

Nathan D Orloff

List of Publications by Year in descending order

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58
papers

1,224
citations

394421

19
h-index

377865

34
g-index

59
all docs

59
docs citations

59
times ranked

1976
citing authors

#	ARTICLE	IF	CITATIONS
1	Exploiting dimensionality and defect mitigation to create tunable microwave dielectrics. <i>Nature</i> , 2013, 502, 532-536.	27.8	204
2	Superconducting metamaterials. <i>Applied Physics Letters</i> , 2005, 87, 034102.	3.3	155
3	Quantitative Permittivity Measurements of Nanoliter Liquid Volumes in Microfluidic Channels to 40 GHz. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2010, 59, 3279-3288.	4.7	140
4	Manipulating particle trajectories with phase-control in surface acoustic wave microfluidics. <i>Biomicrofluidics</i> , 2011, 5, 44107-441079.	2.4	48
5	Passive Intermodulation Due to Self-Heating in Printed Transmission Lines. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2011, 59, 311-322.	4.6	45
6	Dielectric Characterization by Microwave Cavity Perturbation Corrected for Nonuniform Fields. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2014, 62, 2149-2159.	4.6	43
7	Lightweight, Flexible, High-Performance Carbon Nanotube Cables Made by Scalable Flow Coating. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 4903-4910.	8.0	38
8	A Compact Variable-Temperature Broadband Series-Resistor Calibration. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2011, 59, 188-195.	4.6	35
9	Electro-thermo-mechanical model for bulk acoustic wave resonators. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2013, 60, 2389-2403.	3.0	35
10	Label-free detection of conformational changes in switchable DNA nanostructures with microwave microfluidics. <i>Nature Communications</i> , 2019, 10, 1174.	12.8	33
11	High efficiency carbon nanotube thread antennas. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	29
12	Hybrid Characterization of Nanolitre Dielectric Fluids in a Single Microfluidic Channel Up to 110 GHz. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2017, 65, 5063-5073.	4.6	29
13	Carbon nanotube thin film patch antennas for wireless communications. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	29
14	Targeted chemical pressure yields tuneable millimetre-wave dielectric. <i>Nature Materials</i> , 2020, 19, 176-181.	27.5	27
15	A Multireflect-Thru Method of Vector Network Analyzer Calibration. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2017, 65, 905-915.	4.6	26
16	Multiscale metrologies for process optimization of carbon nanotube polymer composites. <i>Carbon</i> , 2016, 108, 381-393.	10.3	24
17	Modeling electrical double-layer effects for microfluidic impedance spectroscopy from 100 kHz to 110 GHz. <i>Lab on A Chip</i> , 2017, 17, 2674-2681.	6.0	24
18	A Multistate Single-Connection Calibration for Microwave Microfluidics. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2018, 66, 1099-1107.	4.6	24

#	ARTICLE	IF	CITATIONS
19	Broadband Permittivity of Liquids Extracted from Transmission Line Measurements of Microfluidic Channels. IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium, 2007, , .	0.0	23
20	Third-Order Intermodulation Distortion and Harmonic Generation in Mismatched Weakly Nonlinear Transmission Lines. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 10-18.	4.6	17
21	First-Order Elastic Nonlinearities of Bulk Acoustic Wave Resonators. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 1206-1213.	4.6	13
22	Integrated bioprinting and imaging for scalable, networkable desktop experimentation. RSC Advances, 2014, 4, 34721-34728.	3.6	13
23	Noncontact conductivity and dielectric measurement for high throughput roll-to-roll nanomanufacturing. Scientific Reports, 2015, 5, 17019.	3.3	13
24	Giant Surface Conductivity Enhancement in a Carbon Nanotube Composite by Ultraviolet Light Exposure. ACS Applied Materials & Interfaces, 2016, 8, 23230-23235.	8.0	13
25	Broadband Characterization of Multilayer Dielectric Thin-Films. IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium, 2007, , .	0.0	12
26	Trade-off between the Mechanical Strength and Microwave Electrical Properties of Functionalized and Irradiated Carbon Nanotube Sheets. ACS Applied Materials & Interfaces, 2016, 8, 9327-9334.	8.0	12
27	Measuring ion-pairing and hydration in variable charge supramolecular cages with microwave microfluidics. Communications Chemistry, 2019, 2, .	4.5	12
28	Temperature-dependent dielectric relaxation in bismuth zinc niobate thin films. Applied Physics Letters, 2010, 97, 022902.	3.3	11
29	New Methods for Series-Resistor Calibrations on Substrates With Losses Up to 110 GHz. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 4287-4297.	4.6	11
30	Influence of the central mode and soft phonon on the microwave dielectric loss near the strain-induced ferroelectric phase transitions in $Sr_{1-x}Ca_xTiO_3$ thin films. Applied Physics Letters, 2017, 110, 081101.	3.2	10
31	Three-Port Frequency-Selective Absorptive Limiter. IEEE Microwave and Wireless Components Letters, 2017, 27, 479-481.	3.2	10
32	Cure temperature influences composite electrical properties by carbon nanotube-rich domain formation. Composites Science and Technology, 2016, 133, 23-32.	7.8	9
33	Special topic on materials and devices for 5G electronics. Applied Physics Letters, 2022, 120, .	3.3	7
34	Optimal Series Resistors for On-Wafer Calibrations. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 196-210.	4.6	5
35	Materials Characterization With Multiple Offset Reflects at Frequencies to 110 GHz. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 184-195.	4.6	5
36	Collector Series-Resistor to Stabilize a Broadband 400 GHz Common-Base Amplifier. IEEE Transactions on Terahertz Science and Technology, 2022, 12, 63-69.	3.1	5

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37	Superconducting Multiplexer Filter Bank for a Frequency-Selective Power Limiter. IEEE Transactions on Applied Superconductivity, 2011, 21, 542-546.	1.7	4
38	Measurement of Ion-Pairing Interactions in Buffer Solutions With Microwave Microfluidics. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2019, 3, 184-190.	3.4	4
39	How to extract distributed circuit parameters from the scattering parameters of a transmission line. , 2017, , .		3
40	The Effect of Annealing Thin Film Parylene C-Platinum Interfaces Characterized by Broadband Dielectric Spectroscopy. , 2021, , .		3
41	Electro-optically derived millimeter-wave sources with phase and amplitude control. Applied Physics Letters, 2021, 119, 151106.	3.3	3
42	Measurement of the Microwave Nonlinear Response of Combined Ferroelectric-Superconductor Transmission Lines. IEEE Transactions on Applied Superconductivity, 2009, 19, 940-943.	1.7	2
43	A Large-Signal Model of Ferroelectric Thin-Film Transmission Lines. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 3059-3067.	4.6	2
44	Sub-Nanosecond Tuning of Microwave Resonators Fabricated on Ruddlesden-Popper Dielectric Thin Films. Advanced Materials Technologies, 2018, 3, 1800090.	5.8	2
45	Impedance tuning with photoconductors to 40 GHz. IET Optoelectronics, 2019, 13, 177-182.	3.3	2
46	Microwave Measurements for Conductive Anisotropic Materials. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 4913-4924.	4.6	2
47	Broadband, High-Frequency Permittivity Characterization for Epitaxial $\text{Ba}_1\text{O}_3\text{M}_2\text{O}_x$ Composition-Spread Thin Films. Physical Review Applied, 2021, 15, .		2
48	High-Gain 500-GHz InP HBT Power Amplifiers. , 2021, , .		2
49	Third-order intermodulation distortion due to self-heating in gold coplanar waveguides. , 2010, , .		1
50	Modeling of Self-Heating Mechanism in the Design of Superconducting Limiters. IEEE Transactions on Applied Superconductivity, 2011, 21, 547-550.	1.7	1
51	Three Planar Devices for Extracting Capacitance per Unit Length. , 2019, , .		1
52	Measurements of Nonlinear Polarization Dynamics in the Tens of Gigahertz. Physical Review Applied, 2020, 13, .	3.8	1
53	Broadband permittivity measurements of thin-film ferroelectrics to 40 GHz. , 2008, , .		0
54	Nonlinear effects in thin-film ferroelectric transmission lines at microwave frequencies. , 2008, , .		0

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55	Broadband Dielectric Spectroscopy of Bovine Serum Albumin and Insulin Solutions in Nanoliter Volumes. Biophysical Journal, 2010, 98, 193a.	0.5	0
56	Qualitative multidimensional calibration comparison. , 2017, , .		0
57	Frequency- and Electric Field-Dependent Physical Model of Ferroelectric Materials in the Tens of GHz. , 2018, , .		0
58	Determining Carbon Fiber Composite Loading with Flip-Chip Measurements to 110 GHz. , 2018, , .		0