Mona Zaghloul

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/7702701/publications.pdf

Version: 2024-02-01

170 papers 2,483 citations

28 h-index 243625 44 g-index

170 all docs

170 docs citations

170 times ranked

2483 citing authors

#	Article	IF	CITATIONS
1	Development of a Cloudâ€Based Epidermal MoSe ₂ Device for Hazardous Gas Sensing. Advanced Functional Materials, 2019, 29, 1900138.	14.9	102
2	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
3	Electrostatically actuated resonant microcantilever beam in CMOS technology for the detection of chemical weapons. IEEE Sensors Journal, 2005, 5, 641-647.	4.7	92
4	Micromachined microwave transmission lines in CMOS technology. IEEE Transactions on Microwave Theory and Techniques, 1997, 45, 630-635.	4.6	84
5	Flexible packaging of solid-state integrated circuit chips with elastomeric microfluidics. Scientific Reports, 2013, 3, .	3.3	83
6	Thermoelectric power sensor for microwave applications by commercial CMOS fabrication. IEEE Electron Device Letters, 1997, 18, 450-452.	3.9	81
7	Integrated contact lens sensor system based on multifunctional ultrathin MoS2 transistors. Matter, 2021, 4, 969-985.	10.0	80
8	Micromachined convective accelerometers in standard integrated circuits technology. Applied Physics Letters, 2000, 76, 508-510.	3.3	79
9	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
10	Hybrid postprocessing etching for CMOS-compatible MEMS. Journal of Microelectromechanical Systems, 1997, 6, 363-372.	2.5	73
11	Improved masking algorithm for chaotic communications systems. Electronics Letters, 1996, 32, 11.	1.0	72
12	Micropreconcentrator for Enhanced Trace Detection of Explosives and Chemical Agents. IEEE Sensors Journal, 2006, 6, 1094-1104.	4.7	72
13	Design and performance of a simple, room-temperature Ga2O3 nanowire gas sensor. Applied Physics Letters, 2009, 95, .	3.3	72
14	CMOS foundry implementation of Schottky diodes for RF detection. IEEE Transactions on Electron Devices, 1996, 43, 2210-2214.	3.0	69
15	Microfabricated chemical preconcentrators for gas-phase microanalytical detection systems. TrAC - Trends in Analytical Chemistry, 2008, 27, 327-343.	11.4	63
16	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
17	Fabrication techniques to realize CMOS-compatible microfluidic microchannels. Journal of Microelectromechanical Systems, 2001, 10, 286-297.	2.5	53
18	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

#	Article	IF	CITATIONS
19	UV-assisted alcohol sensing using SnO2 functionalized GaN nanowire devices. Sensors and Actuators B: Chemical, 2012, 171-172, 499-507.	7.8	52
20	Simulation and optimization of a microfluidic flow sensor. Sensors and Actuators A: Physical, 2001, 88, 121-132.	4.1	50
21	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
22	Development of a PZT MEMS Switch Architecture for Low-Power Digital Applications. Journal of Microelectromechanical Systems, 2011, 20, 1032-1042.	2.5	49
23	Modeling and Fabrication of CMOS Surface Acoustic Wave Resonators. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 992-1001.	4.6	38
24	Modeling and simulation of resistivity of nanometer scale copper. Microelectronics Reliability, 2006, 46, 1050-1057.	1.7	37
25	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
26	Tuning the Polarity of MoTe2 FETs by Varying the Channel Thickness for Gas-Sensing Applications. Sensors, 2019, 19, 2551.	3.8	33
27	A wearable IoT aldehyde sensor for pediatric asthma research and management. Sensors and Actuators B: Chemical, 2019, 287, 584-594.	7.8	33
28	A Novel Saw Device in CMOS: Design, Modeling, and Fabrication. IEEE Sensors Journal, 2007, 7, 219-227.	4.7	32
29	An Antimony Selenide Molecular Ink for Flexible Broadband Photodetectors. Advanced Electronic Materials, 2016, 2, 1600182.	5.1	31
30	Chaotic neuron models and their VLSI circuit implementations. IEEE Transactions on Neural Networks, 1996, 7, 1339-1350.	4.2	28
31	Micromachined thermocouple microwave detector by commercial CMOS fabrication. IEEE Transactions on Microwave Theory and Techniques, 1998, 46, 550-553.	4.6	28
32	Gas Sensing with Bare and Graphene-covered Optical Nano-Antenna Structures. Scientific Reports, 2016, 6, 21287.	3.3	25
33	Experimental and simulation studies of resistivity in nanoscale copper films. Microelectronics Reliability, 2009, 49, 127-134.	1.7	24
34	Highly Sensitive Wearable Piezoelectric Force Sensor With Quasi-Static Load Testing. IEEE Sensors Journal, 2018, 18, 9910-9918.	4.7	20
35	Image wavelet transforms implemented by discrete wavelet chips. Optical Engineering, 1994, 33, 2310.	1.0	19
36	Application of Conformal Mapping Approximation Techniques: Parallel Conductors of Finite Dimensions. IEEE Transactions on Instrumentation and Measurement, 2004, 53, 812-821.	4.7	19

#	Article	IF	CITATIONS
37	In the flow with MEMS. IEEE Circuits and Devices: the Magazine of Electronic and Photonic Systems, 1998, 14, 12-25.	0.4	18
38	Quasi-TEM characteristic impedance of micromachined CMOS coplanar waveguides. IEEE Transactions on Microwave Theory and Techniques, 2000, 48, 852-854.	4.6	18
39	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
40	Miniaturized nanohole array based plasmonic sensor for the detection of acetone and ethanol with insights into the kinetics of adsorptive plasmonic sensing. Nanoscale, 2019, 11, 11922-11932.	5.6	14
41	Mobility Extraction in 2D Transition Metal Dichalcogenide Devices—Avoiding Contact Resistance Implicated Overestimation. Small, 2021, 17, e2100940.	10.0	14
42	Miniature SAW device using MEMS technology. Microelectronics Journal, 2007, 38, 426-429.	2.0	13
43	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
44	Nonreciprocal-Beam Phased-Array Antennas Based on Transistor-Loaded Phase Shifters. IEEE Transactions on Antennas and Propagation, 2021, 69, 7572-7581.	5.1	13
45	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
46	Tuning In-Plane Fixed-Fixed Beam Resonators With Embedded Heater in CMOS Technology. IEEE Electron Device Letters, 2015, 36, 189-191.	3.9	12
47	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
48	Wideband CMOS Compatible Capacitive MEMS Switch for RF Applications. IEEE Microwave and Wireless Components Letters, 2008, 18, 599-601.	3.2	11
49	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
50	A 2.4 GHz SiGe HBT High Voltage/High Power Amplifier. IEEE Microwave and Wireless Components Letters, 2010, 20, 286-288.	3.2	11
51	Review of nanoscale memristor devices as synapses in neuromorphic systems., 2013,,.		10
52	CMOS Micromachined Inductors With Structure Supports for RF Mixer Matching Networks. IEEE Electron Device Letters, 2008, 29, 1209-1211.	3.9	9
53	Micro-hotplate based temperature stabilization system for CMOS SAW resonators. Microsystem Technologies, 2009, 15, 1187-1193.	2.0	9
54	Circular MAGFET Design and SNR Optimization for Magnetic Bead Detection. IEEE Transactions on Magnetics, 2012, 48, 3851-3854.	2.1	9

#	Article	IF	CITATIONS
55	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
56	Semistate implementation: Differentiator example. Circuits, Systems, and Signal Processing, 1986, 5, 171-183.	2.0	8
57	Design, Modeling, and Characterization of a Novel Circular Surface Acoustic Wave Device. IEEE Sensors Journal, 2008, 8, 1807-1815.	4.7	8
58	Synchronous One-Pole \$hbox{LiNbO}_{3}\$ Surface Acoustic Wave Mass Sensors. IEEE Electron Device Letters, 2010, 31, 518-520.	3.9	8
59	Low-power 3-bit piezoelectric MEMS analog to digital converter. , 2011, , .		8
60	Irradiance dependence of photobleaching of resorufin. Journal of Photochemistry and Photobiology A: Chemistry, 2011, 217, 430-432.	3.9	8
61	UV-Assisted Alcohol Sensing With Zinc Oxide-Functionalized Gallium Nitride Nanowires. IEEE Electron Device Letters, 2012, 33, 1075-1077.	3.9	8
62	Plasma ionization under simulated ambient Mars conditions for quantification of methane by mass spectrometry. Analyst, The, 2016, 141, 2270-2277.	3.5	8
63	Modeling and simulation of InAs/GaAs quantum dot solar cells in SILVACO TCAD. , 2014, , .		7
64	Enhancement in CMOS-MEMS Resonator for High Sensitive Temperature Sensing. IEEE Sensors Journal, 2017, 17, 598-603.	4.7	7
65	Investigation of on-state power handling dependence on number of cycles for germanium telluride RF switches. , 2017, , .		7
66	An Artificial Intelligent Flexible Gas Sensor Based on Ultra-Large Area MoSe ₂ Nanosheet., 2019,,.		7
67	High resolution beam switch antenna based on modified <scp>CRLH</scp> Butler matrix. Engineering Reports, 2021, 3, e12287.	1.7	7
68	A Novel Circular SAW (Surface Acoustic Wave) Device in CMOS., 2007,,.		6
69	Surface acoustic wave (SAW) biosensors. , 2010, , .		6
70	Millimeter-Wave SiGe HBT High Voltage/High Power Architecture Implementation. IEEE Microwave and Wireless Components Letters, 2011, 21, 544-546.	3.2	6
71	RF oscillator implementation using integrated CMOS surface acoustic wave resonators. Analog Integrated Circuits and Signal Processing, 2011, 68, 33-42.	1.4	6
72	Enhancement of Photoemission on p-Type GaAs Using Surface Acoustic Waves. Sensors, 2020, 20, 2419.	3.8	6

#	Article	IF	Citations
73	Personal NO2 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
74	Generation of Micro Inductively Coupled Plasma on a Chip. IEEE Transactions on Plasma Science, 2008, 36, 1262-1263.	1.3	5
75	Go with the (micro) flow. IEEE Potentials, 2008, 27, 17-25.	0.3	5
76	Class-A stacked SiGe HBT power amplifier at millimeter-wave. , 2011, , .		5
77	Compact optical microfluidic uric acid analysis system. Biosensors and Bioelectronics, 2011, 26, 4155-4161.	10.1	5
78	Generation and enhancement of surface acoustic waves on a highly doped p-type GaAs substrate. Nanoscale Advances, 2019, 1, 3537-3546.	4.6	5
79	Nonreciprocal Radiation Pattern Metasurface Transformer. , 2019, , .		5
80	Miniature SAW Device for RF-Wireless Applications Using MEMS Technology. , 2006, , .		4
81	Welcome to the Special Section on Smart Sensors!. IEEE Transactions on Circuits and Systems I: Regular Papers, 2007, 54, 1-3.	5.4	4
82	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
83	Nano-electromechanical storage element for a low power complimentary logic architecture using PZT relays. , 2011, , .		4
84	A high resolution time-to-digital converter on FPGA for Time-Correlated Single Photon Counting. , 2012, , .		4
85	Effect of rounding on the sensitivity of optical antennas based sensors. , 2014, , .		4
86	A Compact Output Power Combiner for Broadband Doherty Power Amplifiers. Electronics (Switzerland), 2019, 8, 275.	3.1	4
87	Design of a Non-Reciprocal Reconfigurable Phase Shifter for Phased Array Applications. , 2021, , .		4
88	Changes in Permittivity of the Piezoelectric Material PVDF as Functions of the Electrical Field and Temperature. Materials, 2021, 14, 5736.	2.9	4
89	Comparison of VCO Topology for Wideband Multi-Standard Applications. , 2006, , .		3
90	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

#	Article	IF	Citations
91	Modeling a fixed-fixed beam nano biosensor using equivalent electrical circuit technique., 2009,,.		3
92	Rectangular cmos differential MAGFET biosensor for magnetic particle detection. IEEE Transactions on Magnetics, 2013, 49, 4052-4055.	2.1	3
93	Germanium Telluride reconfigurable antennas. , 2016, , .		3
94	Simple broadband Gysel combiner with a single coupled line. , 2016, , .		3
95	The implementation of low-power and wide tuning range MEMS filters for communication applications. Radio Science, 2016, 51, 1636-1644.	1.6	3
96	Fabrication and characterization of humidity sensors based on CVD grown MoS $<$ inf $>$ 2 $<$ /inf $>$ thin film. , 2017, , .		3
97	Wearable and Stationary Point-of-Care IoT Air Pollution Sensors for Pediatric Asthma Research and Management. , 2019, , .		3
98	Plasmonic Sensing Studies of a Gas-Phase Cystic Fibrosis Marker in Moisture Laden Air. Sensors, 2021, 21, 3776.	3.8	3
99	A Compact Beam Steering Dielectric Resonator Antenna for Wireless Power Transfer. , 2021, , .		3
100	Control of polarity in multilayer MoTe2 field-effect transistors by channel thickness. , 2018, 10725, .		3
101	Non-Reciprocal Phased Array antenna. , 2021, , .		3
102	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
103	Near-optimum design of large-scale systems. Journal of Guidance, Control, and Dynamics, 1986, 9, 374-376.	2.8	2
104	Computer-aided simulation study of photomultiplier tubes. IEEE Transactions on Electron Devices, 1989, 36, 2005-2010.	3.0	2
105	Fault modeling of physical failures in CMOS VLSI circuits. IEEE Transactions on Circuits and Systems, 1990, 37, 1528-1543.	0.9	2
106	Noncontact electrical critical dimensions metrology sensor for chrome photomasks., 2002,,.		2
107	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
108	Modeling and simulation of a ZnO nanowire bridge and development of an electrical equivalent circuit in liquid. , $2009, , .$		2

#	Article	IF	CITATIONS
109	Modeling and simulation of a nanowire-based cantilever structure. , 2009, , .		2
110	An atmospheric pressure ultrahigh frequency plasma jet for ambient mass spectrometry. , 2010, , .		2
111	High sensitive circular Hall Effect sensor for magnetic bead labeled immunoassay. , 2010, , .		2
112	Surface Acoustic Wave devices for ocular drug delivery., 2010,,.		2
113	Single Photon Avalanche Diode in standard CMOS 0.5um technology. , 2011, , .		2
114	A 400 MHz delta-sigma modulator for bandpass IF digitization around 100 MHz with excess loop delay compensation. , 2011, , .		2
115	Point-of-care early HIV diagnosis system on the CMOS & amp; microfluidic hybrid platform., 2012,,.		2
116	Simulations of energy-bands bending effect and carriers transportation in semiconductor with propagating Surface Acoustic Waves. , 2016, , .		2
117	Design and Fabrication of a Plasmonic Gas Sensor. , 2018, , .		2
118	GeTe Phase Change Research at the US Army Research Laboratory. , 2018, , .		2
119	Sensors: Development of a Cloudâ€Based Epidermal MoSe ₂ Device for Hazardous Gas Sensing (Adv. Funct. Mater. 18/2019). Advanced Functional Materials, 2019, 29, 1970122.	14.9	2
120	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
121	Low Noise Wideband CMOS Voltage Controlled Oscillator Using Mems Switch Technology. , 2006, , .		1
122	A new critical dimension metrology for chrome-on-glass substrates based on s-parameter measurements extracted from coplanar waveguide test structures. , 2006, , .		1
123	Implementation of MEMS-SAW device on RF circuits for wireless applications. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	1
124	Development of novel SAW devices in CMOS technology for biosensor applications. , 2008, , .		1
125	Surface acoustic wave based biosensor in CMOS for cancer biomarker detection. , 2008, , .		1
126	Design and implementation of parallel-IDT surface acoustic waves (SAW) low loss RF filters., 2009,,.		1

#	Article	IF	Citations
127	A SAW-based liquid sensor with identification for wireless applications. , 2010, , .		1
128	Computational Methodology for Absolute Calibration Curves for Microfluidic Optical Analyses. Sensors, 2010, 10, 6730-6750.	3.8	1
129	Improved surface acoustic wave filter design with low insertion loss. , 2010, , .		1
130	A Single-Photon Avalanche Diode in CMOS 0.5μm n-well process., 2012,,.		1
131	Flexible packaging and integration of CMOS IC with elastomeric microfluidics. Proceedings of SPIE, 2013, , .	0.8	1
132	Tuning nano antenna with graphene., 2013,,.		1
133	Plasmonic nano-antenna application to chemical gas sensor. , 2014, , .		1
134	Tuning CMOS-MEMS resonators with embedded heater., 2015,,.		1
135	Simulations of properties of quantum dots and high-efficiency GaAs solar cells. , 2016, , .		1
136	U-Shaped Ultrahigh Frequency Atmospheric Pressure Plasma Jet With Magnetic Loop Antenna. IEEE Transactions on Plasma Science, 2017, 45, 43-53.	1.3	1
137	Design and simulation of nano plasmonic biosensors. , 2017, , .		1
138	High Frequency SAW Resonator Design, Simulation, and Optimization with Applications to Chemical Gas Sensors. , $2018, , .$		1
139	Discrimination of 1―and 2â€Propanol by Using the Transient Current Change of a Semiconducting ZnFe ₂ O ₄ Chemiresistor. ChemPlusChem, 2019, 84, 387-391.	2.8	1
140	A 480ÂMHz Band-Pass Sigma Delta Analog to Digital Modulator with Active Inductor Based Resonators. Lecture Notes in Electrical Engineering, 2014, , 1-11.	0.4	1
141	Worst case analysis of resistive networks using linear programming approach. Journal of the Franklin Institute, 1983, 316, 339-351.	3.4	O
142	Semantic definitions of spacecraft command and control languages using hierarchical graphs. Journal of Guidance, Control, and Dynamics, 1983, 6, 26-32.	2.8	0
143	Stray free switched capacitor loop biquad that realizes different generic transfer functions. Journal of the Franklin Institute, 1989, 326, 273-279.	3.4	0
144	Concurrent identification and control of system by applying standardized neurocontroller and neuroplant. , $1996, $, .		0

#	Article	IF	CITATIONS
145	<title>Fully digital foliage-penetrating synthetic aperature radar processor</title> ., 2001, 4391, 281.		O
146	ZnO Based SAW Delay Line: Thin Film Characteristics and IDT Fabrication. Materials Research Society Symposia Proceedings, 2003, 785, 441.	0.1	0
147	Integration of MEMS phase shifters with CMOS control circuitry. , 2006, , .		0
148	Thermally Actuated Multiband Voltage Controlled Oscillator Design with MEMS Switch., 2007,,.		0
149	CMOS compatible edge coupled capacitive MEMS switch for RF applications. , 2007, , .		0
150	Low noise multi-band voltage controlled oscillator using MEMS technology. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	0
151	A configurable L/S-band integrated elliptical lowpass filter utilizing MEMS technology. Microwave and Optical Technology Letters, 2008, 50, 2791-2794.	1.4	0
152	Formation and status of the MEMS microfluidics industry. , 2008, , .		0
153	VLSI implementation of a novel algorithm for binary-negabinary code conversion. , 2008, , .		0
154	The SAW resonators on LiNb0 <inf>3</inf> for mass-sensing applications. , 2010, , .		0
155	Development of air micro plasma source using a magnetic loop with operation at modulated ultra high frequencies. , 2010, , .		0
156	Optical bio sensor using graphene nano ribbons. , 2011, , .		0
157	High power density SiGe millimeter-wave power amplifiers. International Journal of Microwave and Wireless Technologies, 2011, 3, 615-620.	1.9	0
158	94 GHz power amplifier device architecture in SiGe for active phased arrays., 2012,,.		0
159	A self-calibrating temperature independent model of a bi-axial piezoelectric MEMS tilt sensor. , 2012, , .		0
160	High sensitivity CMOS portable biosensor with flexible microfluidic integration., 2013,,.		0
161	GaN non-linear modeling for Ka band resistive mixer design. , 2013, , .		0
162	Biomedical sensor properties of flexible PolyVinyliDene flouride., 2013,,.		0

#	Article	IF	CITATIONS
163	A 6< sup> th< /sup> order continuous time band-pass Sigma Delta Analog to Digital modulator with active inductor based resonators. , 2013 , , .		0
164	Comparison between electric field for plasmonic dipole and bow-tie ONA structures. , 2016, , .		0
165	Electronic Characteristics of MoSe <inf>2</inf> and MoTe <inf>2</inf> for Nanoelectronic Applications., 2018,,.		0
166	Metal Organic Framework-Coated Optical VOC Gas Sensor. , 2018, , .		0
167	Design and Fabrication of a Temperature Sensor Based on Thermopile in CMOS Technology. , 2003, , .		O
168	Production and Utilization of Micro Electro Mechanical Systems., 2005,, 281-297.		0
169	Interface Electronics Design for Wireless Generation of Surface Acoustic Wave Utilized in Wearable Drug Delivery Application. , 2020, , .		0
170	Active Nonreciprocal Phase Shifter for Versatile Phased-Array Antennas and Metasurfaces., 2020,,.		0