

# 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	Ratcheting quasi-ballistic electrons in silicon geometric diodes at room temperature. Science, 2020, 368, 177-180.	12.6	22
2	Monolithic Device Models. , 2018, , 1-1-1-145.		0
3	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
4	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
5	An ocean sensor for measuring the seawater electrochemical response of 8 metals referenced to zinc, for determining ocean pH.. , 2015, , .		1
6	A diffuse reflectance spectral imaging system for tumor margin assessment using custom annular photodiode arrays. Biomedical Optics Express, 2012, 3, 3211.	2.9	20
7	Diffuse reflectance spectral imaging for breast tumor margin assessment. , 2012, , .		3
8	Custom annular photodetector arrays for breast cancer margin assessment using diffuse reflectance spectroscopy. , 2011, , .		4
9	A custom wide-field spectral imager for breast cancer margin assessment. , 2011, , .		0
10	Integrating Sensing and Information Processing in an Electrical and Computer Engineering undergraduate curriculum. , 2009, , .		1
11	Progress in Chip-Scale Photonic Sensing. IEEE Transactions on Biomedical Circuits and Systems, 2009, 3, 202-211.	4.0	44
12	Chip scale integrated planar photonics. Proceedings of SPIE, 2008, , .	0.8	0
13	Mixed-domain simulation of electrophoretic DNA separation for CMOS IC design. , 2008, , .		2
14	Multivariate calibration on a low transistor-count sensor signal processor. , 2008, , .		0
15	Using neural net architectures in analog circuits. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	0
16	General purpose serial processor for delta sigma ADC digital filter. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	1
17	Low voltage electrophoresis on a CMOS chip. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	6
18	Chip-Scale Sensor System Integration for Portable Health Monitoring. Anesthesia and Analgesia, 2007, 105, S42-S47.	2.2	1

#	ARTICLE	IF	CITATIONS
19	Ultra Thin-Film MSM Photodetector with Low Parasitic Capacitance. , 2006, , .		0
20	Integrator Bound-Based Nonlinear Decoder for Delta-Sigma Modulator. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	0
21	CMOS Digital Pixel Sensor with Multiple Reference, Multiple Sampling Dynamic Range Enhancement. , 2006, , .		1
22	Integrated planar lightwave bio/chem OEIC sensors on Si CMOS circuits. , 2005, , .		10
23	Planar lightwave integrated circuits integrated with thin film active optoelectronic devices. , 2005, 5729, 192.		0
24	High speed optical signal distribution using fully embedded thin film MSM photodetectors in multimode interference couplers. , 2005, , .		0
25	Organic Planar Lightwave Integrated Circuits For Sensing and Interconnections. , 2005, , .		0
26	Heterogeneous Integration of Optical Interconnects. , 2005, , .		0
27	High-Speed Large-Area Inverted InGaAs Thin-Film Metalâ€“Semiconductorâ€“Metal Photodetectors. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 686-693.	2.9	19
28	Board-Level Optical Interconnection and Signal Distribution Using Embedded Thin-Film Optoelectronic Devices. Journal of Lightwave Technology, 2004, 22, 2111-2118.	4.6	17
29	Integration of Si-CMOS embedded photo detector array and mixed signal processing system with embedded optical waveguide input. , 2004, 5353, 20.		2
30	Improved measurement-based modeling of inverted-MSM photodetectors using on-wafer calibration structures. , 2004, , .		0
31	InGaAs MSM photodetectors modeling using DOE analysis. , 2004, , .		1
32	High-speed optical interconnection using thin film PDs embedded in polymer waveguides on electrical boards. , 2004, , .		1
33	The heterogeneous integration of optical interconnections into integrated microsystems. IEEE Journal of Selected Topics in Quantum Electronics, 2003, 9, 350-360.	2.9	67
34	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
35	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
36	Optoelectronic Microsystems Integration. Optics and Photonics News, 2003, 14, 26.	0.5	0

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37	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
38	The heterogenous integration of GaN thin-film metal-semiconductor-metal photodetectors onto silicon. IEEE Photonics Technology Letters, 2002, 14, 185-187.	2.5	14
39	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
40	Statistical Modeling of 3D Parallel-Plate Embedded Capacitors Using Monte Carlo Simulation. ETRI Journal, 2001, 23, 23-32.	2.0	5
41	<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
42	Extraction of Passive Device Model Parameters Using Genetic Algorithms. ETRI Journal, 2000, 22, 38-46.	2.0	13
43	Building collaborative teams for multidisciplinary educational projects in optoelectronics. , 2000, 3831, 25.		0
44	Microsystem optoelectronic integration for mixed multisignal systems. IEEE Journal of Selected Topics in Quantum Electronics, 2000, 6, 1231-1239.	2.9	19
45	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
46	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
47	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
48	Using multivariate nested distributions to model semiconductor manufacturing processes. IEEE Transactions on Semiconductor Manufacturing, 1999, 12, 53-65.	1.7	2
49	Mixed Signal Hybrid OEICs: An InP I-MSM Integrated Onto a CMOS Analog Optical Receiver with a Digital CMOS Microprocessor. , 1999, , .		1
50	A fast on-line neural-network training algorithm for a rectifier regulator. IEEE Transactions on Power Electronics, 1998, 13, 366-371.	7.9	47
51	Stacked silicon CMOS circuits with a 40-Mb/s through-silicon optical interconnect. IEEE Photonics Technology Letters, 1998, 10, 606-608.	2.5	18
52	Statistically based parametric yield prediction for integrated circuits. IEEE Transactions on Semiconductor Manufacturing, 1997, 10, 445-458.	1.7	14
53	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
54	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

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55	Scaleable CMOS Current-Mode Preamplifier Design for an Optical Receiver. Analog Integrated Circuits and Signal Processing, 1997, 12, 133-144.	1.4	6
56	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
57	A single-fiber bidirectional optical link using colocated emitters and detectors. IEEE Photonics Technology Letters, 1996, 8, 1385-1387.	2.5	16
58	<title>Smart detectors: devices, integration, circuits, and systems</title>., 1995,, .		1
59	<title>Silicon CMOS optical receiver circuits with integrated thin-film compound semiconductor detectors</title>., 1995, 2400, 335.		4
60	<title>Manufacturable multimaterial integration: compound semiconductor devices bonded to silicon circuitry</title>., 1995, 2524, 152.		0
61	A three-dimensional high-throughput architecture using through-wafer optical interconnect. Journal of Lightwave Technology, 1995, 13, 1085-1092.	4.6	23
62	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
63	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
64	<title>Three-dimensional, massively parallel, optically interconnected silicon computational hardware and architectures for high-speed IR scene generation</title>., 1995,, .		3
65	Fast solution of nonlinear equations using parallel analog hardware. Analog Integrated Circuits and Signal Processing, 1994, 6, 135-156.	1.4	4
66	A floating gate CMOS signal conditioning circuit for nonlinearity correction. Analog Integrated Circuits and Signal Processing, 1993, 4, 21-29.	1.4	1
67	Symbolic substitution system for data compression. Applied Optics, 1993, 32, 752.	2.1	1
68	A programmable piecewise linear large-signal CMOS amplifier. IEEE Journal of Solid-State Circuits, 1993, 28, 84-89.	5.4	13
69	Vertical electrical interconnection of compound semiconductor thin-film devices to underlying silicon circuitry. IEEE Photonics Technology Letters, 1992, 4, 1003-1006.	2.5	31
70	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