

# Ruochen Lu

## List of Publications by Year in descending order

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331670

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docs citations

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times ranked

528  
citing authors

#	ARTICLE	IF	CITATIONS
1	Low-Loss 5-GHz First-Order Antisymmetric Mode Acoustic Delay Lines in Thin-Film Lithium Niobate. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 541-550.	4.6	20
2	Microwave Acoustic Devices: Recent Advances and Outlook. IEEE Journal of Microwaves, 2021, 1, 601-609.	6.5	75
3	Lateral Spurious Mode Suppression in Lithium Niobate A1 Resonators. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 1930-1937.	3.0	27
4	Gigahertz Low-Loss and High Power Handling Acoustic Delay Lines Using Thin-Film Lithium-Niobate-on-Sapphire. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 3246-3254.	4.6	17
5	Near-Zero Drift and High Electromechanical Coupling Acoustic Resonators at > 3.5 GHz. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 3706-3714.	4.6	21
6	Acoustic Loss in Thin-Film Lithium Niobate: An Experimental Study. Journal of Microelectromechanical Systems, 2021, 30, 632-641.	2.5	21
7	RF acoustic microsystems based on suspended lithium niobate thin films: advances and outlook. Journal of Micromechanics and Microengineering, 2021, 31, 114001.	2.6	55
8	Optimized Resonators for Piezoelectric Power Conversion. IEEE Open Journal of Power Electronics, 2021, 2, 212-224.	5.7	30
9	Acoustic Loss of GHz Higher-Order Lamb Waves in Thin-Film Lithium Niobate: A Comparative Study. Journal of Microelectromechanical Systems, 2021, 30, 876-884.	2.5	10
10	A Laterally Vibrating Lithium Niobate MEMS Resonator Array Operating at 500 Å°C in Air. Sensors, 2021, 21, 149.	3.8	7
11	Low-Loss and High Power Handling Acoustic Delay Lines Using Thin-Film Lithium Niobate on Sapphire. , 2021, , .		2
12	A 15.8 GHz A6 Mode Resonator with Q of 720 in Complementarily Oriented Piezoelectric Lithium Niobate Thin Films. , 2021, , .		10
13	Power Flow Angles of GHz Propagating Acoustic Waves in Thin-Film Lithium Niobate. , 2021, , .		1
14	An A1 Mode Resonator at 12 GHz using 160nm Lithium Niobate Suspended Thin Film. , 2021, , .		10
15	Visualization of acoustic power flow in suspended thin-film lithium niobate phononic devices. Applied Physics Letters, 2021, 119, .	3.3	5
16	Fixed-Frequency Control of Piezoelectric Resonator DC-DC Converters for Spurious Mode Avoidance. IEEE Open Journal of Power Electronics, 2021, 2, 582-590.	5.7	9
17	A Piezoelectric Micromachined Ultrasonic Transducer Using Thin-Film Lithium Niobate. Journal of Microelectromechanical Systems, 2020, 29, 1412-1414.	2.5	13
18	Enabling Higher Order Lamb Wave Acoustic Devices With Complementarily Oriented Piezoelectric Thin Films. Journal of Microelectromechanical Systems, 2020, 29, 1332-1346.	2.5	40

#	ARTICLE	IF	CITATIONS
19	Surface Acoustic Wave Devices Using Lithium Niobate on Silicon Carbide. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 3653-3666.	4.6	93
20	Low-Loss Unidirectional Acoustic Focusing Transducer in Thin-Film Lithium Niobate. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 2731-2737.	3.0	7
21	5.4 GHz Acoustic Delay Lines in Lithium Niobate Thin Film with 3 dB Insertion Loss. , 2020, , .		2
22	Surface Acoustic Wave Resonators Using Lithium Niobate on Silicon Carbide Platform. , 2020, , .		14
23	10-60-GHz Electromechanical Resonators Using Thin-Film Lithium Niobate. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 5211-5220.	4.6	70
24	Thin-Film Lithium Niobate Based Piezoelectric Micromachined Ultrasound Transducers. , 2020, , .		3
25	Thin-Film Lithium Niobate Acoustic Delay Line Oscillators. , 2020, , .		4
26	5-GHz Antisymmetric Mode Acoustic Delay Lines in Lithium Niobate Thin Film. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 573-589.	4.6	31
27	GHz Low-Loss Acoustic RF Couplers in Lithium Niobate Thin Film. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 1448-1461.	3.0	9
28	High-Q Antisymmetric Mode Lithium Niobate MEMS Resonators With Spurious Mitigation. Journal of Microelectromechanical Systems, 2020, 29, 135-143.	2.5	42
29	Low Phase Noise RF Oscillators Based on Thin-Film Lithium Niobate Acoustic Delay Lines. Journal of Microelectromechanical Systems, 2020, 29, 129-131.	2.5	15
30	GHz Broadband SH <sub>0</sub> Mode Lithium Niobate Acoustic Delay Lines. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 402-412.	3.0	35
31	A Unidirectional Transducer Design for Scaling GHz AlN-Based RF Microsystems. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 1250-1257.	3.0	11
32	A Wideband Oscillator Exploiting Multiple Resonances in Lithium Niobate MEMS Resonator. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 1854-1866.	3.0	11
33	A <sub>1</sub> Resonators in 128° Y-cut Lithium Niobate with Electromechanical Coupling of 46.4%. Journal of Microelectromechanical Systems, 2020, 29, 313-319.	2.5	88
34	8.5 GHz and 11.5 GHz Acoustic Delay Lines Using Higher-Order Lamb Modes in Lithium Niobate Thin Film. , 2020, , .		2
35	Enabling Channelizing Filters for High Impedance Nodes with Temperature Compensated Lamb-Wave Resonators. , 2020, , .		1
36	Suppression of Spurious Modes in Lithium Niobate A <sub>1</sub> Resonators Using Dispersion Matching. , 2020, , .		1

#	ARTICLE	IF	CITATIONS
37	5 GHz A1 Mode Lateral Overtone Bulk Acoustic Resonators in Thin-Film Lithium Niobate. , 2020, , .		7
38	Aluminum Nitride Lamb Wave Delay Lines With Sub-6 dB Insertion Loss. Journal of Microelectromechanical Systems, 2019, 28, 569-571.	2.5	16
39	4.5 GHz Lithium Niobate MEMS Filters With 10% Fractional Bandwidth for 5G Front-Ends. Journal of Microelectromechanical Systems, 2019, 28, 575-577.	2.5	77
40	Gigahertz Low-Loss and Wideband S0 Mode Lithium Niobate Acoustic Delay Lines. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1373-1386.	3.0	49
41	A 1.65 GHz Lithium Niobate A1 Resonator with Electromechanical Coupling of 14% and Q of 3112. , 2019, , .		12
42	Power-Efficient Ovenized Lithium Niobate SH0 Resonator Arrays with Passive Temperature Compensation. , 2019, , .		7
43	Towards Digitally Addressable Delay Synthesis: GHz Low-Loss Acoustic Delay Elements from 20 NS to 900 NS. , 2019, , .		4
44	A Chip-Scale RF MEMS Gyration via Hybridizing Lorentz-Force and Piezoelectric Transductions. , 2019, , .		5
45	Boosting Qs of AlN Resonators by Redefining Acoustic Boundaries. , 2019, , .		7
46	Resonant Torsional Micro-Actuators Using Thin-Film Lithium Niobate. , 2019, , .		6
47	Temperature Stability Analysis of Thin-Film Lithium Niobate SH0 Plate Wave Resonators. Journal of Microelectromechanical Systems, 2019, 28, 799-809.	2.5	17
48	Advancing Lithium Niobate Based Thin Film Devices for 5G Front-Ends. , 2019, , .		7
49	A Radio Frequency Nonreciprocal Network Based on Switched Acoustic Delay Lines. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 1516-1530.	4.6	37
50	Low-Loss and Wideband Acoustic Delay Lines. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 1379-1391.	4.6	40
51	Accurate Extraction of Large Electromechanical Coupling in Piezoelectric MEMS Resonators. Journal of Microelectromechanical Systems, 2019, 28, 209-218.	2.5	80
52	Nanowatt-Level Wakeup Receiver Front Ends Using MEMS Resonators for Impedance Transformation. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 1615-1627.	4.6	40
53	Q-enhanced Lithium Niobate SH0 Resonators with Optimized Acoustic Boundaries. , 2019, , .		12
54	A Highly Reconfigurable Bit-Level Duty-Cycled TRF Receiver Achieving $\sim 106$ -dBm Sensitivity and 33-nW Average Power Consumption. IEEE Solid-State Circuits Letters, 2019, 2, 309-312.	2.0	11

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55	A C-band Lithium Niobate MEMS Filter with 10% Fractional Bandwidth for 5G Front-ends. , 2019, , .		4
56	A C-band Lithium Niobate MEMS Filter with 10% Fractional Bandwidth for 5G Front-ends. , 2019, , .		0
57	5 GHz Acoustic Delay Lines using Antisymmetric Mode in Lithium Niobate Thin Film. , 2019, , .		4
58	A 300-500 MHz Tunable Oscillator Exploiting Ten Overtones in Single Lithium Niobate Resonator. , 2019, , .		7
59	Lithium Niobate Phononic Crystals for Tailoring Performance of RF Laterally Vibrating Devices. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 934-944.	3.0	26
60	A Radio Frequency Non-Reciprocal Network Based on Switched Low-Loss Acoustic Delay Lines. , 2018, , .		2
61	S0-Mode Lithium Niobate Acoustic Delay Lines with 1 dB Insertion Loss. , 2018, , .		22
62	Toward Ka Band Acoustics: Lithium Niobate Asymmetrical Mode Piezoelectric MEMS Resonators. , 2018, , .		70
63	A Radio Frequency Comb Filter for Sparse Fourier Transform-Based Spectrum Sensing. , 2018, , .		2
64	Scaling Acoustic Filters Towards 5G. , 2018, , .		33
65	Lithium niobate lateral overtone resonators for low power frequency-hopping applications. , 2018, , .		16
66	An SHO lithium niobate trans-impedance chirp compressor with high voltage gain. , 2018, , .		4
67	Exploiting parallelism in resonators for large voltage gain in low power wake up radio front ends. , 2018, , .		33
68	Frequency Independent Framework for Synthesis of Programmable Non-reciprocal Networks. Scientific Reports, 2018, 8, 14655.	3.3	17
69	1.7 GHz Y-Cut Lithium Niobate MEMS Resonators with FoM of 336 and $Q$ of $9.15 \times 10^{12}$ . , 2018, , .		12
70	RF Filters with Periodic Passbands for Sparse Fourier Transform-Based Spectrum Sensing. Journal of Microelectromechanical Systems, 2018, 27, 931-944.	2.5	25
71	An SHO Lithium Niobate dispersive delay line for chirp compression-enabled low power radios. , 2017, , .		12
72	5 Ghz lithium niobate MEMS resonators with high FoM of 153. , 2017, , .		75

#	ARTICLE	IF	CITATIONS
73	A 150 MHz voltage controlled oscillator using lithium niobate RF-MEMS resonator. , 2017, , .		11
74	Simultaneous wireless power transfer and communication to chip-scale devices. , 2017, , .		1
75	Lithium Niobate MEMS Chirp Compressors for Near Zero Power Wake-Up Radios. Journal of Microelectromechanical Systems, 2017, 26, 1204-1215.	2.5	30
76	Lithium niobate MEMS devices and subsystems for radio frequency signal processing. , 2017, , .		12
77	An SHO lithium niobate correlator for orthogonal frequency coded spread spectrum communications. , 2017, , .		17
78	A high FoM lithium niobate resonant transformer for passive voltage amplification. , 2017, , .		23
79	Lithium niobate phononic crystals for radio frequency SHO waves. , 2017, , .		2
80	Mitigation of AO spurious modes in AlN MEMS resonators with SiO2 addendums. , 2016, , .		5
81	Analysis and Removal of Spurious Response in SHO Lithium Niobate MEMS Resonators. IEEE Transactions on Electron Devices, 2016, 63, 2066-2073.	3.0	46
82	Piezoelectric RF resonant voltage amplifiers for IoT applications. , 2016, , .		15
83	High speed mid-infrared detectors based on MEMS resonators and spectrally selective metamaterials. , 2016, , .		4
84	Parametric excitation in geometrically optimized AlN contour mode resonators. , 2015, , .		2
85	Study of thermal nonlinearity in lithium niobate-based MEMS resonators. , 2015, , .		28
86	A non-resonant, gravity-induced micro triboelectric harvester to collect kinetic energy from low-frequency jiggling movements of human limbs. Journal of Micromechanics and Microengineering, 2014, 24, 065010.	2.6	13