Peter G Steeneken

List of Publications by Year
in descending order

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107 papers	2,858 citations	201575 27 h-index	214721 47 g-index
114 all docs	114 docs citations	114 times ranked	3012 citing authors

#	Article	IF	Citations
1	Exchange Splitting and Charge Carrier Spin Polarization in EuO. Physical Review Letters, 2002, 88, 047201.	2.9	206
2	Piezoresistive heat engine and refrigerator. Nature Physics, 2011, 7, 354-359.	6.5	144
3	Graphene Squeeze-Film Pressure Sensors. Nano Letters, 2016, 16, 568-571.	4.5	143
4	Nonlinear dynamic characterization of two-dimensional materials. Nature Communications, 2017, 8, 1253.	5.8	96
5	Isoreticular two-dimensional magnetic coordination polymers prepared through pre-synthetic ligand functionalization. Nature Chemistry, 2018, 10, 1001-1007.	6.6	94
6	Nanoelectromechanical Sensors Based on Suspended 2D Materials. Research, 2020, 2020, 8748602.	2.8	93
7	Photoemission and x-ray-absorption study of misfit-layered (Bi,Pb)-Sr-Co-O compounds: Electronic structure of a hole-doped Co-O triangular lattice. Physical Review B, 2001, 64, .	1.1	86
8	A Five-Band Reconfigurable PIFA for Mobile Phones. IEEE Transactions on Antennas and Propagation, 2007, 55, 3300-3309.	3.1	82
9	Visualizing the Motion of Graphene Nanodrums. Nano Letters, 2016, 16, 2768-2773.	4.5	74
10	Dynamics and squeeze film gas damping of a capacitive RF MEMS switch. Journal of Micromechanics and Microengineering, 2005, 15, 176-184.	1.5	73
11	Magnetic and electronic phase transitions probed by nanomechanical resonators. Nature Communications, 2020, 11, 2698.	5.8	69
12	Highly Anisotropic Mechanical and Optical Properties of 2D Layered As₂S₃ Membranes. ACS Nano, 2019, 13, 10845-10851.	7.3	60
13	Controlling the anisotropy of a van der Waals antiferromagnet with light. Science Advances, 2021, 7, .	4.7	59
14	Characterization of dielectric charging in RF MEMS capacitive switches. , 2006, , .		49
15	Tuning nonlinear damping in graphene nanoresonators by parametricâ€“direct internal resonance. Nature Communications, 2021, 12, 1099.	5.8	49
16	Static Capacitive Pressure Sensing Using a Single Graphene Drum. ACS Applied Materials & Interfaces, 2017, 9, 43205-43210.	4.0	47
17	Voltageâ€Controlled Surface Wrinkling of Elastomeric Coatings. Advanced Materials, 2013, 25, 3438-3442.	11.1	46
18	Sensitive capacitive pressure sensors based on graphene membrane arrays. Microsystems and Nanoengineering, 2020, 6, 102.	3.4	44

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19	Amplitude saturation of MEMS resonators explained by autoparametric resonance. Journal of Micromechanics and Microengineering, 2010, 20, 105012.	1.5	42
20	Size- and temperature-dependent bending rigidity of graphene using modal analysis. Carbon, 2018, 139, 334-341.	5.4	42
21	Opto-thermally excited multimode parametric resonance in graphene membranes. Scientific Reports, 2018, 8, 9366.	1.6	42
22	Sealing Graphene Nanodrums. Nano Letters, 2019, 19, 5313-5318.	4.5	41
23	Dynamics of 2D material membranes. 2D Materials, 2021, 8, 042001.	2.0	41
24	High-Frequency Stochastic Switching of Graphene Resonators Near Room Temperature. Nano Letters, 2019, 19, 1282-1288.	4.5	39
25	Optomechanics for thermal characterization of suspended graphene. Physical Review B, 2017, 96, .	1.1	38
26	A 10MHz piezoresistive MEMS resonator with high Q. , 2006, , .		36
27	Microelectromechanical tunable capacitors for reconfigurable RF architectures. Journal of Micromechanics and Microengineering, 2006, 16, 601-611.	1.5	36
28	Kelvin probe study of laterally inhomogeneous dielectric charging and charge diffusion in RF MEMS capacitive switches. , 2008, , .		35
29	RF MEMS tunable capacitors with large tuning ratio. , 0, , .		33
30	Time and voltage dependence of dielectric charging in RF MEMS capacitive switches. , 2007, , .		33
31	Center-Shift Method for the Characterization of Dielectric Charging in RF MEMS Capacitive Switches. IEEE Transactions on Semiconductor Manufacturing, 2008, 21, 148-153.	1.4	33
32	Spiderweb Nanomechanical Resonators via Bayesian Optimization: Inspired by Nature and Guided by Machine Learning. Advanced Materials, 2022, 34, e2106248.	11.1	31
33	Probing nanomotion of single bacteria with graphene drums. Nature Nanotechnology, 2022, 17, 637-642.	15.6	30
34	Crossing the Gap fromp- ton-Type Doping: Nature of the States near the Chemical Potential inLa2â^'xSrxCuO4andNd2â^'xCexCuO4â^Í´. Physical Review Letters, 2003, 90, 247005.	2.9	29
35	Inkjetâ€Printed Highâ€‹i›Q‹/i› Nanocrystalline Diamond Resonators. Small, 2019, 15, e1803774.	5.2	29
36	High-quality-factor tantalum oxide nanomechanical resonators by laser oxidation of TaSe2. Nano Research, 2015, 8, 2842-2849.	5.8	27

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37	On-chip Heaters for Tension Tuning of Graphene Nanodrums. Nano Letters, 2018, 18, 2852-2858.	4.5	27
38	Ultrathin complex oxide nanomechanical resonators. Communications Physics, 2020, 3, .	2.0	24
39	Colorimetry Technique for Scalable Characterization of Suspended Graphene. Nano Letters, 2016, 16, 6792-6796.	4.5	23
40	Graphene gas osmometers. 2D Materials, 2017, 4, 011002.	2.0	23
41	Chemical Design and Magnetic Ordering in Thin Layers of 2D Metalâ€“Organic Frameworks (MOFs). Journal of the American Chemical Society, 2021, 143, 18502-18510.	6.6	22
42	High-frequency gas effusion through nanopores in suspended graphene. Nature Communications, 2020, 11, 6025.	5.8	21
43	Nanomechanical probing and strain tuning of the Curie temperature in suspended Cr2Ge2Te6-based heterostructures. Npj 2D Materials and Applications, 2022, 6, .	3.9	21
44	The Avalanche-Mode Superjunction LED. IEEE Transactions on Electron Devices, 2017, 64, 1612-1618.	1.6	20
45	Experimental characterization of graphene by electrostatic resonance frequency tuning. Journal of Applied Physics, 2017, 122, 234302.	1.1	20
46	High-Q integrated RF passives and RF-MEMS on silicon. Materials Research Society Symposia Proceedings, 2003, 783, 311.	0.1	18
47	Direct and parametric synchronization of a graphene self-oscillator. Applied Physics Letters, 2017, 110, .	1.5	18
48	Sensitive Transfer-Free Wafer-Scale Graphene Microphones. ACS Applied Materials & Interfaces, 2022, 14, 21705-21712.	4.0	18
49	MEMS oscillating squeeze-film pressure sensor with optoelectronic feedback. Journal of Micromechanics and Microengineering, 2015, 25, 045011.	1.5	17
50	Nonlinear dynamic identification of grapheneâ€™s elastic modulus via reduced order modeling of atomistic simulations. Journal of the Mechanics and Physics of Solids, 2019, 122, 161-176.	2.3	17
51	Graphene mechanical pixels for Interferometric Modulator Displays. Nature Communications, 2018, 9, 4837.	5.8	16
52	Identifying degradation mechanisms in RF MEMS capacitive switches. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	15
53	Graphene gas pumps. 2D Materials, 2018, 5, 031009.	2.0	15
54	Rigid body dynamics of diamagnetically levitating graphite resonators. Applied Physics Letters, 2020, 116, 243505.	1.5	15

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55	Small, low-ohmic RF MEMS switches with thin-film package. , 2011, , .		14
56	Very large scale characterization of graphene mechanical devices using a colorimetry technique. Nanoscale, 2017, 9, 7559-7564.	2.8	14
57	Amplitude calibration of 2D mechanical resonators by nonlinear optical transduction. Applied Physics Letters, 2017, 111, 253104.	1.5	14
58	A Miniaturized Low Power Pirani Pressure Sensor Based on Suspended Graphene. , 2018, , .		14
59	Study of charge density waves in suspended 2H-TaS2 and 2H-TaSe2 by nanomechanical resonance. Applied Physics Letters, 2021, 118, .	1.5	14
60	Transient thermal characterization of suspended monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm Physical Review Materials, 2018, 2, .	3.1	14
61	Nonequilibrium thermodynamics of acoustic phonons in suspended graphene. Physical Review Research, 2020, 2, .	1.3	13
62	Tunable Strong Coupling of Mechanical Resonance between Spatially Separated FePS₃ Nanodrums. Nano Letters, 2022, 22, 36-42.	4.5	13
63	Multi-layer graphene pirani pressure sensors. Nanotechnology, 2021, 32, 335501.	1.3	12
64	Narrow Bandwidth Single-Resonator MEMS Tuning Fork Filter. Frequency Control Symposium and Exhibition, Proceedings of the IEEE International, 2007, , .	0.0	11
65	Numerical Path Following as an Analysis Method for Electrostatic MEMS. Journal of Microelectromechanical Systems, 2009, 18, 488-499.	1.7	11
66	Design optimization of field-plate assisted RESURF devices. , 2013, , .		11
67	Low power wide spectrum optical transmitter using avalanche mode LEDs in SOI CMOS technology. Optics Express, 2017, 25, 16981.	1.7	11
68	Mechanical dissipation by substrateâ€“mode coupling in SiN resonators. Applied Physics Letters, 2022, 121, .	1.5	11
69	Ideal RESURF Geometries. IEEE Transactions on Electron Devices, 2015, 62, 3341-3347.	1.6	10
70	Mass measurement of graphene using quartz crystal microbalances. Applied Physics Letters, 2019, 115, .	1.5	10
71	Self-Sealing Complex Oxide Resonators. Nano Letters, 2022, 22, 1475-1482.	4.5	10
72	Weight of zero-loss electrons and sum rules in extrinsic processes that can influence photoemission spectra. Physical Review B, 2001, 63, .	1.1	9

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73	Work function changes in the double layered manganiteLa1.2Sr1.8Mn2O7. Physical Review B, 2001, 64, .	1.1	9
74	Empirical and theoretical characterisation of electrostatically driven MEMS structures with stress gradients. Sensors and Actuators A: Physical, 2005, 123-124, 555-562.	2.0	9
75	Suspended graphene beams with tunable gap for squeeze-film pressure sensing. , 2017, , .		9
76	Electrons, holes, and spin inNd2â˜'xCexCuO4â˜'Î´. Physical Review B, 2003, 67, .	1.1	8
77	MEMS-Based Reconfigurable Multi-band BiCMOS Power Amplifier. , 2006, , .		8
78	Fast RF-CV Characterization Through High-Speed 1-port S-Parameter Measurements. IEEE Transactions on Semiconductor Manufacturing, 2012, 25, 310-316.	1.4	8
79	Electric Field and Interface Charge Extraction in Field-Plate Assisted RESURF Devices. IEEE Transactions on Electron Devices, 2015, 62, 622-629.	1.6	7
80	The boost transistor: A field plate controlled LDMOST. , 2015, , .		7
81	Probing the singlet character of the two-hole states in cuprate superconductors. Physica B: Condensed Matter, 2002, 312-313, 34-35.	1.3	6
82	Comparison of electrical techniques for temperature evaluation in power MOS transistors. , 2013, , .		6
83	2.0â€“2.7â€…GHz programmable bandpass filter with RF-MEMS capacitance matrices. Electronics Letters, 2009, 45, 738.	0.5	5
84	Accelerated resistance degradation in aluminum by pulsed power cycling. , 2015, , .		5
85	Method to Determine the Closed-Loop Precision of Resonant Sensors From Open-Loop Measurements. IEEE Sensors Journal, 2020, 20, 14262-14272.	2.4	5
86	Phonon scattering at kinks in suspended graphene. Physical Review B, 2020, 101, .	1.1	5
87	Squeeze-Film Effect on Atomically Thin Resonators in the High-Pressure Limit. Nano Letters, 2021, 21, 7617-7624.	4.5	5
88	Impact of Interface Charge on the Electrostatics of Field-Plate Assisted RESURF Devices. IEEE Transactions on Electron Devices, 2014, 61, 2859-2866.	1.6	4
89	Diamagnetically levitating resonant weighing scale. Sensors and Actuators A: Physical, 2021, 330, 112842.	2.0	4
90	Graphene gas pumps. , 2018, , .		3

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91	Optical Sensing of Chlorophyll(in) With Dual-Spectrum Si LEDs in SOI-CMOS Technology. IEEE Sensors Journal, 2022, 22, 11280-11289.	2.4	3
92	Semi-permeability of graphene nanodrums in sucrose solution. 2D Materials, 2021, 8, 015031.	2.0	3
93	Direct Wafer-Scale CVD Graphene Growth under Platinum Thin-Films. Materials, 2022, 15, 3723.	1.3	3
94	MEMS-based MCM VCO for space applications. , 2006, , .		2
95	Fast RF-CV characterization through high-speed 1-port S-parameter measurements. , 2010, , .		2
96	Performance limits of MEMS switches for power electronics. , 2012, , .		2
97	The safe operating volume as a general measure for the operating limits of LDMOS transistors. , 2013, , .		2
98	Identifying failure mechanisms in LDMOS transistors by analytical stability analysis. , 2014, , .		2
99	Photonic and Optomechanical Thermometry. Optics, 2022, 3, 159-176.	0.6	2
100	Theoretical description of the Fano-effect in the angle-integrated valence-band photoemission of paramagnetic solids. Applied Physics A: Materials Science and Processing, 2001, 73, 663-666.	1.1	1
101	Nonlinear elasticity of wrinkled atomically thin membranes. Journal of Applied Physics, 2021, 130, .	1.1	1
102	Optical absorption sensing with dual-spectrum silicon LEDs in SOI-CMOS technology. , 2020, , .		1
103	A Test Structure for Young Modulus Extraction Through Capacitance-Voltage Measurements. , 0, , .		0
104	A low SAR, five-band MEMS switched PIFA for mobile phones. , 2007, , .		0
105	Integrated heat sinks for SOI power devices. , 2013, , .		0
106	Physics-based stability analysis of MOS transistors. Solid-State Electronics, 2015, 113, 28-34.	0.8	0
107	Path Following and Numerical Continuation Methods for Non-Linear MEMS and NEMS. NATO Science for Peace and Security Series B: Physics and Biophysics, 2010, , 129-140.	0.2	0