4	34
27	Proton induced multilevel storage capability in self-assembled indium-zinc-oxide thin-film transistors. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 113503	3.4	7
26	Flexible protonic/electronic coupled neuron transistors self-assembled on paper substrates for logic applications. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 093509	3.4	35
25	Indium-tin-oxide thin film transistor biosensors for label-free detection of avian influenza virus H5N1. <i>Analytica Chimica Acta</i> , <b>2013</b> , 773, 83-88	6.6	49
24	Junctionless Flexible Oxide-Based Thin-Film Transistors on Paper Substrates. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 65-67	4.4	28
23	Low-Voltage Oxide-Based Electric-Double-Layer TFTs Gated by Stacked $\text{SiO}_2$ Electrolyte/Chitosan Hybrid Dielectrics. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 848-850	4.4	11
22	Transparent In-Plane-Gate Junctionless Oxide-Based TFTs Directly Written by Laser Scribing. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 1723-1725	4.4	7
21	Low-Voltage Junctionless Oxide-Based Thin-Film Transistors Self-Assembled by a Gradient Shadow Mask. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 1720-1722	4.4	13
20	Dual Function of Antireflectance and Surface Passivation of Atomic-Layer-Deposited $\text{Al}_2\text{O}_3$ Films. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 1753-1755	4.4	12
19	Realization of size controllable graphene micro/nanogap with a micro/nanowire mask method for organic field-effect transistors. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 103301	3.4	3

18	Flexible Low-Voltage Electric-Double-Layer TFTs Self-Assembled on Paper Substrates. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 518-520	4.4	16
17	Ferromagnetic and metallic properties of the semihydrogenated GaN sheet. <i>Physica Status Solidi (B): Basic Research</i> , <b>2011</b> , 248, 1442-1445	1.3	23
16	Low-Voltage Electric-Double-Layer TFTs on $\text{SiO}_2$ -Covered Paper Substrates. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 1543-1545	4.4	6
15	Junctionless in-plane-gate transparent thin-film transistors. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 193502	3.4	18
14	Low-Voltage Organic/Inorganic Hybrid Transparent Thin-Film Transistors Gated by Chitosan-Based Proton Conductors. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 1549-1551	4.4	25
13	Dual in-plane-gate oxide-based thin-film transistors with tunable threshold voltage. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 113504	3.4	14
12	Electrostatic modification of oxide semiconductors by electric double layers of microporous $\text{SiO}_2$ -based solid electrolyte. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 054501	2.5	7
11	Low-voltage transparent electric-double-layer ZnO-based thin-film transistors for portable transparent electronics. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 043114	3.4	42
10	Vertical low-voltage oxide transistors gated by microporous $\text{SiO}_2/\text{LiCl}$ composite solid electrolyte with enhanced electric-double-layer capacitance. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 052104	3.4	12
9	Low-voltage transparent $\text{SnO}_2$ nanowire transistors gated by microporous $\text{SiO}_2$ solid-electrolyte with improved polarization response. <i>Journal of Materials Chemistry</i> , <b>2010</b> , 20, 8010		30
8	One-Volt Oxide Thin-Film Transistors on Paper Substrates Gated by $\text{SiO}_2$ -Based Solid Electrolyte With Controllable Operation Modes. <i>IEEE Transactions on Electron Devices</i> , <b>2010</b> , 57, 2258-2263	2.9	20
7	Degenerately Mo-doped $\text{In}_2\text{O}_3$ nanowire arrays on $\text{In}_2\text{O}_3$ microwires with metallic behaviors. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 024312	2.5	4
6	Acoustic phonon transport in a four-channel quantum structure. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 104515	2.5	5
5	Multiple enhanced transmission bands through compound periodic array of rectangular holes. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 093108	2.5	13
4	Theoretical investigation of the negative differential resistance in squashed $\text{C}_{60}$ molecular device. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 263304	3.4	94
3	Controllable light transmission through cascaded metal films perforated with periodic hole arrays. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 221909	3.4	15
2	Investigation of Ge nanocrystals in a metal-insulator-semiconductor structure with a $\text{HfO}_2/\text{SiO}_2$ stack as the tunnel dielectric. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 113105	3.4	18
1	A Spiking Stochastic Neuron Based on Stacked $\text{InGaZnO}$ Memristors. <i>Advanced Electronic Materials</i> , <b>2010</b> , 1, 18	1.8	5

