

# Sheng Chang

## 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.

80  
papers

907  
citations

16  
h-index

25  
g-index

92  
ext. papers

1,240  
ext. citations

3.8  
avg, IF

4.65  
L-index

#	Paper	IF	Citations
80	The effect of Ag atoms diffusion into $\pi$ -phase CsPbI <sub>3</sub> -based memory device. <i>Microelectronic Engineering</i> , <b>2022</b> , 251, 111668	2.5	1
79	A Multi-Classification Hybrid Quantum Neural Network Using an All-Qubit Multi-Observable Measurement Strategy.. <i>Entropy</i> , <b>2022</b> , 24,	2.8	2
78	Micron channel length ZnO thin film transistors using bilayer electrodes.. <i>Journal of Colloid and Interface Science</i> , <b>2022</b> , 622, 769-779	9.3	0
77	A K-Band Active Up/Down Bidirectional Mixer in 130-nm CMOS <b>2021</b> ,		1
76	DMMAN: A two-stage audio-visual fusion framework for sound separation and event localization. <i>Neural Networks</i> , <b>2021</b> , 133, 229-239	9.1	5
75	Ensemble echo network with deep architecture for time-series modeling. <i>Neural Computing and Applications</i> , <b>2021</b> , 33, 4997-5010	4.8	7
74	A K-band high-gain power amplifier with slow-wave transmission-line transformer in 130-nm RF CMOS. <i>International Journal of Circuit Theory and Applications</i> , <b>2021</b> , 49, 1347-1357	2	2
73	Machine learning method for tight-binding Hamiltonian parameterization from ab-initio band structure. <i>Npj Computational Materials</i> , <b>2021</b> , 7,	10.9	8
72	Memristor-Based Image Enhancement: High Efficiency and Robustness. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 602-609	2.9	5
71	Steep-Slope Transistors Based on Chiral Graphene Nanoribbons With Intrinsic Cold Source. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 4123-4128	2.9	2
70	Fully memristive spiking-neuron learning framework and its applications on pattern recognition and edge detection. <i>Neurocomputing</i> , <b>2020</b> , 403, 80-87	5.4	16
69	Asia-Pacific Lightning Location Network (APLLN) and Preliminary Performance Assessment. <i>Remote Sensing</i> , <b>2020</b> , 12, 1537	5	4
68	Multi-information fusion neural networks for arrhythmia automatic detection. <i>Computer Methods and Programs in Biomedicine</i> , <b>2020</b> , 193, 105479	6.9	20
67	The reconstruction of the symmetry between sublattices: a strategy to improve the transport properties of edge-defective graphene nanoribbon transistors. <i>Physical Chemistry Chemical Physics</i> , <b>2020</b> , 22, 18265-18271	3.6	2
66	A Multilayer Neural Network Merging Image Preprocessing and Pattern Recognition by Integrating Diffusion and Drift Memristors. <i>IEEE Transactions on Cognitive and Developmental Systems</i> , <b>2020</b> , 1-1	3	16
65	Classification of VLF/LF Lightning Signals Using Sensors and Deep Learning Methods. <i>Sensors</i> , <b>2020</b> , 20,	3.8	8
64	Three-Channel Metasurfaces for Simultaneous Meta-Holography and Meta-Nanoprinting: A Single-Cell Design Approach. <i>Laser and Photonics Reviews</i> , <b>2020</b> , 14, 2000032	8.3	57

63	A Real Time QRS Detection Algorithm Based on ET and PD Controlled Threshold Strategy. <i>Sensors</i> , <b>2020</b> , 20,	3.8	9
62	A Single-Celled Tri-Functional Metasurface Enabled with Triple Manipulations of Light. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2003990	15.6	43
61	MFB-CBRNN: A Hybrid Network for MI Detection Using 12-Lead ECGs. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2020</b> , 24, 503-514	7.2	31
60	Gas sensing properties of buckled bismuthene predicted by first-principles calculations. <i>Physical Chemistry Chemical Physics</i> , <b>2019</b> , 21, 11455-11463	3.6	23
59	A novel ECG signal compression method using spindle convolutional auto-encoder. <i>Computer Methods and Programs in Biomedicine</i> , <b>2019</b> , 175, 139-150	6.9	19
58	Prediction of Stable and High-Performance Charge Transport in Zigzag Tellurene Nanoribbons. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 2365-2369	2.9	8
57	Influence of Compact Memristors Stability on Machine Learning. <i>IEEE Access</i> , <b>2019</b> , 7, 47472-47478	3.5	12
56	Monitor-Based Spiking Recurrent Network for the Representation of Complex Dynamic Patterns. <i>International Journal of Neural Systems</i> , <b>2019</b> , 29, 1950006	6.2	21
55	The MBPEP: a deep ensemble pruning algorithm providing high quality uncertainty prediction. <i>Applied Intelligence</i> , <b>2019</b> , 49, 2942-2955	4.9	7
54	Interface Coupling as a Crucial Factor for Spatial Localization of Electronic States in a Heterojunction of Graphene Nanoribbons. <i>Physical Review Applied</i> , <b>2019</b> , 11,	4.3	6
53	Acceleration of LSTM With Structured Pruning Method on FPGA. <i>IEEE Access</i> , <b>2019</b> , 7, 62930-62937	3.5	8
52	Band-Offset Degradation in van der Waals Heterojunctions. <i>Physical Review Applied</i> , <b>2019</b> , 12,	4.3	7
51	A 2.5-Gb/s CMOS optical receiver with wide dynamic range using dual AGCs. <i>Analog Integrated Circuits and Signal Processing</i> , <b>2019</b> , 101, 229-235	1.2	
50	Wave-Function Symmetry Mechanism of Quantum-Well States in Graphene Nanoribbon Heterojunctions. <i>Physical Review Applied</i> , <b>2019</b> , 12,	4.3	2
49	A $K$ -Band High-Gain and Low-Noise Folded CMOS Mixer Using Current-Reuse and Cross-Coupled Techniques. <i>IEEE Access</i> , <b>2019</b> , 7, 133218-133226	3.5	9
48	A K-Band High-Gain LNA in 0.13- $\mu$ m RF CMOS <b>2019</b> ,		1
47	Strain engineering of chevron graphene nanoribbons. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 082501	2.5	5
46	Efficient Multispikes Learning for Spiking Neural Networks Using Probability-Modulated Timing Method. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , <b>2019</b> , 30, 1984-1997	10.3	9

45	A hardware friendly unsupervised memristive neural network with weight sharing mechanism. <i>Neurocomputing</i> , <b>2019</b> , 332, 193-202	5.4	19
44	SpikeCD: a parameter-insensitive spiking neural network with clustering degeneracy strategy. <i>Neural Computing and Applications</i> , <b>2019</b> , 31, 3933-3945	4.8	6
43	Activating impurity effect in edge nitrogen-doped chevron graphene nanoribbons. <i>Journal of Physics Communications</i> , <b>2018</b> , 2, 045028	1.2	6
42	A 28 GHz LNA using defected ground structure for 5G application. <i>Microwave and Optical Technology Letters</i> , <b>2018</b> , 60, 1067-1072	1.2	8
41	Micro-Strip Line 90° Phase Shifter with Double Ground Slots for D-Band Applications. <i>Journal of Circuits, Systems and Computers</i> , <b>2018</b> , 27, 1850192	0.9	1
40	Real-Time Multilead Convolutional Neural Network for Myocardial Infarction Detection. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2018</b> , 22, 1434-1444	7.2	77
39	Dielectric Engineering With the Environment Material in 2-D Semiconductor Devices. <i>IEEE Journal of the Electron Devices Society</i> , <b>2018</b> , 6, 325-331	2.3	3
38	Restraining Strategy of the Stone-Wales Defect Effect on Graphene Nanoribbon MOSFETs. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 1092-1095	4.4	9
37	Lossless medical image compression using geometry-adaptive partitioning and least square-based prediction. <i>Medical and Biological Engineering and Computing</i> , <b>2018</b> , 56, 957-966	3.1	9
36	A transport isolation by orbital hybridization transformation toward graphene nanoribbon-based nanostructure integration. <i>Nanotechnology</i> , <b>2018</b> , 29, 455704	3.4	1
35	Multiple-feature-branch convolutional neural network for myocardial infarction diagnosis using electrocardiogram. <i>Biomedical Signal Processing and Control</i> , <b>2018</b> , 45, 22-32	4.9	66
34	Graphene Nanoribbon Tunnel Field-Effect Transistor via Segmented Edge Saturation. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 2694-2701	2.9	16
33	Three-dimensional separate descendant-based SPIHT algorithm for fast compression of high-resolution medical image sequences. <i>IET Image Processing</i> , <b>2017</b> , 11, 80-87	1.7	12
32	Highly Sensitive Bilayer Phosphorene Nanoribbon Pressure Sensor Based on the Energy Gap Modulation Mechanism: A Theoretical Study. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 1313-1316	4.4	12
31	A Versatile and Accurate Compact Model of Memristor With Equivalent Resistor Topology. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 1367-1370	4.4	8
30	Confined state energies in AGNR semiconductor-semiconductor heterostructure. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2017</b> , 381, 319-322	2.3	1
29	Multi-valued logic design methodology with double negative differential resistance transistors. <i>Micro and Nano Letters</i> , <b>2017</b> , 12, 738-743	0.9	3
28	A Numerical Study on Graphene Nanoribbon Heterojunction Dual-Material Gate Tunnel FET. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 1354-1357	4.4	23

27	Novel Near-Lossless Compression Algorithm for Medical Sequence Images with Adaptive Block-Based Spatial Prediction. <i>Journal of Digital Imaging</i> , <b>2016</b> , 29, 706-715	5.3	13
26	The Dual Effects of Gate Dielectric Constant in Tunnel FETs. <i>IEEE Journal of the Electron Devices Society</i> , <b>2016</b> , 4, 445-450	2.3	10
25	Prior knowledge input neural network method for GFET description. <i>Journal of Computational Electronics</i> , <b>2016</b> , 15, 911-918	1.8	3
24	Adaptive digital ridgelet transform and its application in image denoising <b>2016</b> , 52, 45-54		9
23	Energy gap tunable graphene antidot nanoribbon MOSFET: A uniform multiscale analysis from band structure to transport properties. <i>Carbon</i> , <b>2016</b> , 101, 143-151	10.4	24
22	Scaling Effect of Phosphorene Nanoribbon - Uncovering the Origin of Asymmetric Current Transport. <i>Scientific Reports</i> , <b>2016</b> , 6, 38009	4.9	10
21	Novel Strategy of Edge Saturation Hamiltonian for Graphene Nanoribbon Devices. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 4514-4520	2.9	8
20	Effects of Fin shape on sub-10 nm FinFETs. <i>Journal of Computational Electronics</i> , <b>2015</b> , 14, 515-523	1.8	11
19	A Novel PNIN Barrier Controlled Tunnel FET. <i>Advanced Materials Research</i> , <b>2015</b> , 1096, 497-502	0.5	2
18	Band Structure Effects in Extremely Scaled Silicon Nanowire MOSFETs With Different Cross Section Shapes. <i>IEEE Transactions on Electron Devices</i> , <b>2015</b> , 62, 3547-3553	2.9	20
17	Negative differential resistance in graphene nanoribbon superlattice field-effect transistors. <i>Micro and Nano Letters</i> , <b>2015</b> , 10, 400-403	0.9	8
16	Cross-Sectional Shape Effects of Gate-All-Around Nanowire Field-Effect Transistors. <i>Journal of Computational and Theoretical Nanoscience</i> , <b>2015</b> , 12, 5171-5178	0.3	
15	Artificial Neural Network Based CNTFETs Modeling. <i>Applied Mechanics and Materials</i> , <b>2014</b> , 667, 390-395	0.3	2
14	Thin-film LDMOS on partial SOI with improved breakdown voltage and suppressed kink effect. <i>International Journal of Electronics</i> , <b>2014</b> , 101, 37-49	1.2	3
13	A Novel Barrier Controlled Tunnel FET. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 798-800	4.4	45
12	Fast reconstruction with adaptive sampling in block compressed imaging. <i>IEICE Electronics Express</i> , <b>2014</b> , 11, 20140056-20140056	0.5	4
11	Hardware efficient architecture for compressed imaging. <i>IEICE Electronics Express</i> , <b>2014</b> , 11, 20140562-20140562		5
10	High Precision Multicolorimetric Pyrometer With a Novel Photoelectric MOSFET. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2014</b> , 63, 680-686	5.2	1

9	SVM-based synthetic fingerprint discrimination algorithm and quantitative optimization strategy. <i>PLoS ONE</i> , <b>2014</b> , 9, e111099	3.7	4
8	The effects of elliptical gate cross section on carbon nanotube gate-all-around field effect transistor <b>2013</b> ,		1
7	Effects of vacancy defects on graphene nanoribbon field effect transistor. <i>Micro and Nano Letters</i> , <b>2013</b> , 8, 816-821	0.9	27
6	. <i>IEEE Transactions on Electron Devices</i> , <b>2012</b> , 59, 1131-1136	2.9	25
5	Effect of silicon window polarity on partial-SOI LDMOSFETs. <i>Micro and Nano Letters</i> , <b>2012</b> , 7, 628	0.9	4
4	An Implementation of SOPC-Based Neural Monitoring System. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2012</b> , 61, 2469-2475	5.2	2
3	High-Performance FPGA Implementation of Discrete Wavelet Transform for Image Processing <b>2011</b> ,		4
2	High-Order Element Effects of the Green's Function in Quantum Transport Simulation of Nanoscale Devices. <i>IEEE Transactions on Electron Devices</i> , <b>2009</b> , 56, 3106-3114	2.9	5
1	A novel photoelectric MOSFET with AC output under constant illumination. <i>Optical and Quantum Electronics</i> , <b>2009</b> , 41, 795-803	2.4	1