

Rebecca L Peterson

List of Publications by Year in descending order

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80
papers

2,600
citations

331259

21
h-index

223531

46
g-index

80
all docs

80
docs citations

80
times ranked

3322
citing authors

#	ARTICLE	IF	CITATIONS
1	Low-temperature, high-performance solution-processed metal oxide thin-film transistors formed by a sol-gel on chip process. <i>Nature Materials</i> , 2011, 10, 45-50.	13.3	935
2	Harvesting traffic-induced vibrations for structural health monitoring of bridges. <i>Journal of Micromechanics and Microengineering</i> , 2011, 21, 104005.	1.5	110
3	Fused-Silica Micro Birdbath Resonator Gyroscope (μ -BRG). <i>Journal of Microelectromechanical Systems</i> , 2014, 23, 66-77.	1.7	101
4	High Performance, Low Temperature Solution-Processed Barium and Strontium Doped Oxide Thin Film Transistors. <i>Chemistry of Materials</i> , 2014, 26, 1195-1203.	3.2	62
5	Thinned-PZT on SOI process and design optimization for piezoelectric inertial energy harvesting. , 2011, , .		60
6	3-Dimensional Blow Torch-Molding of Fused Silica Microstructures. <i>Journal of Microelectromechanical Systems</i> , 2013, 22, 1276-1284.	1.7	60
7	Monolithic integration of high-voltage thin-film electronics on low-voltage integrated circuits using a solution process. <i>Nature Electronics</i> , 2019, 2, 540-548.	13.1	56
8	Low-Temperature Sintering of In-Plane Self-Assembled ZnO Nanorods for Solution-Processed High-Performance Thin Film Transistors. <i>Journal of Physical Chemistry C</i> , 2007, 111, 18831-18835.	1.5	55
9	Long-term testing of a vibration harvesting system for the structural health monitoring of bridges. <i>Sensors and Actuators A: Physical</i> , 2014, 217, 139-150.	2.0	53
10	Interfacial reactions of titanium/gold ohmic contacts with Sn-doped In_2O_3 -Ga 2O_3 . <i>APL Materials</i> , 2019, 7, .	2.2	51
11	Molybdenum as a contact material in zinc tin oxide thin film transistors. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	45
12	<i>In Situ</i> Chemical Modification of Schottky Barrier in Solution-Processed Zinc Tin Oxide Diode. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 23801-23809.	4.0	44
13	High-Q fused silica birdbath and hemispherical 3-D resonators made by blow torch molding. , 2013, , .		40
14	Air flow sensing using micro-wire-bonded hair-like hot-wire anemometry. <i>Journal of Micromechanics and Microengineering</i> , 2013, 23, 085017.	1.5	39
15	Wafer-Level Integration of High-Quality Bulk Piezoelectric Ceramics on Silicon. <i>IEEE Transactions on Electron Devices</i> , 2013, 60, 2022-2030.	1.6	39
16	A self-supplied inertial piezoelectric energy harvester with power-management IC. , 2011, , .		37
17	A CPW T-resonator technique for electrical characterization of microwave substrates. <i>IEEE Microwave and Wireless Components Letters</i> , 2002, 12, 90-92.	2.0	35
18	High aspect ratio deep silicon etching. , 2012, , .		35

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19	Area-Selective Atomic Layer Deposition Patterned by Electrohydrodynamic Jet Printing for Additive Manufacturing of Functional Materials and Devices. ACS Nano, 2020, 14, 17262-17272.	7.3	33
20	High-Performance Zinc Tin Oxide TFTs with Active Layers Deposited by Atomic Layer Deposition. Advanced Electronic Materials, 2020, 6, 2000195.	2.6	33
21	A CMOS-compatible piezoelectric vibration energy scavenger based on the integration of bulk PZT films on silicon. , 2010, , .		32
22	Accelerated Aging Stability of In^{2+} -Ga ₂ O ₃ Titanium/Gold Ohmic Interfaces. ACS Applied Materials & Interfaces, 2020, 12, 46277-46287.	4.0	29
23	Micro-hydraulic structure for high performance bio-mimetic air flow sensor arrays. , 2011, , .		28
24	A high-Q birdbath resonator gyroscope (BRG). , 2013, , .		28
25	Piezoelectrically transduced high-Q silica micro resonators. , 2013, , .		24
26	Process and characterization of ohmic contacts for beta-phase gallium oxide. Journal of Materials Research, 2021, 36, 4771-4789.	1.2	24
27	Multistage Planar Thermoelectric Microcoolers. Journal of Microelectromechanical Systems, 2011, 20, 1201-1210.	1.7	23
28	Observation of impurity band conduction and variable range hopping in heavily doped (010) In^{2+} -Ga ₂ O ₃ . Semiconductor Science and Technology, 2019, 34, 03LT02.	1.0	23
29	Charge transport in solution-processed zinc tin oxide thin film transistors. Journal of Materials Research, 2012, 27, 2286-2292.	1.2	22
30	Thermally stable yttrium-scandium oxide high-k dielectrics deposited by a solution process. Journal Physics D: Applied Physics, 2016, 49, 115109.	1.3	21
31	Ternary Alloy Rare-Earth Scandate as Dielectric for β -Ga ₂ O ₃ MOS Structures. IEEE Transactions on Electron Devices, 2019, 66, 2489-2495.	1.6	21
32	Ultrathin Strained-SOI by Stress Balance on Compliant Substrates and FET Performance. IEEE Transactions on Electron Devices, 2005, 52, 2207-2214.	1.6	20
33	Annealing Induced Interfacial Evolution of Titanium/Gold Metallization on Unintentionally Doped In^{2+} -Ga ₂ O ₃ . ECS Journal of Solid State Science and Technology, 2019, 8, Q3176-Q3179.	0.9	20
34	Tunable uniaxial vs biaxial in-plane strain using compliant substrates. Applied Physics Letters, 2005, 87, 061922.	1.5	19
35	Reduced buckling in one dimension versus two dimensions of a compressively strained film on a compliant substrate. Applied Physics Letters, 2006, 88, 201913.	1.5	18
36	Effect of relative humidity and pre-annealing temperature on spin-coated zinc tin oxide films made via the metal-organic decomposition route. Journal of Materials Chemistry C, 2017, 5, 8071-8081.	2.7	18

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37	Causes of the Difference Between Hall Mobility and Field-Effect Mobility for p-Type RF Sputtered Cu ₂ O Thin-Film Transistors. IEEE Transactions on Electron Devices, 2020, 67, 5557-5563.	1.6	17
38	A 3-DOF piezoelectric micro vibratory stage based on bulk-PZT/silicon crab-leg suspensions. , 2013, , .		16
39	The effects of localized tail states on charge transport mechanisms in amorphous zinc tin oxide Schottky diodes. Semiconductor Science and Technology, 2017, 32, 12LT02.	1.0	16
40	Parylene microprobes with engineered stiffness and shape for improved insertion. , 2011, , .		15
41	Harvesting traffic-induced bridge vibrations. , 2011, , .		15
42	Plasma-Enhanced Atomic Layer Deposition of p-Type Copper Oxide Semiconductors with Tunable Phase, Oxidation State, and Morphology. Journal of Physical Chemistry C, 2021, 125, 9383-9390.	1.5	15
43	Passivation of Thin Channel Zinc Tin Oxide TFTs Using Al ₂ O ₃ Deposited by O ₃ -Based Atomic Layer Deposition. IEEE Electron Device Letters, 2019, 40, 1120-1123.	2.2	14
44	High Stroke and High Deflection Bulk-PZT Diaphragm and Cantilever Micro Actuators and Effect of Pre-Stress on Device Performance. Journal of Microelectromechanical Systems, 2014, 23, 438-451.	1.7	13
45	Energy harvesting of radio frequency and vibration energy to enable wireless sensor monitoring of civil infrastructure. , 2011, , .		12
46	Drie of fused silica. , 2013, , .		12
47	Fabrication of multi-layer vertically stacked fused silica microsystems. , 2013, , .		12
48	Maximizing uniaxial tensile strain in large-area silicon-on-insulator islands on compliant substrates. Journal of Applied Physics, 2006, 100, 023537.	1.1	11
49	Technology for fabricating dense 3-D microstructure arrays for biomimetic hair-like sensors. , 2013, , .		11
50	Post-CMOS FinFET Integration of Bismuth Telluride and Antimony Telluride Thin-Film-Based Thermoelectric Devices on Sol Substrate. IEEE Electron Device Letters, 2013, 34, 1334-1336.	2.2	11
51	A scalable, modular, multi-stage, peristaltic, electrostatic gas micro-pump. , 2012, , .		10
52	Effects of high temperature annealing on the atomic layer deposited HfO ₂ / ¹² -Ga ₂ O ₃ (010) interface. Journal of Applied Physics, 2022, 131, .	1.1	10
53	A 6-DOF piezoelectric micro vibratory stage based on multi-axis distributed-electrode excitation of PZT/Si unimorph T-beams. , 2013, , .		9
54	The roles of rare-earth dopants in solution-processed ZnO-based transparent conductive oxides. Journal of Applied Physics, 2017, 122, 105301.	1.1	9

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55	Hair-based sensors for micro-autonomous systems. Proceedings of SPIE, 2012, , .	0.8	8
56	A 2-D directional air flow sensor array made using stereolithography and MEMS micro-hydraulic structures. , 2013, , .		7
57	Exploiting In Situ Redox and Diffusion of Molybdenum to Enable Thin-Film Circuitry for Low-Cost Wireless Energy Harvesting. Advanced Functional Materials, 2019, 29, 1806002.	7.8	7
58	High sensitivity, high density micro-hydraulic force sensor array utilizing stereo-lithography fabrication technique. , 2013, , .		6
59	High-speed electrostatic micro-hydraulics for sensing and actuation. , 2013, , .		6
60	Valve-only pumping in mechanical gas micropumps. , 2013, , .		5
61	Charge trapping and recovery in ALD HfO ₂ /In ₂ -Ga ₂ O ₃ (010) MOS capacitors. Semiconductor Science and Technology, 2021, 36, 04LT01.	1.0	5
62	Experimental and theoretical study of hole scattering in RF sputtered p-type Cu ₂ O thin films. Applied Physics Letters, 2022, 120, .	1.5	5
63	Extraction of SnO Subbandgap Defect Density by Numerical Modeling of p-Type TFTs. IEEE Transactions on Electron Devices, 2022, 69, 2436-2442.	1.6	5
64	A two-tiered self-powered wireless monitoring system architecture for bridge health management. Proceedings of SPIE, 2010, , .	0.8	4
65	Electromagnetic generator optimization for non-resonant energy harvester. , 2014, , .		4
66	Highly-reliable electrostatic actuator using filleted electrode made with photoresist solvent reflow. , 2013, , .		3
67	High-speed air microjet arrays produced using acoustic streaming for micro propulsion. , 2013, , .		3
68	Iodine-treated starch as easy-to-use, biodegradable material with controllable swelling and stiffening properties. , 2013, , .		2
69	Wide bandgap oxides. APL Materials, 2019, 7, .	2.2	2
70	A CPW T-Resonator Technique for Electrical Characterization of Microwave Substrates. , 2001, , .		1
71	Relaxed SiGe Layers with High Ge Content by Compliant Substrates. Materials Research Society Symposia Proceedings, 2003, 768, 171.	0.1	1
72	Island Scaling Effects on Photoluminescence of Strained SiGe/Si (100). Materials Research Society Symposia Proceedings, 2004, 809, B8.4.1.	0.1	1

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73	Comment on "Fabrication of strained silicon on insulator by strain transfer process" [Appl. Phys. Lett. 87, 051921 (2005)]. Applied Physics Letters, 2006, 88, 146101.	1.5	1
74	Enhancing breakdown voltage in amorphous zinc tin oxide Schottky diode. , 2017, , .		1
75	Relaxed SiGe Layers with High Ge Content by Compliant Substrates. Materials Research Society Symposia Proceedings, 2003, 765, 1.	0.1	1
76	A Multiphysics Reduced Order Model of Valve Pumping in a 4-Stage Vacuum Micropump. , 2012, , .		1
77	Theoretical and Experimental Analysis of Active Valve Pumping for High Flow Rate Applications. , 2013, , .		0
78	Increased blocking voltage in solution processed ZTO HVTFTs through drain offset. , 2017, , .		0
79	Thin Films: Exploiting In Situ Redox and Diffusion of Molybdenum to Enable Thin-Film Circuitry for Low-Cost Wireless Energy Harvesting (Adv. Funct. Mater. 5/2019). Advanced Functional Materials, 2019, 29, 1970029.	7.8	0
80	(Invited) Monolithic Integration of Zinc Tin Oxide Electronics. ECS Meeting Abstracts, 2020, MA2020-01, 1328-1328.	0.0	0