Roozbeh Tabrizian

List of Publications by Year
in descending order

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51 papers	711 citations	759233 12 h-index	713466 21 g-index
52 all docs	52 docs citations	52 times ranked	582 citing authors

#	Article	IF	Citations
1	Intrinsically Tunable Laminated Ferroelectric Scandium Aluminum Nitride Extensional Resonator Based on Local Polarization Switching. , 2022, , .		8
2	Complementary-Switchable Dual-Mode SHF Scandium Aluminum Nitride BAW Resonator. IEEE Transactions on Electron Devices, 2022, 69, 4624-4631.	3.0	17
3	Dual-Mode Scandium-Aluminum Nitride Lamb-Wave Resonators Using Reconfigurable Periodic Poling. Micromachines, 2022, 13, 1003.	2.9	8
4	Growth of C-Axis Textured AlN Films on Vertical Sidewalls of Silicon Microfins. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 753-759.	3.0	7
5	A Segmentedâ€Target Sputtering Process for Growth of Subâ€50â€‰nm Ferroelectric Scandiumâ€“Aluminumâ€“Nitride Films with Composition and Stress Tuning. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100087.	2.4	27
6	Ferroelectric-on-Si Super-High-Frequency Fin Bulk Acoustic Resonators With Hf_{0.5}Zr_{0.5}O₂ Nanolaminated Transducers. IEEE Microwave and Wireless Components Letters, 2021, 31, 701-704.	3.2	12
7	In-Plane Bulk Acoustic Resonators Using 50nm-Thick Nano-Laminated Ferroelectric Hf0.5Zr0.5O2. , 2021, , .		0
8	High-Q Gallium Nitride Thickness-Shear Baw Resonators with Reduced Temperature Sensitivty. , 2021, , .		0
9	Intrinsically Switchable Ferroelectric Scandium Aluminum Nitride Lamb-Mode Resonators. IEEE Electron Device Letters, 2021, 42, 1065-1068.	3.9	25
10	Resolving Mechanical Properties and Morphology Evolution of Freeâ€Standing Ferroelectric Hf_{0.5}Zr_{0.5}O₂. Advanced Engineering Materials, 2021, 23, 2101221.	3.5	9
11	Excitation of high-frequency in-plane bulk acoustic resonance modes in geometrically engineered hafnium zirconium oxide nano-electro-mechanical membrane. Applied Physics Letters, 2020, 117, .	3.3	7
12	Clandestine nanoelectromechanical tags for identification and authentication. Microsystems and Nanoengineering, 2020, 6, 103.	7.0	4
13	A High-Q 30nm-Thick MFM Resonator Using Ferroelectric Hafnium Zirconium Oxide. , 2020, , .		1
14	Thermo-Acoustic Engineering of GaN SAW Resonators for Stable Clocks in Extreme Environments. , 2020, , .		5
15	A 30-nm thick integrated hafnium zirconium oxide nano-electro-mechanical membrane resonator. Applied Physics Letters, 2020, 116, .	3.3	17
16	Acoustically Coupled Wideband RF Filters with Bandwidth Reconfigurablity Using Ferroelectric Aluminum Scandium Nitride Film. , 2020, , .		11
17	10.1063/1.5134856.1. , 2020, , .		0
18	Dispersion-Engineered Guided-Wave Resonators in Anisotropic Single-Crystal Substratesâ€”Part II: Numerical and Experimental Characterization. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1149-1154.	3.0	10

#	Article	IF	Citations
19	An ultrathin integrated nanoelectromechanical transducer based on hafnium zirconium oxide. Nature Electronics, 2019, 2, 506-512.	26.0	42
20	High-Q UHF and SHF Bulk Acoustic Wave Resonators with Ten-Nanometer Hf_{0.5}Zr_{0.5}O₂ Ferroelectric Transducer. , 2019, , .		6
21	A Non-Reciprocal Filter Using Asymmetrically Transduced Micro-Acoustic Resonators. IEEE Electron Device Letters, 2019, 40, 800-803.	3.9	10
22	A Super-High-Frequency Non-Released Silicon Fin Bulk Acoustic Resonator. , 2019, , .		3
23	Dispersion-Engineered Guided-Wave Resonators in Anisotropic Single-Crystal Substratesâ€”Part I: Concept and Analytical Design. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1140-1148.	3.0	12
24	Non-Reciprocal Acoustoelectric Amplification in Germanium-Based Lamb Wave Delay Lines. , 2019, , .		3
25	Sputter Process Optimization for Al_{0.7}Sc_{0.3}N Piezoelectric Films. , 2019, , .		10
26	Characterizing Micro- and Nano-Materials Based on Their Ultrasonic Dispersion Properties: A Feasibility Study. , 2018, , .		1
27	A Nano-Mechanical Resonator with 10nm Hafnium-Zirconium Oxide Ferroelectric Transducer. , 2018, , .		9
28	Multi-Mode Micromechanical Resonant Tags for Traceability and Authentication Applications. , 2018, , .		1
29	Exploiting elastic anharmonicity in aluminum nitride matrix for phase-synchronous frequency reference generation. Applied Physics Letters, 2018, 112, 123503.	3.3	2
30	High k<inf>t</inf>².Q silicon Fin Bulk Acoustic Resonators (FinBAR) FOR chip-scale multi-band spectrum analysis. , 2018, , .		2
31	Power-insensitive silicon crystal-cut for amplitude-stable frequency synthesis. , 2017, , .		11
32	The effect of elastic anharmonicity on the nonlinear behavior of waveguide-based AlN resonator. , 2017, , .		3
33	High-Q silicon fin bulk acoustic resonators for signal processing beyond the UHF. , 2017, , .		5
34	Anti-symmetric shear-extensional AlN lamb-wave resonators with k<inf>t</inf>2 > 4%. , 2017, , .		0
35	Fabrication Process Flows for Implementation of Piezoelectric MEMS Resonators. Microsystems and Nanosystems, 2017, , 283-298.	0.1	1
36	Bilayer nano-waveguide resonators for sensing applications. , 2016, , .		3

#	Article	IF	Citations
37	High-Q energy trapping of temperature-stable shear waves with LamÃ© cross-sectional polarization in a single crystal silicon waveguide. Applied Physics Letters, 2016, 108, .	3.3	12
38	Temperature compensated MEMS oscillator using structural resistance based temperature sensing. , 2015, , .		0
39	Investigation Into the Quality Factor of Piezoelectric-on-Silica Micromachined Resonators. Journal of Microelectromechanical Systems, 2015, 24, 1695-1702.	2.5	7
40	Thermo-acoustic engineering of silicon microresonators via evanescent waves. Applied Physics Letters, 2015, 106, .	3.3	17
41	Dual-Mode AlN-on-Silicon Micromechanical Resonators for Temperature Sensing. IEEE Transactions on Electron Devices, 2014, 61, 591-597.	3.0	42
42	High-Frequency AlN-on-Silicon Resonant Square Gyroscopes. Journal of Microelectromechanical Systems, 2013, 22, 1007-1009.	2.5	36
43	Temperature-Stable Silicon Oxide (SilOx) Micromechanical Resonators. IEEE Transactions on Electron Devices, 2013, 60, 2656-2663.	3.0	113
44	Acoustically-engineered multi-port AlN-on-silicon resonators for accurate temperature sensing. , 2013, , .		12
45	A 27 MHz temperature compensated MEMS oscillator with sub-ppm instability. , 2012, , .		34
46	Energy dissipation in micromechanical resonators. Proceedings of SPIE, 2011, , .	0.8	21
47	Laterally-excited silicon bulk acoustic resonators with sidewall AlN. , 2011, , .		5
48	Tunable silicon bulk acoustic resonators with multi-face AlN transduction. , 2011, , .		4
49	Effect of phonon interactions on limiting the f.Q product of micromechanical resonators. , 2009, , .		106
50	Low-loss MEMS band-pass filters with improved out-of-band rejection by exploiting inductive parasitics. , 2009, , .		5
51	Compensation, Tuning, and Trimming of MEMS Resonators. Advanced Micro & Nanosystems, 0, , 305-325.	0.2	2