

# Pinaki Mazumder

## List of Publications by Year in descending order

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Version: 2024-02-01

71  
papers

4,574  
citations

393982

19  
h-index

344852

36  
g-index

80  
all docs

80  
docs citations

80  
times ranked

5082  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanoscale Memristor Device as Synapse in Neuromorphic Systems. Nano Letters, 2010, 10, 1297-1301.	4.5	3,507
2	CMOS and Memristor-Based Neural Network Design for Position Detection. Proceedings of the IEEE, 2012, 100, 2050-2060.	16.4	150
3	Large phase modulation of THz wave via an enhanced resonant active HEMT metasurface. Nanophotonics, 2018, 8, 153-170.	2.9	75
4	Self-Controlled Writing and Erasing in a Memristor Crossbar Memory. IEEE Nanotechnology Magazine, 2011, 10, 1454-1463.	1.1	66
5	Memristor-based RRAM with applications. Science China Information Sciences, 2012, 55, 1446-1460.	2.7	53
6	Dual-band refractometric terahertz biosensing with intense wave-matter-overlap microfluidic channel. Biomedical Optics Express, 2019, 10, 3789.	1.5	50
7	Learning in Memristor Crossbar-Based Spiking Neural Networks Through Modulation of Weight-Dependent Spike-Timing-Dependent Plasticity. IEEE Nanotechnology Magazine, 2018, 17, 520-532.	1.1	47
8	Evolution map of the memristor: from pure capacitive state to resistive switching state. Nanoscale, 2019, 11, 17222-17229.	2.8	45
9	Tunneling-Based Cellular Nonlinear Network Architectures for Image Processing. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2009, 17, 487-495.	2.1	43
10	Accelerated Chip-Level Thermal Analysis Using Multilayer Green's Function. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2007, 26, 325-344.	1.9	36
11	Online Supervised Learning for Hardware-Based Multilayer Spiking Neural Networks Through the Modulation of Weight-Dependent Spike-Timing-Dependent Plasticity. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 4287-4302.	7.2	35
12	Terahertz Dual-Polarization Beam Splitter Via an Anisotropic Matrix Metasurface. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 491-497.	2.0	32
13	Terahertz Quantum Cryptography. IEEE Journal on Selected Areas in Communications, 2020, 38, 483-495.	9.7	30
14	Spoof Plasmon Interconnects Communications Beyond RC Limit. IEEE Transactions on Communications, 2019, 67, 599-610.	4.9	29
15	Bio-Sensing by Mach-Zehnder Interferometer Comprising Doubly-Corrugated Spoofed Surface Plasmon Polariton (DC-SSPP) Waveguide. IEEE Transactions on Terahertz Science and Technology, 2012, 2, 460-466.	2.0	27
16	Analysis of Doubly Corrugated Spoof Surface Plasmon Polariton (DC-SSPP) Structure With Sub-Wavelength Transmission at THz Frequencies. IEEE Transactions on Terahertz Science and Technology, 2012, 2, 345-354.	2.0	24
17	Electrodynamics of spoof plasmons in periodically corrugated waveguides. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160616.	1.0	24
18	Spoof Surface Plasmon Polariton Beam Splitter. IEEE Transactions on Terahertz Science and Technology, 2016, 6, 832-839.	2.0	24

#	ARTICLE	IF	CITATIONS
19	A Drift-Tolerant Read/Write Scheme for Multilevel Memristor Memory. IEEE Nanotechnology Magazine, 2017, 16, 1016-1027.	1.1	24
20	Straintronics-based magnetic tunneling junction: Dynamic and static behavior analysis and material investigation. Applied Physics Letters, 2014, 104, .	1.5	18
21	Fault Modeling and Parallel Testing for 1T1M Memory Array. IEEE Nanotechnology Magazine, 2018, 17, 437-451.	1.1	18
22	Dynamic Pinning Synchronization of Fuzzy-Dependent-Switched Coupled Memristive Neural Networks With Mismatched Dimensions on Time Scales. IEEE Transactions on Fuzzy Systems, 2022, 30, 779-793.	6.5	17
23	A fractional phase-coding strategy for terahertz beam patterning on digital metasurfaces. Optics Express, 2020, 28, 6395.	1.7	17
24	THz Polarizer Controller Based on Cylindrical Spoof Surface Plasmon Polariton (C-SSPP). IEEE Transactions on Terahertz Science and Technology, 2015, 5, 556-563.	2.0	16
25	Straintronics-Based True Random Number Generator for High-Speed and Energy-Limited Applications. IEEE Transactions on Magnetics, 2016, 52, 1-9.	1.2	14
26	Hardware-Friendly Actor-Critic Reinforcement Learning Through Modulation of Spike-Timing-Dependent Plasticity. IEEE Transactions on Computers, 2017, 66, 299-311.	2.4	14
27	An Equivalent Circuit Modeling of an Equispaced Metallic Nanoparticles (MNPs) Plasmon Wire. IEEE Nanotechnology Magazine, 2009, 8, 412-418.	1.1	13
28	Image Processing by a Programmable Grid Comprising Quantum Dots and Memristors. IEEE Nanotechnology Magazine, 2013, 12, 879-887.	1.1	13
29	Memristor based STDP learning network for position detection. , 2010, , .		12
30	A Low-Power Hardware Architecture for On-Line Supervised Learning in Multi-Layer Spiking Neural Networks. , 2018, , .		11
31	Terahertz Switch Based on Waveguide-Cavity-Waveguide Comprising Cylindrical Spoof Surface Plasmon Polariton. IEEE Transactions on Electron Devices, 2015, 62, 1312-1318.	1.6	10
32	Efficient Modeling of Transmission Lines With Electromagnetic Wave Coupling by Using the Finite Difference Quadrature Method. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2007, 15, 1289-1302.	2.1	9
33	Terahertz Beam Steering With Doped GaAs Phase Modulator and a Design of Spatial-Resolved High-Speed Terahertz Analog-to-Digital Converter. IEEE Transactions on Electron Devices, 2014, 61, 2195-2202.	1.6	9
34	Energy-Efficient Hardware Architecture of Self-Organizing Map for ECG Clustering in 65-nm CMOS. IEEE Transactions on Circuits and Systems II: Express Briefs, 2017, 64, 1097-1101.	2.2	9
35	Effect of temperature variations and thermal noise on the static and dynamic behavior of straintronics devices. Journal of Applied Physics, 2015, 118, .	1.1	7
36	Metamaterial sensor platforms for Terahertz DNA sensing. , 2013, , .		6

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37	Towards developing a compact model for magnetization switching in straintronics magnetic random access memory devices. Journal of Applied Physics, 2016, 120, .	1.1	6
38	Threshold Read Method for Multi-bit Memristive Crossbar Memory. , 2011, , .		5
39	Programmable quantum-dots memristor based architecture for image processing. , 2012, , .		5
40	Multi-purpose neuro-architecture with memristors. , 2011, , .		4
41	A Scalable Low-Power Reconfigurable Accelerator for Action-Dependent Heuristic Dynamic Programming. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 1897-1908.	3.5	3
42	Comparison of FFT/IFFT Designs Utilizing Different Low Power Techniques. , 2012, , .		2
43	A Reconfigurable Interconnect Technology based on Spoof Plasmon. , 2019, , .		2
44	A High-Precision THz Beam Steering Array Applied 2-bit Non-uniform Coding Strategy by Fractionally Dividing the Phase Gradient Distribution. , 2019, , .		2
45	Ultra low-power filter bank for hearing aid speech processor. , 2012, , .		1
46	A low-power reconfigurable CMOS power amplifier for wireless sensor network applications. , 2014, , .		1
47	THz analog to digital converter using single sided spoof surface plasmon polariton waveguide. , 2016, , .		1
48	Ka-band relativistic diffraction generator with a tapered coaxial Bragg reflector. AIP Advances, 2017, 7, 115020.	0.6	1
49	Fano-resonance based metamaterial THz sensor. , 2018, , .		1
50	Broadband and High-efficiency Circular-polarized Terahertz Frequency Scanning Metasurface. , 2019, , .		1
51	Reformative EIT Inspired Ultra-sensitive Terahertz Sensing on Micro-volumetric Microfluidic Metamaterial. , 2019, , .		1
52	Process Variation in Spoof Plasmon Interconnect: Consequences and Compensations. , 2020, , .		1
53	The Guiding Mechanism of Nonradiative Surface Plasmon (SP) Energy Transfer Along the Metallic Nanowire. , 2008, , .		0
54	An accurate interconnect thermal model using equivalent transmission line circuit. , 2009, , .		0

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55	One-Dimensional Surface Plasmon Photonic Crystal Slab (SPPCS) for a Nanophotodiode. IEEE Nanotechnology Magazine, 2010, 9, 470-473.	1.1	0
56	Nanopipelining of NML using multiferroic single-domain nanomagnets. , 2011, , .		0
57	Guest Editors' Introduction: Special Section on Chips and Architectures for Emerging Technologies and Applications. IEEE Transactions on Computers, 2011, 60, 450-451.	2.4	0
58	Spoofed surface plasmon Mach-Zehnder interferometer (MZI) structure for THz bio-sensing applications. , 2012, , .		0
59	Iterative architecture for value iteration using memristors. , 2014, , .		0
60	Spatial-resolved high-speed THz analog-to-digital convertor comprising phase modulated beam steering architecture. , 2014, , .		0
61	Dynamic analysis of winner-take-all neural networks with global inhibitory feedback. , 2015, , .		0
62	A High-Gain and Low-Profile Terahertz Corrugated Antenna. , 2018, , .		0
63	Terahertz Quadruple-Band Switching Polarization Converter Based on HEMT - Embedded Net-Grid Metasurface. , 2018, , .		0
64	Electrically Discretized Sub-terahertz Phase Shifter Based on Novel Independent Phase Delay Meta-atoms. , 2019, , .		0
65	Broadband Achromatic Metasurface Devices. , 2019, , .		0
66	Terahertz Microfluidic Biosensing Platform Based on Intense Wave-matter-interaction Channels. , 2019, , .		0
67	Terahertz 1-bit digital dynamic phase programmable metasurface based on AlGaIn/GaN heterostructure. , 2019, , .		0
68	Terahertz broadband independent electrically tuned phase-shifter based on metamaterial with mutual-coupling magnetic resonance. , 2019, , .		0
69	Terahertz Broadband Linear-to-Circular Polarization Deflection Based on a Birefringent Reflective Metasurface. , 2019, , .		0
70	Sensitive Terahertz Phase Modulation via a Co-Planar HEMT-Switched LC-Dipole Resonant Metasurface Under Low 2DEG Carrier Concentrations. , 2019, , .		0
71	Broadband Nonuniform Terahertz Multimode Conversion Series with Compactness and Pure Pattern. Journal of Infrared, Millimeter, and Terahertz Waves, 2022, 43, 150-164.	1.2	0