

Martin A Brooke

List of Publications by Year in descending order

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70
papers

850
citations

471509

17
h-index

580821

25
g-index

70
all docs

70
docs citations

70
times ranked

497
citing authors

#	ARTICLE	IF	CITATIONS
1	A floating-gate MOSFET with tunneling injector fabricated using a standard double-polysilicon CMOS process. IEEE Electron Device Letters, 1991, 12, 111-113.	3.9	73
2	The heterogeneous integration of optical interconnections into integrated microsystems. IEEE Journal of Selected Topics in Quantum Electronics, 2003, 9, 350-360.	2.9	67
3	Identification and control of induction motor stator currents using fast on-line random training of a neural network. IEEE Transactions on Industry Applications, 1997, 33, 697-704.	4.9	51
4	A fast on-line neural-network training algorithm for a rectifier regulator. IEEE Transactions on Power Electronics, 1998, 13, 366-371.	7.9	47
5	Progress in Chip-Scale Photonic Sensing. IEEE Transactions on Biomedical Circuits and Systems, 2009, 3, 202-211.	4.0	44
6	8 x 8 array of thin-film photodetectors vertically electrically interconnected to silicon circuitry. IEEE Photonics Technology Letters, 1995, 7, 1168-1170.	2.5	40
7	Integrated detectors for embedded optical interconnections on electrical boards, modules, and integrated circuits. IEEE Journal of Selected Topics in Quantum Electronics, 2002, 8, 1427-1434.	2.9	38
8	Vertical electrical interconnection of compound semiconductor thin-film devices to underlying silicon circuitry. IEEE Photonics Technology Letters, 1992, 4, 1003-1006.	2.5	31
9	Noninvasive Material Thickness Detection by Aerosol Jet Printed Sensors Enhanced Through Metallic Carbon Nanotube Ink. IEEE Sensors Journal, 2017, 17, 4612-4618.	4.7	30
10	RTD/CMOS nanoelectronic circuits: thin-film InP-based resonant tunneling diodes integrated with CMOS circuits. IEEE Electron Device Letters, 1999, 20, 119-122.	3.9	29
11	A CMOS feedforward neural-network chip with on-chip parallel learning for oscillation cancellation. IEEE Transactions on Neural Networks, 2002, 13, 1178-1186.	4.2	28
12	A three-dimensional high-throughput architecture using through-wafer optical interconnect. Journal of Lightwave Technology, 1995, 13, 1085-1092.	4.6	23
13	Ratcheting quasi-ballistic electrons in silicon geometric diodes at room temperature. Science, 2020, 368, 177-180.	12.6	22
14	Optical interconnections on electrical boards using embedded active optoelectronic components. IEEE Journal of Selected Topics in Quantum Electronics, 2003, 9, 465-476.	2.9	21
15	A diffuse reflectance spectral imaging system for tumor margin assessment using custom annular photodiode arrays. Biomedical Optics Express, 2012, 3, 3211.	2.9	20
16	Communication through stacked silicon circuitry using integrated thin film InP-based emitters and detectors. IEEE Photonics Technology Letters, 1995, 7, 1028-1030.	2.5	19
17	Microsystem optoelectronic integration for mixed multisignal systems. IEEE Journal of Selected Topics in Quantum Electronics, 2000, 6, 1231-1239.	2.9	19
18	High-Speed Large-Area Inverted InGaAs Thin-Film Metal-Semiconductor-Metal Photodetectors. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 686-693.	2.9	19

#	ARTICLE	IF	CITATIONS
19	Stacked silicon CMOS circuits with a 40-Mb/s through-silicon optical interconnect. IEEE Photonics Technology Letters, 1998, 10, 606-608.	2.5	18
20	Smart CMOS focal plane arrays: a Si CMOS detector array and sigma-delta analog-to-digital converter imaging system. IEEE Journal of Selected Topics in Quantum Electronics, 1999, 5, 296-305.	2.9	17
21	Board-Level Optical Interconnection and Signal Distribution Using Embedded Thin-Film Optoelectronic Devices. Journal of Lightwave Technology, 2004, 22, 2111-2118.	4.6	17
22	A single-fiber bidirectional optical link using colocated emitters and detectors. IEEE Photonics Technology Letters, 1996, 8, 1385-1387.	2.5	16
23	Statistically based parametric yield prediction for integrated circuits. IEEE Transactions on Semiconductor Manufacturing, 1997, 10, 445-458.	1.7	14
24	The heterogenous integration of GaN thin-film metal-semiconductor-metal photodetectors onto silicon. IEEE Photonics Technology Letters, 2002, 14, 185-187.	2.5	14
25	Substrate-embedded and flip-chip-bonded photodetector polymer-based optical interconnects: analysis, design, and performance. Journal of Lightwave Technology, 2003, 21, 2382-2394.	4.6	14
26	A programmable piecewise linear large-signal CMOS amplifier. IEEE Journal of Solid-State Circuits, 1993, 28, 84-89.	5.4	13
27	Extraction of Passive Device Model Parameters Using Genetic Algorithms. ETRI Journal, 2000, 22, 38-46.	2.0	13
28	A 100 Mbps, LED Through-Wafer Optoelectronic Link for Multicomputer Interconnection Networks. Journal of Parallel and Distributed Computing, 1997, 41, 3-19.	4.1	10
29	Integrated planar lightwave bio/chem OEIC sensors on Si CMOS circuits. , 2005, , .		10
30	Miniature spectral imaging device for wide-field quantitative functional imaging of the morphological landscape of breast tumor margins. Journal of Biomedical Optics, 2017, 22, 026007.	2.6	10
31	A three-layer 3D silicon system using through-Si vertical optical interconnections and Si CMOS hybrid building blocks. IEEE Journal of Selected Topics in Quantum Electronics, 1999, 5, 276-286.	2.9	7
32	Scaleable CMOS Current-Mode Preamplifier Design for an Optical Receiver. Analog Integrated Circuits and Signal Processing, 1997, 12, 133-144.	1.4	6
33	Low voltage electrophoresis on a CMOS chip. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	6
34	Statistical Modeling of 3D Parallel-Plate Embedded Capacitors Using Monte Carlo Simulation. ETRI Journal, 2001, 23, 23-32.	2.0	5
35	Fast solution of nonlinear equations using parallel analog hardware. Analog Integrated Circuits and Signal Processing, 1994, 6, 135-156.	1.4	4
36	<title>Silicon CMOS optical receiver circuits with integrated thin-film compound semiconductor detectors</title>. , 1995, 2400, 335.		4

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37	Custom annular photodetector arrays for breast cancer margin assessment using diffuse reflectance spectroscopy. , 2011, , .		4
38	<title>Hybrid optically interconnected microprocessor: an InP I-MSM integrated onto a mixed-signal CMOS analog optical receiver with a digital CMOS microprocessor</title>. , 2000, , .		3
39	Diffuse reflectance spectral imaging for breast tumor margin assessment. , 2012, , .		3
40	<title>Three-dimensional, massively parallel, optically interconnected silicon computational hardware and architectures for high-speed IR scene generation</title>. , 1995, , .		3
41	Using multivariate nested distributions to model semiconductor manufacturing processes. IEEE Transactions on Semiconductor Manufacturing, 1999, 12, 53-65.	1.7	2
42	Integration of Si-CMOS embedded photo detector array and mixed signal processing system with embedded optical waveguide input. , 2004, 5353, 20.		2
43	Mixed-domain simulation of electrophoretic DNA separation for CMOS IC design. , 2008, , .		2
44	A floating gate CMOS signal conditioning circuit for nonlinearity correction. Analog Integrated Circuits and Signal Processing, 1993, 4, 21-29.	1.4	1
45	Symbolic substitution system for data compression. Applied Optics, 1993, 32, 752.	2.1	1
46	<title>Smart detectors: devices, integration, circuits, and systems</title>. , 1995, , .		1
47	Improvement in bit-error rate for optoelectronic multicomputer interconnection networks using cyclic redundancy code error detection. IEEE Photonics Technology Letters, 1997, 9, 848-850.	2.5	1
48	InGaAs MSM photodetectors modeling using DOE analysis. , 2004, , .		1
49	High-speed optical interconnection using thin film PDs embedded in polymer waveguides on electrical boards. , 2004, , .		1
50	CMOS Digital Pixel Sensor with Multiple Reference, Multiple Sampling Dynamic Range Enhancement. , 2006, , .		1
51	General purpose serial processor for delta sigma ADC digital filter. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	1
52	Chip-Scale Sensor System Integration for Portable Health Monitoring. Anesthesia and Analgesia, 2007, 105, S42-S47.	2.2	1
53	Integrating Sensing and Information Processing in an Electrical and Computer Engineering undergraduate curriculum. , 2009, , .		1
54	An ocean sensor for measuring the seawater electrochemical response of 8 metals referenced to zinc, for determining ocean pH.. , 2015, , .		1

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55	Mixed Signal Hybrid OEICs: An InP I-MSM Integrated Onto a CMOS Analog Optical Receiver with a Digital CMOS Microprocessor. , 1999, , .		1
56	<title>Manufacturable multimaterial integration: compound semiconductor devices bonded to silicon circuitry</title>. , 1995, 2524, 152.		0
57	Building collaborative teams for multidisciplinary educational projects in optoelectronics. , 2000, 3831, 25.		0
58	Optoelectronic Microsystems Integration. Optics and Photonics News, 2003, 14, 26.	0.5	0
59	Improved measurement-based modeling of inverted-MSM photodetectors using on-wafer calibration structures. , 2004, , .		0
60	Planar lightwave integrated circuits integrated with thin film active optoelectronic devices. , 2005, 5729, 192.		0
61	High speed optical signal distribution using fully embedded thin film MSM photodetectors in multimode interference couplers. , 2005, , .		0
62	Ultra Thin-Film MSM Photodetector with Low Parasitic Capacitance. , 2006, , .		0
63	Integrator Bound-Based Nonlinear Decoder for Delta-Sigma Modulator. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	0
64	Using neural net architectures in analog circuits. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	0
65	Chip scale integrated planar photonics. Proceedings of SPIE, 2008, , .	0.8	0
66	Multivariate calibration on a low transistor-count sensor signal processor. , 2008, , .		0
67	A custom wide-field spectral imager for breast cancer margin assessment. , 2011, , .		0
68	Organic Planar Lightwave Integrated Circuits For Sensing and Interconnections. , 2005, , .		0
69	Heterogeneous Integration of Optical Interconnects. , 2005, , .		0
70	Monolithic Device Models. , 2018, , 1-1-1-145.		0