

Mona Zaghloul

List of Publications by Year in descending order

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170
papers

2,483
citations

186265

28
h-index

243625

44
g-index

170
all docs

170
docs citations

170
times ranked

2483
citing authors

#	ARTICLE	IF	CITATIONS
1	Personal NO ₂ sensor demonstrates feasibility of in-home exposure measurements for pediatric asthma research and management. Journal of Exposure Science and Environmental Epidemiology, 2022, 32, 312-319.	3.9	6
2	High resolution beam switch antenna based on modified <sc>CRLH</sc> Butler matrix. Engineering Reports, 2021, 3, e12287.	1.7	7
3	Design of a Non-Reciprocal Reconfigurable Phase Shifter for Phased Array Applications. , 2021, , .		4
4	Nonreciprocal-Beam Phased-Array Antennas Based on Transistor-Loaded Phase Shifters. IEEE Transactions on Antennas and Propagation, 2021, 69, 7572-7581.	5.1	13
5	Integrated contact lens sensor system based on multifunctional ultrathin MoS ₂ transistors. Matter, 2021, 4, 969-985.	10.0	80
6	Plasmonic Sensing Studies of a Gas-Phase Cystic Fibrosis Marker in Moisture Laden Air. Sensors, 2021, 21, 3776.	3.8	3
7	Mobility Extraction in 2D Transition Metal Dichalcogenide Devicesâ€”Avoiding Contact Resistance Implicated Overestimation. Small, 2021, 17, e2100940.	10.0	14
8	Changes in Permittivity of the Piezoelectric Material PVDF as Functions of the Electrical Field and Temperature. Materials, 2021, 14, 5736.	2.9	4
9	A Compact Beam Steering Dielectric Resonator Antenna for Wireless Power Transfer. , 2021, , .		3
10	Non-Reciprocal Phased Array antenna. , 2021, , .		3
11	Human Body Specific Absorption Rate Reduction Employing a Compact Magneto-Dielectric AMC Structure for 5G Massive-MIMO Applications. Eng, 2021, 2, 501-511.	2.4	9
12	A Cloud-Connected NO ₂ and Ozone Sensor System for Personalized Pediatric Asthma Research and Management. IEEE Sensors Journal, 2020, 20, 15143-15153.	4.7	13
13	Enhancement of Photoemission on p-Type GaAs Using Surface Acoustic Waves. Sensors, 2020, 20, 2419.	3.8	6
14	Interface Electronics Design for Wireless Generation of Surface Acoustic Wave Utilized in Wearable Drug Delivery Application. , 2020, , .		0
15	Active Nonreciprocal Phase Shifter for Versatile Phased-Array Antennas and Metasurfaces. , 2020, , .		0
16	Generation and enhancement of surface acoustic waves on a highly doped p-type GaAs substrate. Nanoscale Advances, 2019, 1, 3537-3546.	4.6	5
17	Nonreciprocal Radiation Pattern Metasurface Transformer. , 2019, , .		5
18	An Artificial Intelligent Flexible Gas Sensor Based on Ultra-Large Area MoSe ₂ Nanosheet. , 2019, , .		7

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19	Miniaturized nanohole array based plasmonic sensor for the detection of acetone and ethanol with insights into the kinetics of adsorptive plasmonic sensing. <i>Nanoscale</i> , 2019, 11, 11922-11932.	5.6	14
20	Tuning the Polarity of MoTe ₂ FETs by Varying the Channel Thickness for Gas-Sensing Applications. <i>Sensors</i> , 2019, 19, 2551.	3.8	33
21	A Compact Output Power Combiner for Broadband Doherty Power Amplifiers. <i>Electronics (Switzerland)</i> , 2019, 8, 275.	3.1	4
22	Sensors: Development of a Cloud-Based Epidermal MoSe ₂ Device for Hazardous Gas Sensing (Adv. Funct. Mater. 18/2019). <i>Advanced Functional Materials</i> , 2019, 29, 1970122.	14.9	2
23	Discrimination of 1- and 2-Propanol by Using the Transient Current Change of a Semiconducting ZnFe ₂ O ₄ Chemiresistor. <i>ChemPlusChem</i> , 2019, 84, 387-391.	2.8	1
24	A wearable IoT aldehyde sensor for pediatric asthma research and management. <i>Sensors and Actuators B: Chemical</i> , 2019, 287, 584-594.	7.8	33
25	Development of a Cloud-Based Epidermal MoSe ₂ Device for Hazardous Gas Sensing. <i>Advanced Functional Materials</i> , 2019, 29, 1900138.	14.9	102
26	Wearable and Stationary Point-of-Care IoT Air Pollution Sensors for Pediatric Asthma Research and Management. , 2019, , .		3
27	Design and Fabrication of a Plasmonic Gas Sensor. , 2018, , .		2
28	Electronic Characteristics of MoSe ₂ and MoTe ₂ for Nanoelectronic Applications. , 2018, , .		0
29	Metal Organic Framework-Coated Optical VOC Gas Sensor. , 2018, , .		0
30	High Frequency SAW Resonator Design, Simulation, and Optimization with Applications to Chemical Gas Sensors. , 2018, , .		1
31	Highly Sensitive Wearable Piezoelectric Force Sensor With Quasi-Static Load Testing. <i>IEEE Sensors Journal</i> , 2018, 18, 9910-9918.	4.7	20
32	GeTe Phase Change Research at the US Army Research Laboratory. , 2018, , .		2
33	Control of polarity in multilayer MoTe ₂ field-effect transistors by channel thickness. , 2018, 10725, .		3
34	Enhancement in CMOS-MEMS Resonator for High Sensitive Temperature Sensing. <i>IEEE Sensors Journal</i> , 2017, 17, 598-603.	4.7	7
35	U-Shaped Ultrahigh Frequency Atmospheric Pressure Plasma Jet With Magnetic Loop Antenna. <i>IEEE Transactions on Plasma Science</i> , 2017, 45, 43-53.	1.3	1
36	Fabrication and characterization of humidity sensors based on CVD grown MoS ₂ thin film. , 2017, , .		3

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37	Design and simulation of nano plasmonic biosensors. , 2017, , .		1
38	Investigation of on-state power handling dependence on number of cycles for germanium telluride RF switches. , 2017, , .		7
39	Simulations of energy-bands bending effect and carriers transportation in semiconductor with propagating Surface Acoustic Waves. , 2016, , .		2
40	Germanium Telluride reconfigurable antennas. , 2016, , .		3
41	Simple broadband Gysel combiner with a single coupled line. , 2016, , .		3
42	An Antimony Selenide Molecular Ink for Flexible Broadband Photodetectors. Advanced Electronic Materials, 2016, 2, 1600182.	5.1	31
43	Gas Sensing with Bare and Graphene-covered Optical Nano-Antenna Structures. Scientific Reports, 2016, 6, 21287.	3.3	25
44	Simulations of properties of quantum dots and high-efficiency GaAs solar cells. , 2016, , .		1
45	The implementation of low-power and wide tuning range MEMS filters for communication applications. Radio Science, 2016, 51, 1636-1644.	1.6	3
46	Comparison between electric field for plasmonic dipole and bow-tie ONA structures. , 2016, , .		0
47	Plasma ionization under simulated ambient Mars conditions for quantification of methane by mass spectrometry. Analyst, The, 2016, 141, 2270-2277.	3.5	8
48	Tuning CMOS-MEMS resonators with embedded heater. , 2015, , .		1
49	Tuning In-Plane Fixed-Fixed Beam Resonators With Embedded Heater in CMOS Technology. IEEE Electron Device Letters, 2015, 36, 189-191.	3.9	12
50	Plasmonic nano-antenna application to chemical gas sensor. , 2014, , .		1
51	Modeling and simulation of InAs/GaAs quantum dot solar cells in SILVACO TCAD. , 2014, , .		7
52	Effect of rounding on the sensitivity of optical antennas based sensors. , 2014, , .		4
53	A 480MHz Band-Pass Sigma Delta Analog to Digital Modulator with Active Inductor Based Resonators. Lecture Notes in Electrical Engineering, 2014, , 1-11.	0.4	1
54	Rectangular cmos differential MAGFET biosensor for magnetic particle detection. IEEE Transactions on Magnetics, 2013, 49, 4052-4055.	2.1	3

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55	High sensitivity CMOS portable biosensor with flexible microfluidic integration. , 2013, , .		0
56	Flexible packaging of solid-state integrated circuit chips with elastomeric microfluidics. Scientific Reports, 2013, 3, .	3.3	83
57	Flexible packaging and integration of CMOS IC with elastomeric microfluidics. Proceedings of SPIE, 2013, , .	0.8	1
58	Review of nanoscale memristor devices as synapses in neuromorphic systems. , 2013, , .		10
59	GaN non-linear modeling for Ka band resistive mixer design. , 2013, , .		0
60	Biomedical sensor properties of flexible PolyVinylidene flouride. , 2013, , .		0
61	A 6 th order continuous time band-pass Sigma Delta Analog to Digital modulator with active inductor based resonators. , 2013, , .		0
62	Tuning nano antenna with graphene. , 2013, , .		1
63	Point-of-care early HIV diagnosis system on the CMOS & microfluidic hybrid platform. , 2012, , .		2
64	A Single-Photon Avalanche Diode in CMOS 0.5 μ m n-well process. , 2012, , .		1
65	94 GHz power amplifier device architecture in SiGe for active phased arrays. , 2012, , .		0
66	Circular MAGFET Design and SNR Optimization for Magnetic Bead Detection. IEEE Transactions on Magnetics, 2012, 48, 3851-3854.	2.1	9
67	A high resolution time-to-digital converter on FPGA for Time-Correlated Single Photon Counting. , 2012, , .		4
68	UV-Assisted Alcohol Sensing With Zinc Oxide-Functionalized Gallium Nitride Nanowires. IEEE Electron Device Letters, 2012, 33, 1075-1077.	3.9	8
69	A self-calibrating temperature independent model of a bi-axial piezoelectric MEMS tilt sensor. , 2012, , .		0
70	UV-assisted alcohol sensing using SnO ₂ functionalized GaN nanowire devices. Sensors and Actuators B: Chemical, 2012, 171-172, 499-507.	7.8	52
71	Class-A stacked SiGe HBT power amplifier at millimeter-wave. , 2011, , .		5
72	Optical bio sensor using graphene nano ribbons. , 2011, , .		0

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73	Single Photon Avalanche Diode in standard CMOS 0.5um technology. , 2011, , .		2
74	A 400 MHz delta-sigma modulator for bandpass IF digitization around 100 MHz with excess loop delay compensation. , 2011, , .		2
75	Nano-electromechanical storage element for a low power complimentary logic architecture using PZT relays. , 2011, , .		4
76	Development of a PZT MEMS Switch Architecture for Low-Power Digital Applications. Journal of Microelectromechanical Systems, 2011, 20, 1032-1042.	2.5	49
77	Low-power 3-bit piezoelectric MEMS analog to digital converter. , 2011, , .		8
78	Millimeter-Wave SiGe HBT High Voltage/High Power Architecture Implementation. IEEE Microwave and Wireless Components Letters, 2011, 21, 544-546.	3.2	6
79	RF oscillator implementation using integrated CMOS surface acoustic wave resonators. Analog Integrated Circuits and Signal Processing, 2011, 68, 33-42.	1.4	6
80	Compact optical microfluidic uric acid analysis system. Biosensors and Bioelectronics, 2011, 26, 4155-4161.	10.1	5
81	Irradiance dependence of photobleaching of resorufin. Journal of Photochemistry and Photobiology A: Chemistry, 2011, 217, 430-432.	3.9	8
82	High power density SiGe millimeter-wave power amplifiers. International Journal of Microwave and Wireless Technologies, 2011, 3, 615-620.	1.9	0
83	A SAW-based liquid sensor with identification for wireless applications. , 2010, , .		1
84	The SAW resonators on LiNbO ₃ for mass-sensing applications. , 2010, , .		0
85	An atmospheric pressure ultrahigh frequency plasma jet for ambient mass spectrometry. , 2010, , .		2
86	High sensitive circular Hall Effect sensor for magnetic bead labeled immunoassay. , 2010, , .		2
87	Generation of ultrahigh frequency air microplasma in a magnetic loop and effects of pulse modulation on operation. Applied Physics Letters, 2010, 96, .	3.3	11
88	Computational Methodology for Absolute Calibration Curves for Microfluidic Optical Analyses. Sensors, 2010, 10, 6730-6750.	3.8	1
89	Surface acoustic wave (SAW) biosensors. , 2010, , .		6
90	Improved surface acoustic wave filter design with low insertion loss. , 2010, , .		1

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91	Fabrication and Characterization of a Surface-Acoustic-Wave Biosensor in CMOS Technology for Cancer Biomarker Detection. IEEE Transactions on Biomedical Circuits and Systems, 2010, 4, 62-73.	4.0	50
92	Surface Acoustic Wave devices for ocular drug delivery. , 2010, , .		2
93	Synchronous One-Pole LiNbO_3 Surface Acoustic Wave Mass Sensors. IEEE Electron Device Letters, 2010, 31, 518-520.	3.9	8
94	Development of air micro plasma source using a magnetic loop with operation at modulated ultra high frequencies. , 2010, , .		0
95	A 2.4 GHz SiGe HBT High Voltage/High Power Amplifier. IEEE Microwave and Wireless Components Letters, 2010, 20, 286-288.	3.2	11
96	Design and implementation of parallel-IDT surface acoustic waves (SAW) low loss RF filters. , 2009, , .		1
97	Design and performance of a simple, room-temperature Ga ₂ O ₃ nanowire gas sensor. Applied Physics Letters, 2009, 95, .	3.3	72
98	Modeling and simulation of a ZnO nanowire bridge and development of an electrical equivalent circuit in liquid. , 2009, , .		2
99	Design and simulation of a thermally actuated MEMS switch for microwave circuits. International Journal of RF and Microwave Computer-Aided Engineering, 2009, 19, 492-501.	1.2	4
100	Micro-hotplate based temperature stabilization system for CMOS SAW resonators. Microsystem Technologies, 2009, 15, 1187-1193.	2.0	9
101	Experimental and simulation studies of resistivity in nanoscale copper films. Microelectronics Reliability, 2009, 49, 127-134.	1.7	24
102	Robust CMOS Micromachined Inductors With Structure Supports for Gilbert Mixer Matching Circuits. IEEE Transactions on Circuits and Systems II: Express Briefs, 2009, 56, 429-433.	3.0	3
103	Modeling and simulation of a nanowire-based cantilever structure. , 2009, , .		2
104	Modeling a fixed-fixed beam nano biosensor using equivalent electrical circuit technique. , 2009, , .		3
105	A configurable L/S-band integrated elliptical lowpass filter utilizing MEMS technology. Microwave and Optical Technology Letters, 2008, 50, 2791-2794.	1.4	0
106	Microfabricated chemical preconcentrators for gas-phase microanalytical detection systems. TrAC - Trends in Analytical Chemistry, 2008, 27, 327-343.	11.4	63
107	Generation of Micro Inductively Coupled Plasma on a Chip. IEEE Transactions on Plasma Science, 2008, 36, 1262-1263.	1.3	5
108	CMOS Micromachined Inductors With Structure Supports for RF Mixer Matching Networks. IEEE Electron Device Letters, 2008, 29, 1209-1211.	3.9	9

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109	Development of novel SAW devices in CMOS technology for biosensor applications. , 2008, , .		1
110	Formation and status of the MEMS microfluidics industry. , 2008, , .		0
111	VLSI implementation of a novel algorithm for binary-negabinary code conversion. , 2008, , .		0
112	Wideband CMOS Compatible Capacitive MEMS Switch for RF Applications. IEEE Microwave and Wireless Components Letters, 2008, 18, 599-601.	3.2	11
113	Design, Modeling, and Characterization of a Novel Circular Surface Acoustic Wave Device. IEEE Sensors Journal, 2008, 8, 1807-1815.	4.7	8
114	Temperature Stability Analysis of CMOS-SAW Devices by Embedded Heater Design. IEEE Transactions on Device and Materials Reliability, 2008, 8, 705-713.	2.0	12
115	Go with the (micro) flow. IEEE Potentials, 2008, 27, 17-25.	0.3	5
116	Surface acoustic wave based biosensor in CMOS for cancer biomarker detection. , 2008, , .		1
117	Welcome to the Special Section on Smart Sensors!. IEEE Transactions on Circuits and Systems I: Regular Papers, 2007, 54, 1-3.	5.4	4
118	A Novel Circular SAW (Surface Acoustic Wave) Device in CMOS. , 2007, , .		6
119	Thermally Actuated Multiband Voltage Controlled Oscillator Design with MEMS Switch. , 2007, , .		0
120	CMOS compatible edge coupled capacitive MEMS switch for RF applications. , 2007, , .		0
121	A Novel Saw Device in CMOS: Design, Modeling, and Fabrication. IEEE Sensors Journal, 2007, 7, 219-227.	4.7	32
122	Implementation of MEMS-SAW device on RF circuits for wireless applications. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	1
123	Low noise multi-band voltage controlled oscillator using MEMS technology. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	0
124	Miniature SAW device using MEMS technology. Microelectronics Journal, 2007, 38, 426-429.	2.0	13
125	Modeling and Fabrication of CMOS Surface Acoustic Wave Resonators. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 992-1001.	4.6	38
126	Low Noise Wideband CMOS Voltage Controlled Oscillator Using Mems Switch Technology. , 2006, , .		1

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127	Miniature SAW Device for RF-Wireless Applications Using MEMS Technology. , 2006, , .		4
128	Comparison of VCO Topology for Wideband Multi-Standard Applications. , 2006, , .		3
129	Integration of MEMS phase shifters with CMOS control circuitry. , 2006, , .		0
130	A new critical dimension metrology for chrome-on-glass substrates based on s-parameter measurements extracted from coplanar waveguide test structures. , 2006, , .		1
131	Modeling and simulation of resistivity of nanometer scale copper. Microelectronics Reliability, 2006, 46, 1050-1057.	1.7	37
132	Micropreconcentrator for Enhanced Trace Detection of Explosives and Chemical Agents. IEEE Sensors Journal, 2006, 6, 1094-1104.	4.7	72
133	Electrostatically actuated resonant microcantilever beam in CMOS technology for the detection of chemical weapons. IEEE Sensors Journal, 2005, 5, 641-647.	4.7	92
134	Production and Utilization of Micro Electro Mechanical Systems. , 2005, , 281-297.		0
135	Application of Conformal Mapping Approximation Techniques: Parallel Conductors of Finite Dimensions. IEEE Transactions on Instrumentation and Measurement, 2004, 53, 812-821.	4.7	19
136	Noncontact Critical Dimension Metrology Sensor for Chrome Photomasks Featuring a Low-Temperature Co-Fired Ceramic Technology. IEEE Transactions on Semiconductor Manufacturing, 2004, 17, 25-34.	1.7	2
137	ZnO Based SAW Delay Line: Thin Film Characteristics and IDT Fabrication. Materials Research Society Symposia Proceedings, 2003, 785, 441.	0.1	0
138	Design and Fabrication of a Temperature Sensor Based on Thermopile in CMOS Technology. , 2003, , .		0
139	Noncontact electrical critical dimensions metrology sensor for chrome photomasks. , 2002, , .		2
140	Fabrication techniques to realize CMOS-compatible microfluidic microchannels. Journal of Microelectromechanical Systems, 2001, 10, 286-297.	2.5	53
141	<title>Fully digital foliage-penetrating synthetic aperture radar processor</title>. , 2001, 4391, 281.		0
142	Simulation and optimization of a microfluidic flow sensor. Sensors and Actuators A: Physical, 2001, 88, 121-132.	4.1	50
143	RF components for wireless communication using CM-CMOS technology. International Journal of RF and Microwave Computer-Aided Engineering, 2001, 11, 330-340.	1.2	1
144	Quasi-TEM characteristic impedance of micromachined CMOS coplanar waveguides. IEEE Transactions on Microwave Theory and Techniques, 2000, 48, 852-854.	4.6	18

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145	Micromachined convective accelerometers in standard integrated circuits technology. Applied Physics Letters, 2000, 76, 508-510.	3.3	79
146	Characterization of broad-band transmission for coplanar waveguides on CMOS silicon substrates. IEEE Transactions on Microwave Theory and Techniques, 1998, 46, 632-640.	4.6	99
147	Micromachined thermocouple microwave detector by commercial CMOS fabrication. IEEE Transactions on Microwave Theory and Techniques, 1998, 46, 550-553.	4.6	28
148	In the flow with MEMS. IEEE Circuits and Devices: the Magazine of Electronic and Photonic Systems, 1998, 14, 12-25.	0.4	18
149	Combating Noise and Other Channel Distortions in Chaotic Communications. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1997, 07, 215-225.	1.7	11
150	Micromachined microwave transmission lines in CMOS technology. IEEE Transactions on Microwave Theory and Techniques, 1997, 45, 630-635.	4.6	84
151	Hybrid postprocessing etching for CMOS-compatible MEMS. Journal of Microelectromechanical Systems, 1997, 6, 363-372.	2.5	73
152	Thermoelectric power sensor for microwave applications by commercial CMOS fabrication. IEEE Electron Device Letters, 1997, 18, 450-452.	3.9	81
153	Improved masking algorithm for chaotic communications systems. Electronics Letters, 1996, 32, 11.	1.0	72
154	Chaotic neuron models and their VLSI circuit implementations. IEEE Transactions on Neural Networks, 1996, 7, 1339-1350.	4.2	28
155	Concurrent identification and control of system by applying standardized neurocontroller and neuroplant. , 1996, , .		0
156	CMOS foundry implementation of Schottky diodes for RF detection. IEEE Transactions on Electron Devices, 1996, 43, 2210-2214.	3.0	69
157	SYNCHRONIZATION OF CHAOTIC NEURAL NETWORKS AND APPLICATIONS TO COMMUNICATIONS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1996, 06, 2571-2585.	1.7	77
158	Image wavelet transforms implemented by discrete wavelet chips. Optical Engineering, 1994, 33, 2310.	1.0	19
159	VLSI implementation of synaptic weighting and summing in pulse coded neural-type cells. IEEE Transactions on Neural Networks, 1992, 3, 394-403.	4.2	52
160	High-level CAD melds micromachined devices with foundries. IEEE Circuits and Devices: the Magazine of Electronic and Photonic Systems, 1992, 8, 10-17.	0.4	34
161	Fault modeling of physical failures in CMOS VLSI circuits. IEEE Transactions on Circuits and Systems, 1990, 37, 1528-1543.	0.9	2
162	An enhancement-mode MOS voltage-controlled linear resistor with large dynamic range. IEEE Transactions on Circuits and Systems, 1990, 37, 1284-1288.	0.9	58

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163	Stray free switched capacitor loop biquad that realizes different generic transfer functions. Journal of the Franklin Institute, 1989, 326, 273-279.	3.4	0
164	A machine-learning classification approach for IC manufacturing control based on test structure measurements. IEEE Transactions on Semiconductor Manufacturing, 1989, 2, 47-53.	1.7	14
165	Computer-aided simulation study of photomultiplier tubes. IEEE Transactions on Electron Devices, 1989, 36, 2005-2010.	3.0	2
166	Semistate implementation: Differentiator example. Circuits, Systems, and Signal Processing, 1986, 5, 171-183.	2.0	8
167	Near-optimum design of large-scale systems. Journal of Guidance, Control, and Dynamics, 1986, 9, 374-376.	2.8	2
168	Worst case analysis of resistive networks using linear programming approach. Journal of the Franklin Institute, 1983, 316, 339-351.	3.4	0
169	Semantic definitions of spacecraft command and control languages using hierarchical graphs. Journal of Guidance, Control, and Dynamics, 1983, 6, 26-32.	2.8	0
170	Error bounds on solutions of nonlinear networks when using approximate element characteristics. IEEE Transactions on Circuits and Systems, 1980, 27, 20-29.	0.9	2