Xiaoping Liao

List of Publications by Year in Descending Order

88 papers	577 citations	11 h-index	18 g-index
100 ext. papers	708 ext. citations	2.7 avg, IF	4.71 L-index

#	Paper	IF	Citations
88	Theoretical and Experimental Investigation of a Photoelectric-Thermoelectric Integrated Power Generator Filled by Al Layer. *IEEE Transactions on Electron Devices*, **2022**, 1-7	2.9	0
87	Research of a Compact MEMS-Based Integrated Detector for X-Band Application: Theory, Design, Fabrication, and Measurement. *IEEE Sensors Journal*, **2021**, 1-1	4	
86	A novel RF Power Detector Based on Positive and Negative Thermistors Using Standard CMOS Technology. *IEEE Electron Device Letters*, **2021**, 1-1	4.4	2
85	Electromagnetic-Thermal-Electric Analysis of Indirectly-Heated RF MEMS Power Sensors With Different Terminal Resistor Dimensions. *IEEE Sensors Journal*, **2021**, 21, 4342-4349	4	2
84	A C-Band MEMS Frequency Discriminator With High Sensitivity and Linearity. *IEEE Electron Device Letters*, **2021**, 42, 410-413	4.4	2
83	A New RF MEMS Power Sensor Based on Double-Deck Thermocouples With High Sensitivity and Large Dynamic Range. *IEEE Microwave and Wireless Components Letters*, **2021**, 31, 1023-1026	2.6	2
82	Modeling of the Photoelectric□Thermoelectric Integrated Micropower Generator. *IEEE Transactions on Electron Devices*, **2021**, 68, 4509-4515	2.9	1
81	Research on Micro-Electro-Mechanical System-Based Integrated Energy Harvester with Test Structures. *Energy Technology*, **2021**, 9, 2100488	3.5	1
80	Researches on MEMS thermoelectric-photoelectric integrated energy harvester with metal heat sink. *Microelectronics Journal*, **2020**, 96, 104702	1.8	8
79	The thermoelectric-photoelectric integrated power generator and its design verification. *Solid-State Electronics*, **2020**, 170, 107818	1.7	4
78	Power management circuit based on micro-electromechanical systems thermoelectric-photoelectric integrated power generator. *Microwave and Optical Technology Letters*, **2020**, 62, 1082-1086	1.2	3
77	Balanced-Bridge Method for the Characterization of Dielectric Charging in RF MEMS Cantilever Switches. *IEEE Sensors Journal*, **2020**, 20, 1928-1933	4	1
76	High-power electro-mechanical behavior of a capacitive microwave power sensor with warped cantilever beam. *Solid-State Electronics*, **2020**, 172, 107877	1.7	2
75	A Novel Thermistor-Based RF Power Sensor With Wheatstone Bridge Fabricating on MEMS Membrane. *Journal of Microelectromechanical Systems*, **2020**, 29, 1314-1321	2.5	6
74	A Micro-Machined Phase Discriminator With Improved Power Capacity on C-Band and X-Band. *IEEE Sensors Journal*, **2019**, 19, 2133-2139	4	3
73	Bent cantilever radio frequency microelectromechanical system power detector with improved linearity up to 1 W. *IET Microwaves, Antennas and Propagation*, **2019**, 13, 1732-1736	1.6	1
72	Investigations of the Thermoelectric-Photoelectric Integrated Power Generator With I-Shaped Thermocouple Structure and its Test Structures. *IEEE Sensors Journal*, **2019**, 19, 11113-11119	4	3

(2017-2019)

71	Accuracy improvement of micro-electro-mechanical system microwave power sensor based on self-reference algorithm. *Microwave and Optical Technology Letters*, **2019**, 61, 897-902	1.2	1
70	A Novel Multi-Source Micro Power Generator for Harvesting Thermal and Optical Energy. *IEEE Electron Device Letters*, **2019**, 40, 349-352	4.4	13
69	RF MEMS Thermistor Power Sensor Based on Wheatstone Full-Bridge Structure **2019**,		2
68	**2019**, 3, 1-4		4
67	MEMS-Based Thermoelectric–Photoelectric Integrated Power Generator. *Journal of Microelectromechanical Systems*, **2019**, 28, 1-3	2.5	16
66	Modeling of an 8–12 GHz receiver front-end based on an in-line MEMS frequency discriminator. *Solid-State Electronics*, **2018**, 144, 54-59	1.7	4
65	Review of Micro Thermoelectric Generator. *Journal of Microelectromechanical Systems*, **2018**, 27, 1-18	2.5	107
64	An Integrated Microwave Detector Based on MEMS Technology for X-Band Application. *IEEE Electron Device Letters*, **2018**, 39, 742-745	4.4	6
63	MEMS microwave power sensor with thermovoltage compensation and transformation. *Electronics Letters*, **2018**, 54, 1042-1043	1.1	3
62	Application Consideration of Thermocouple-Based Microwave Power Sensor **2018**,		1
61	One to 40 GHz ultra-wideband RF MEMS direct-contact switch based on GaAs MMIC technique. *IET Microwaves, Antennas and Propagation*, **2018**, 12, 879-884	1.6	1
60	High-Power Handling Analysis of a Capacitive MEMS Power Sensor at X -Band. *IEEE Sensors Journal*, **2018**, 18, 5272-5277	4	9
59	A Four-Port Microwave Phase Detector at X -Band Based on MEMS Power Sensors. *IEEE Sensors Journal*, **2017**, 17, 2029-2035	4	7
58	Theoretical and Experimental Investigation of Cascaded Microwave Power Sensor. *IEEE Transactions on Electron Devices*, **2017**, 64, 1728-1734	2.9	5
57	Reliability Improvement of the Cascaded Power Sensor Based on MIM Capacitor. *IEEE Microwave and Wireless Components Letters*, **2017**, 27, 272-274	2.6	3
56	Ka-band RF MEMS capacitive switch with low loss, high isolation, long-term reliability and high power handling based on GaAs MMIC technology. *IET Microwaves, Antennas and Propagation*, **2017**, 11, 942-948	1.6	13
55	Miniaturization of a broadband power divider for X-band application based on GaAs technology. *Microwave and Optical Technology Letters*, **2017**, 59, 1427-1431	1.2	2
54	Analysis and design of a broadband coplanar Wilkinson power divider at X-band. *Microwave and Optical Technology Letters*, **2017**, 59, 307-312	1.2	2

53	Modeling of Differential Power Sensor Based on Seesaw Structure for Microwave Communication Application. *IEEE Transactions on Electron Devices*, **2017**, 64, 4664-4670	2.9	1
52	Characteristics of Doped n+ GaAs Thermopile-Based RF MEMS Power Sensors for MMIC Applications. *IEEE Electron Device Letters*, **2017**, 38, 1473-1476	4.4	3
51	Improved Dynamic Range of Microwave Power Sensor by MEMS Cantilever Beam. *Journal of Microelectromechanical Systems*, **2017**, 26, 1183-1185	2.5	9
50	A Dual-Channel MEMS Amplitude Demodulator for On-Line Detection in Radio Relay Station. *IEEE Electron Device Letters*, **2017**, 38, 1121-1124	4.4	6
49	Modeling of an in-line MEMS frequency discriminator for RF receiver front-end application **2017**,		2
48	n+ GaAs/AuGeNi-Au Thermocouple-Type RF MEMS Power Sensors Based on Dual Thermal Flow Paths in GaAs MMIC. *Sensors*, **2017**, 17,	3.8	3
47	2-Dimensional vibration model of MEMS cantilever beams with step-up anchors. *Microsystem Technologies*, **2016**, 22, 893-901	1.7	1
46	An X -Band Dual Channel Microwave Phase Detector Based on GaAs MMIC Technology. *IEEE Sensors Journal*, **2016**, 16, 6515-6516	4	3
45	A Sandwich-Type Thermoelectric Microwave Power Sensor for GaAs MMIC-Compatible Applications. *IEEE Electron Device Letters*, **2016**, 37, 1639-1641	4.4	10
44	Fabrication of the Differential Microwave Power Sensor by Seesaw-Type MEMS Membrane. *Journal of Microelectromechanical Systems*, **2016**, 25, 582-584	2.5	4
43	A MEMS microwave phase detector with broadband performance operable at X-band. *Microwave and Optical Technology Letters*, **2016**, 58, 806-809	1.2	7
42	A Cascaded Terminating-Type and Capacitive-Type Power Sensor for −10- to 22-dBm Application. *IEEE Electron Device Letters*, **2016**, 37, 489-491	4.4	11
41	Equivalent lumped circuit model and S-parameter of indirect-heating thermoelectric power sensor. *Sensors and Actuators A: Physical*, **2016**, 240, 110-117	3.9	7
40	Residual stress and adhesion experiment on the capacitive MEMS power sensor based on GaAs MMIC process. *Journal of Adhesion Science and Technology*, **2016**, 30, 803-813	2	
39	A 3D Model of the Thermoelectric Microwave Power Sensor by MEMS Technology. *Sensors*, **2016**, 16,	3.8	6
38	High-power handling capacity and output response of a capacitive microwave power sensor **2016**,		1
37	Design of the microwave frequency sensor for power-unknown signal based on MEMS technology **2016**,		1
36	. *IEEE Sensors Journal*, **2016**, 16, 3480-3481	4	11

35	Research on the Response Time of Indirect-Heating Microwave Power Sensor. *IEEE Sensors Journal*, **2016**, 16, 5270-5276	4	8
34	A Directional Inline-Type Millimeter-Wave MEMS Power Sensor for GaAs MMIC Applications. *Journal of Microelectromechanical Systems*, **2015**, 24, 253-255	2.5	3
33	Investigation of the adhesion of perforated MEMS clamped�clamped beams based on the GaAs MMIC process with the resonant method. *Journal of Adhesion Science and Technology*, **2015**, 29, 1663-1679	2	3
32	An Integrated Microwave Power and Frequency Sensor For 1�0 GHz Application. *IEEE Sensors Journal*, **2015**, 15, 5465-5471	4	5
31	. *IEEE Sensors Journal*, **2015**, 15, 6765-6766	4	13
30	. *IEEE Sensors Journal*, **2015**, 15, 665-666	4	6
29	High-power up to 4 W characteristics of the capacitive microwave power sensor with grounded beam. *Electronics Letters*, **2015**, 51, 1798-1800	1.1	1
28	An Insertion Thermoelectric RF MEMS Power Sensor for GaAs MMIC-Compatible Applications. *IEEE Microwave and Wireless Components Letters*, **2015**, 25, 265-267	2.6	6
27	Research on Thermocouple Distribution for Microwave Power Sensors Based on GaAs MMIC Process. *IEEE Sensors Journal*, **2015**, 15, 4178-4179	4	10
26	Third-Order Intermodulation of an MEMS Clamped-Clamped Beam Capacitive Power Sensor Based on GaAs Technology. *IEEE Sensors Journal*, **2015**, 15, 3645-3646	4	2
25	High dynamic range microwave power sensor with thermopile and curled cantilever beam. *Electronics Letters*, **2015**, 51, 1341-1343	1.1	5
24	Suspended Thermopile for Microwave Power Sensors Based on Bulk MEMS and GaAs MMIC Technology. *IEEE Sensors Journal*, **2015**, 15, 2019-2020	4	7
23	Measurements on Intermodulation Distortion of Capacitive Power Sensor Based on MEMS Cantilever Beam. *IEEE Sensors Journal*, **2014**, 14, 621-622	4	13
22	A cascade RF power sensor based on GaAs MMIC for improved dynamic range application **2014**,		3
21	A Frequency-Compensation-Type Microwave Power Sensor Fabricated by GaAs MMIC Process. *IEEE Sensors Journal*, **2014**, 14, 2936-2937	4	4
20	Inline capacitive RF power sensor based on floating MEMS beam for GaAs MMIC applications. *Electronics Letters*, **2014**, 50, 1292-1294	1.1	8
19	A novel in-line type frequency detector based on MEMS technology and the GaAs MMIC process. *Journal of Micromechanics and Microengineering*, **2014**, 24, 035005	2	7
18	An X-band Wilkinson power divider and comparison with its miniaturization based on GaAs MMIC process. *Microwave and Optical Technology Letters*, **2014**, 56, 700-705	1.2	4

17	Micromachined Passive Bandpass Filters Based on GaAs Monolithic-Microwave-Integrated-Circuit Technology. *IEEE Transactions on Electron Devices*, **2013**, 60, 221-228	2.9	11
16	A capacitive power sensor based on the MEMS cantilever beam fabricated by GaAs MMIC technology. *Journal of Micromechanics and Microengineering*, **2013**, 23, 035001	2	20
15	Research on temperature characteristic of thermoelectric microwave power sensors based on GaAs MMIC technology. *Electronics Letters*, **2013**, 49, 1462-1464	1.1	7
14	2-D model of the indirectly-heated type microwave power sensor based on GaAs MMIC process **2013**,		2
13	A Thermocouple-Based Self-Heating RF Power Sensor With GaAs MMIC-Compatible Micromachining Technology. *IEEE Electron Device Letters*, **2012**, 33, 606-608	4.4	22
12	Sensitivity characteristics in the packaged inline RF MEMS power sensors under different temperature and humidity environments **2012**,		1
11	An 8–12 GHz microwave frequency detector based on MEMS power sensors. *Journal of Micromechanics and Microengineering*, **2012**, 22, 035005	2	11
10	Modeling and design of a capacitive microwave power sensor for X-band applications based on GaAs technology. *Journal of Micromechanics and Microengineering*, **2012**, 22, 055013	2	19
9	A three-channel thermoelectric RF MEMS power sensor for GaAs MMIC applications. *Sensors and Actuators A: Physical*, **2012**, 182, 68-71	3.9	13
8	Micromachined GaAs MMIC-Based Spiral Inductors With Metal Shores and Patterned Ground Shields. *IEEE Sensors Journal*, **2012**, 12, 1853-1860	4	8
7	Third-order intermodulation distortion of the capacitive microwave power sensor using MEMS clamped beam **2012**,		3
6	Packaging-Test-Fixture for In-Line Coupling RF MEMS Power Sensors. *Journal of Microelectromechanical Systems*, **2011**, 20, 1231-1233	2.5	12
5	A novel microwave power sensor using MEMS fixed-fixed beam **2011**,		6
4	An 8-12GHz capacitive power sensor based on MEMS cantilever beam **2011**,		5
3	Research on the phase of an inline coupling RF MEMS power sensor **2011**,		1
2	Microwave frequency detector based on MEMS technology **2008**,		1
1	Investigations of microwave integrated detector and its processing circuit. *International Journal of Electronics Letters*,1-8	0.6	