

Donhee Ham

List of Publications by Year in descending order

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73
papers

4,148
citations

201674

27
h-index

214800

47
g-index

79
all docs

79
docs citations

79
times ranked

5489
citing authors

#	ARTICLE	IF	CITATIONS
1	A crossbar array of magnetoresistive memory devices for in-memory computing. Nature, 2022, 601, 211-216.	27.8	214
2	Multi-parametric functional imaging of cell cultures and tissues with a CMOS microelectrode array. Lab on A Chip, 2022, 22, 1286-1296.	6.0	20
3	A 200 x 256 Image Sensor Heterogeneously Integrating a 2D Nanomaterial-Based Photo-FET Array and CMOS Time-to-Digital Converters. , 2022, , .		5
4	Synthesis of High-Performance Monolayer Molybdenum Disulfide at Low Temperature. Small Methods, 2021, 5, e2000720.	8.6	27
5	Neuromorphic electronics based on copying and pasting the brain. Nature Electronics, 2021, 4, 635-644.	26.0	94
6	A nanoelectrode array for obtaining intracellular recordings from thousands of connected neurons. Nature Biomedical Engineering, 2020, 4, 232-241.	22.5	171
7	Portable NMR with Parallelism. Analytical Chemistry, 2020, 92, 2112-2120.	6.5	28
8	An Atomically Thin Optoelectronic Machine Vision Processor. Advanced Materials, 2020, 32, e2002431.	21.0	111
9	Extracellular recording of direct synaptic signals with a CMOS-nanoelectrode array. Lab on A Chip, 2020, 20, 3239-3248.	6.0	17
10	The Design of a CMOS Nanoelectrode Array With 4096 Current-Clamp/Voltage-Clamp Amplifiers for Intracellular Recording/Stimulation of Mammalian Neurons. IEEE Journal of Solid-State Circuits, 2020, 55, 2567-2582.	5.4	23
11	Vertical MoS ₂ Double-Layer Memristor with Electrochemical Metallization as an Atomic-Scale Synapse with Switching Thresholds Approaching 100 mV. Nano Letters, 2019, 19, 2411-2417.	9.1	288
12	Electrical Solitons for Microwave Systems: Harmonizing Nonlinearity and Dispersion with Nonlinear Transmission Line. IEEE Microwave Magazine, 2019, 20, 123-134.	0.8	10
13	CMOS interface with biological molecules and cells : Invited review paper. , 2019, , .		1
14	CMOS interface with biological molecules and cells. , 2019, , .		3
15	Optimizing Nanoelectrode Arrays for Scalable Intracellular Electrophysiology. Accounts of Chemical Research, 2018, 51, 600-608.	15.6	78
16	Micro-NMR on CMOS for Biomolecular Sensing. , 2018, , 101-132.		4
17	CMOS electronics probe inside a cellular network " Invited review paper. , 2018, , .		1
18	CMOS nanoelectrode array for all-electrical intracellular electrophysiological imaging. Nature Nanotechnology, 2017, 12, 460-466.	31.5	212

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19	Gigahertz Electromagnetic Structures via Direct Ink Writing for Radio-Frequency Oscillator and Transmitter Applications. <i>Advanced Materials</i> , 2017, 29, 1605198.	21.0	86
20	All-Electrical Graphene DNA Sensor Array. <i>Methods in Molecular Biology</i> , 2017, 1572, 169-187.	0.9	1
21	Integrated CMOS spectrometer for multi-dimensional NMR spectroscopy. , 2017, , .		3
22	Optimization of CMOS-ISFET-Based Biomolecular Sensing: Analysis and Demonstration in DNA Detection. <i>IEEE Transactions on Electron Devices</i> , 2016, , 1-8.	3.0	28
23	Plasmonic mass and Johnson-Nyquist noise. <i>Nanotechnology</i> , 2015, 26, 354002.	2.6	2
24	Symmetry Engineering of Graphene Plasmonic Crystals. <i>Nano Letters</i> , 2015, 15, 5001-5009.	9.1	13
25	CHAPTER 6. Hardware Developments: Handheld NMR Systems for Biomolecular Sensing. <i>New Developments in NMR</i> , 2015, , 158-182.	0.1	1
26	High-dimensional chaos from self-sustained collisions of solitons. <i>Applied Physics Letters</i> , 2014, 104, 244109.	3.3	2
27	Far-Infrared Graphene Plasmonic Crystals for Plasmonic Band Engineering. <i>Nano Letters</i> , 2014, 14, 2479-2484.	9.1	67
28	Scalable NMR spectroscopy with semiconductor chips. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 11955-11960.	7.1	102
29	Electrophoretic and field-effect graphene for all-electrical DNA array technology. <i>Nature Communications</i> , 2014, 5, 4866.	12.8	109
30	Measurement of collective dynamical mass of Dirac fermions in graphene. <i>Nature Nanotechnology</i> , 2014, 9, 594-599.	31.5	53
31	Plasmonics with two-dimensional conductors. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014, 372, 20130104.	3.4	19
32	Small NMR biomolecular sensors. <i>Solid-State Electronics</i> , 2013, 84, 13-21.	1.4	27
33	Two-path solid-state interferometry using ultra-subwavelength two-dimensional plasmonic waves. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	16
34	Solid-state and biological systems interface. , 2012, , .		0
35	Solid-State and biological systems interface. , 2012, , .		1
36	A 2.9-mW 11-b 20-MS/s pipelined ADC with dual-mode-based digital background calibration. , 2012, , .		11

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37	A Newtonian approach to extraordinarily strong negative refraction. <i>Nature</i> , 2012, 488, 65-69.	27.8	34
38	Time-Domain CMOS Temperature Sensors With Dual Delay-Locked Loops for Microprocessor Thermal Monitoring. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2012, 20, 1590-1601.	3.1	75
39	Ultra-Subwavelength Two-Dimensional Plasmonic Circuits. <i>Nano Letters</i> , 2012, 12, 2272-2277.	9.1	62
40	Palm NMR and 1-Chip NMR. <i>IEEE Journal of Solid-State Circuits</i> , 2011, 46, 342-352.	5.4	121
41	Guest Editorial"Selected Papers From the 2011 IEEE International Solid-State Circuits Conference (ISSCC). <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2011, 5, 501-502.	4.0	0
42	Fully monolithic 18.7GHz 16Ps GaAs mode-locked oscillators. , 2011, , .		2
43	Stretchable microfluidic electric circuit applied for radio frequency antenna. , 2011, , .		9
44	Phase Noise of Distributed Oscillators. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2010, 58, 2105-2117.	4.6	16
45	Stretchable Microfluidic Radiofrequency Antennas. <i>Advanced Materials</i> , 2010, 22, 2749-2752.	21.0	385
46	Silicon RF NMR biomolecular sensor - review. , 2010, , .		1
47	Palm NMR and one-chip NMR. , 2010, , .		17
48	Vertically integrated, three-dimensional nanowire complementary metal-oxide-semiconductor circuits. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 21035-21038.	7.1	116
49	Dual-DLL-based CMOS all-digital temperature sensor for microprocessor thermal monitoring. , 2009, , .		34
50	Reflection Soliton Oscillator. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2009, 57, 2344-2353.	4.6	36
51	Introduction to the Special Issue on the 2008 IEEE International Solid-State Circuits Conference. <i>IEEE Journal of Solid-State Circuits</i> , 2009, 44, 3-6.	5.4	2
52	CMOS RF Biosensor Utilizing Nuclear Magnetic Resonance. <i>IEEE Journal of Solid-State Circuits</i> , 2009, 44, 1629-1643.	5.4	97
53	Chip" NMR biosensor for detection and molecular analysis of cells. <i>Nature Medicine</i> , 2008, 14, 869-874.	30.7	561
54	Fast-Lock Hybrid PLL Combining Fractional- N and Integer- N Modes of Differing Bandwidths. <i>IEEE Journal of Solid-State Circuits</i> , 2008, 43, 379-389.	5.4	82

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55	Digital Background Calibration in Pipelined ADCs Using Commutated Feedback Capacitor Switching. IEEE Transactions on Circuits and Systems II: Express Briefs, 2008, 55, 877-881.	3.0	25
56	Authors' Response [to comments on "On the self-generation of electrical soliton pulses"]. IEEE Journal of Solid-State Circuits, 2008, 43, 1492-1493.	5.4	0
57	Surpassing Tradeoffs by Separation: Examples in Frequency Generation Circuits. , 2008, , .		1
58	Gigahertz surface acoustic wave generation on ZnO thin films deposited by radio frequency magnetron sputtering on III-V semiconductor substrates. Journal of Vacuum Science & Technology B, 2008, 26, 1848-1851.	1.3	25
59	CMOS Mini Nuclear Magnetic Resonance System and its Application for Biomolecular Sensing. , 2008, , .		23
60	Soliton and Nonlinear Wave Electronics. , 2008, , 159-184.		2
61	Picosecond electrical soliton oscillators & THz electronics. , 2007, , .		1
62	TD: Trends in Wireless Systems. , 2007, , .		0
63	All-Digital Dynamic Self-Detection and Self-Compensation of Static Phase Offsets in Charge-Pump PLLs. , 2007, , .		5
64	Fast-locking Hybrid PLL Synthesizer Combining Integer & Fractional Divisions. , 2007, , .		8
65	Integrated cell manipulation systemâ€™ CMOS/microfluidic hybrid. Lab on A Chip, 2007, 7, 331-337.	6.0	136
66	The silicon that Moves and Feels Small Living Things. IEEE Solid-State Circuits Society Newsletter, 2007, 12, 4-9.	0.0	3
67	CMOS-based Magnetic Cell Manipulation System. Integrated Circuits and Systems, 2007, , 103-144.	0.2	1
68	Ordered and chaotic electrical solitons: communication perspectives. , 2006, 44, 126-135.		17
69	Fast-locking Integer/Fractional-N Hybrid PLL Frequency Synthesizer. , 2006, , .		0
70	Passive&Active Control of Regenerative Standing&Soliton Waves. , 2006, , .		1
71	CMOS Meets Bio. , 2006, , .		2
72	High-speed integrated nanowire circuits. Nature, 2005, 434, 1085-1085.	27.8	305

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73	Virtual damping and einstein relation in oscillators. IEEE Journal of Solid-State Circuits, 2003, 38, 407-418.	5.4	85