

David A. Powell

List of Publications by Year in descending order

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110
papers

3,068
citations

126708

33
h-index

168136

53
g-index

111
all docs

111
docs citations

111
times ranked

2873
citing authors

#	ARTICLE	IF	CITATIONS
1	Development of an Equivalent Circuit Model for the Design of Array of Electrically Small Antennas. IEEE Transactions on Antennas and Propagation, 2023, 71, 381-392.	3.1	1
2	Printed Tapered Leaky-Wave Antennas for W-Band Frequencies. IEEE Transactions on Antennas and Propagation, 2022, 70, 900-910.	3.1	6
3	Characterization of Broadband Focusing Microwave Metasurfaces at Oblique Incidence. IEEE Transactions on Antennas and Propagation, 2022, 70, 2023-2032.	3.1	2
4	Microacoustic Metagratings at Ultra-High Frequencies Fabricated by Two-Photon Lithography. Advanced Science, 2022, 9, e2200990.	5.6	6
5	Topological Supercavity Resonances in the Finite System. Advanced Science, 2022, 9, e2200257.	5.6	34
6	Sound trapping in an open resonator. Nature Communications, 2021, 12, 4819.	5.8	56
7	Beyond the Limits of Single Resonance Huygens' Metasurfaces. , 2021, , .		1
8	Scalable Metagrating for Efficient Ultrasonic Focusing. Physical Review Applied, 2021, 16, .	1.5	20
9	Achromatic Huygensâ€™ Metalenses with Deeply Subwavelength Thickness. Advanced Optical Materials, 2020, 8, 2000754.	3.6	26
10	A wide aperture metasurface for the control of high order diffraction. , 2020, , .		0
11	Huygens Metasurface Lens for W-Band Switched Beam Antenna Applications. IEEE Open Journal of Antennas and Propagation, 2020, 1, 290-299.	2.5	9
12	Reconfigurable Acoustic Metagrating for High-Efficiency Anomalous Reflection. Physical Review Applied, 2020, 13, .	1.5	54
13	Dual-Region Resonant Meander Metamaterial. Advanced Optical Materials, 2020, 8, 1901658.	3.6	6
14	High-Efficiency Refracting Millimeter-Wave Metasurfaces. IEEE Transactions on Antennas and Propagation, 2020, 68, 5453-5462.	3.1	20
15	Nonlinear Metamaterials. Advances in Dynamics, Patterns, Cognition, 2020, , 55-79.	0.2	1
16	Broadband Achromatic Printed-Circuit Metasurfaces. , 2020, , .		0
17	Bandwidth limit and synthesis approach for single resonance ultrathin metasurfaces. Journal Physics D: Applied Physics, 2020, 53, 495304.	1.3	12
18	Broadband Metasurfaces through First Order Approximation of Surface Impedances. , 2020, , .		0

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19	Deeply Subwavelength Metasurface Resonators for Terahertz Wavefront Manipulation. <i>Advanced Optical Materials</i> , 2019, 7, 1900736.	3.6	25
20	Acoustic meta-atom with experimentally verified maximum Willis coupling. <i>Nature Communications</i> , 2019, 10, 3148.	5.8	60
21	Accurate Metasurface Synthesis Incorporating Near-Field Coupling Effects. <i>Physical Review Applied</i> , 2019, 11, .	1.5	26
22	Realization of achromatic microwave metasurface lenses. , 2019, , .		0
23	Ultrathin tunable terahertz absorbers based on electrostatically actuated metamaterial. , 2019, , .		0
24	Using electrically-small HPEM antenna array elements to divide power and shape aperture fields. , 2018, , .		1
25	Time-varying metasurfaces for arbitrary parametric wave control. , 2018, , .		0
26	Measuring monopole and dipole polarizability of acoustic meta-atoms. <i>Applied Physics Letters</i> , 2018, 113, .	1.5	13
27	Huygensâ€™™ Metadevices for Parametric Waves. <i>Physical Review X</i> , 2018, 8, .	2.8	79
28	Bandwidth and size limits of achromatic printed-circuit metasurfaces. <i>Optics Express</i> , 2018, 26, 29440.	1.7	17
29	Interference between the Modes of an All-Dielectric Meta-atom. <i>Physical Review Applied</i> , 2017, 7, .	1.5	49
30	Polarizationâ€”induced Chirality in Metamaterials via Optomechanical Interaction. <i>Advanced Optical Materials</i> , 2017, 5, 1600760.	3.6	36
31	Ultrathin tunable terahertz absorber based on MEMS-driven metamaterial. <i>Microsystems and Nanoengineering</i> , 2017, 3, 17033.	3.4	84
32	Strong Broadband Terahertz Optical Activity through Control of the Blaschke Phase with Chiral Metasurfaces. <i>Physical Review Applied</i> , 2017, 8, .	1.5	16
33	Tunable focusing by a flexible metasurface. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2017, 26, 62-68.	1.0	3
34	Fast Tunable Terahertz Absorber Based on a MEMS-driven Metamaterial. , 2017, , .		1
35	Tunable Metaâ€”Liquid Crystals. <i>Advanced Materials</i> , 2016, 28, 1553-1558.	11.1	37
36	Electrically tunable terahertz metamaterials with embedded large-area transparent thin-film transistor arrays. <i>Scientific Reports</i> , 2016, 6, 23486.	1.6	21

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37	Terahertz focusing of multiple wavelengths by graphene metasurfaces. Applied Physics Letters, 2016, 108, .	1.5	28
38	Graphene metasurfaces for arbitrary wavefront control. , 2016, , .		1
39	Reconfigurable THz and microwave metamaterials based on ĩ€-conjugated polymers. , 2016, , .		0
40	Strong terahertz absorption in all-dielectric Huygensâ€™™ metasurfaces. Nanotechnology, 2016, 27, 424003.	1.3	60
41	Electroactive Tuning of Doubleâ€™Layered Metamaterials Based on ĩ€â€™Conjugated Polymer Actuators. Advanced Optical Materials, 2016, 4, 135-140.	3.6	13
42	Elastic metamaterials for tuning circular polarization of electromagnetic waves. Scientific Reports, 2016, 6, 28273.	1.6	14
43	Purcell effect in hyperbolic metamaterial resonators. Physical Review B, 2015, 92, .	1.1	62
44	Polarization properties of optical metasurfaces of different symmetries. Physical Review B, 2015, 91, .	1.1	27
45	Coupled Electromagnetic and Elastic Dynamics in Metamaterials. Springer Series in Materials Science, 2015, , 59-87.	0.4	0
46	Hybrid Metal-Dielectric Nanoantennas for Directional Emission Enhancement. , 2015, , .		1
47	Mechanically tunable bi-layer terahertz metamaterials. , 2015, , .		0
48	Post-processing approach for tuning multi-layered metamaterials. Applied Physics Letters, 2014, 105, 151102.	1.5	16
49	Polarization phenomena in periodic metasurfaces at oblique incidence. , 2014, , .		0
50	Hybrid nanoantennas for directional emission enhancement. Applied Physics Letters, 2014, 105, .	1.5	83
51	Electromagnetic tuning of resonant transmission in magnetoelastic metamaterials. Applied Physics Letters, 2014, 104, .	1.5	17
52	Nonlinear interaction of meta-atoms through optical coupling. Applied Physics Letters, 2014, 104, 014104.	1.5	19
53	Broadband chiral metamaterials with large optical activity. Physical Review B, 2014, 89, .	1.1	56
54	Spontaneous chiral symmetry breaking in metamaterials. Nature Communications, 2014, 5, 4441.	5.8	64

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55	Resonant dynamics of arbitrarily shaped meta-atoms. <i>Physical Review B</i> , 2014, 90, .	1.1	35
56	Nonlinear response via intrinsic rotation in metamaterials. <i>Physical Review B</i> , 2013, 87, .	1.1	36
57	Temperature Control of Terahertz Metamaterials With Liquid Crystals. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2013, 3, 827-831.	2.0	31
58	Symmetry properties of metamaterials at oblique incidence. , 2013, , .		1
59	Self-oscillations in nonlinear torsional metamaterials. <i>New Journal of Physics</i> , 2013, 15, 073036.	1.2	22
60	Pneumatically switchable graded index metamaterial lens. <i>Applied Physics Letters</i> , 2013, 102, 031904.	1.5	12
61	Flexible Helices for Nonlinear Metamaterials. <i>Advanced Materials</i> , 2013, 25, 3409-3412.	11.1	61
62	Dispersionless optical activity in metamaterials. <i>Applied Physics Letters</i> , 2013, 102, 201121.	1.5	34
63	Circular dichroism of four-wave mixing in nonlinear metamaterials. <i>Physical Review B</i> , 2013, 88, .	1.1	41
64	Twists and shifts make nonlinear metamaterials. , 2013, , .		0
65	Tunable and nonlinear fishnet metamaterials based on liquid crystal infiltration. <i>Proceedings of SPIE</i> , 2012, , .	0.8	1
66	Spatial dispersion of multilayer fishnet metamaterials. <i>Optics Express</i> , 2012, 20, 15100.	1.7	33
67	Optical activity and coupling in twisted dimer meta-atoms. <i>Applied Physics Letters</i> , 2012, 100, 111114.	1.5	38
68	Chiral meta-atoms rotated by light. <i>Applied Physics Letters</i> , 2012, 101, 031105.	1.5	10
69	Linear and nonlinear coupling in metamaterials. , 2012, , .		0
70	Magnetoelastic metamaterials. <i>Nature Materials</i> , 2012, 11, 30-33.	13.3	229
71	Liquid crystal based nonlinear fishnet metamaterials. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	128
72	Tuning the nonlinear response of coupled split-ring resonators. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	11

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73	Electromagnetic wave analogue of an electronic diode. <i>New Journal of Physics</i> , 2011, 13, 033025.	1.2	111
74	Correcting the Fabry-Perot artifacts in metamaterial retrieval procedures. <i>Physical Review B</i> , 2011, 84, .	1.1	31
75	Metamaterials with conformational nonlinearity. <i>Scientific Reports</i> , 2011, 1, 138.	1.6	49
76	Discrete dissipative localized modes in nonlinear magnetic metamaterials. <i>Optics Express</i> , 2011, 19, 26500.	1.7	21
77	Near-field interaction of twisted split-ring resonators. <i>Physical Review B</i> , 2011, 83, .	1.1	66
78	Observation of tunneling of slow and fast electromagnetic modes in coupled periodic waveguides. <i>Applied Physics Letters</i> , 2011, 98, .	1.5	7
79	Second harmonic generation with zero phase velocity waves. <i>Applied Physics Letters</i> , 2011, 98, 161111.	1.5	10
80	Magnetoelastic metamaterials. , 2011, , .		5
81	Tuning linear and nonlinear properties of broadside-coupled resonators. , 2011, , .		0
82	Second harmonic generation in the zero-index regime. , 2011, , .		0
83	Influence of the substrate on negative index fishnet metamaterials. <i>Optics Communications</i> , 2010, 283, 4770-4774.	1.0	9
84	Analysing and manipulating near-field interaction in metamaterials. , 2010, , .		0
85	Substrate-induced bianisotropy in metamaterials. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	46
86	Tunable fishnet metamaterials infiltrated by liquid crystals. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	97
87	Tilted response of fishnet metamaterials at near-infrared optical wavelengths. <i>Physical Review B</i> , 2010, 81, .	1.1	49
88	Metamaterial tuning by manipulation of near-field interaction. <i>Physical Review B</i> , 2010, 82, .	1.1	126
89	Dispersion extraction with near-field measurements in periodic waveguides. <i>Optics Express</i> , 2009, 17, 3716.	1.7	15
90	Asymmetric parametric amplification in nonlinear left-handed transmission lines. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	34

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91	Nonlinear electric metamaterials. Applied Physics Letters, 2009, 95, .	1.5	78
92	Acoustic Wave Gas and Vapor Sensors. , 2009, , 1-44.		4
93	Nonlinear control of tunneling through an epsilon-near-zero channel. Physical Review B, 2009, 79, .	1.1	65
94	The sub-wavelength imaging performance of disordered wire media. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 3919-3921.	0.9	3
95	Cut-wire-pair structures as two-dimensional magnetic metamaterials. Optics Express, 2008, 16, 15185.	1.7	20
96	Experimental observation of slow light tunneling in coupled periodic waveguides. , 2008, , .		0
97	Multistability in nonlinear left-handed transmission lines. Applied Physics Letters, 2008, 92, .	1.5	13
98	Self-tuning mechanisms of nonlinear split-ring resonators. Applied Physics Letters, 2007, 91, .	1.5	91
99	Experimental studies of binary metamaterials. , 2007, , .		0
100	Scattering of electromagnetic waves in metamaterial superlattices. Applied Physics Letters, 2007, 90, 201919.	1.5	25
101	Spatial Sensitivity Distribution of Surface Acoustic Wave Resonator Sensors. IEEE Sensors Journal, 2007, 7, 204-212.	2.4	6
102	Polyaniline Nanofiber Based Surface Acoustic Wave Gas Sensorsâ€™Effect of Nanofiber Diameter on H_2 Response. IEEE Sensors Journal, 2007, 7, 213-218.	2.4	84
103	Optimization of film thickness for thermoelectric micro-Peltier cooler. , 2005, , .		0
104	Comparison of Conductometric Gas Sensitivity of Surface Acoustic Wave Modes in Layered Structures. Sensor Letters, 2005, 3, 66-70.	0.4	7
105	Numerical calculation of SAW sensitivity: application to ZnO/LiTaO3 transducers. Sensors and Actuators A: Physical, 2004, 115, 456-461.	2.0	56
106	A study of CO sensors with oscillatory response. Sensors and Actuators B: Chemical, 2003, 96, 610-614.	4.0	7
107	Comparison of layered based SAW sensors. Sensors and Actuators B: Chemical, 2003, 91, 303-308.	4.0	22
108	Layered SAW nitrogen dioxide sensor with WO 3 selective layer. , 2003, , .		2

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109	Electrically tunable terahertz metamaterials with embedded large-area transparent thin-film transistor arrays. , 0, .		1
110	A Terahertz gradient metasurface based on hybridized dipole and quadrupole resonances. Journal Physics D: Applied Physics, 0, , .	1.3	0