

Alastair Hibbins

List of Publications by Year in descending order

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156
papers

4,007
citations

168829

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145109

60
g-index

157
all docs

157
docs citations

157
times ranked

3606
citing authors

#	ARTICLE	IF	CITATIONS
1	Slow waves on long helices. Scientific Reports, 2022, 12, 1902.	1.6	0
2	Superscattering and Directive Antennas via Mode Superposition in Subwavelength Core-Shell Meta-Atoms. Photonics, 2022, 9, 6.	0.9	6
3	3D printed metaparticles based on platonic solids for isotropic, multimode microwave scattering. , 2022, , .		1
4	Gapless dispersion of acoustic line modes with glide symmetry. Physical Review B, 2022, 105, .	1.1	3
5	A thermophone-based bridge circuit for the measurement of electrical and thermal properties of thin films. Journal Physics D: Applied Physics, 2022, 55, 35LT01.	1.3	0
6	Resonator-based Pressure Sensor for Wall Pressure. , 2022, , .		2
7	Confined acoustic line modes within a glide-symmetric waveguide. Scientific Reports, 2022, 12, .	1.6	3
8	Time-domain imaging of curling modes in a confined magnetic vortex and a micromagnetic study exploring the role of spiral spin waves emitted by the core. Physical Review B, 2021, 103, .	1.1	3
9	Broadband Artificial Magnetic Conductors Constructed of Magnetically Coupled Elements. , 2021, , .		0
10	Dark Mode Excitation in Three-Dimensional Interlaced Metallic Meshes. ACS Photonics, 2021, 8, 841-846.	3.2	11
11	Surface wave reflection from a metasurface termination. Scientific Reports, 2021, 11, 12054.	1.6	0
12	Multiband superbackscattering via mode superposition in a single dielectric particle. Applied Physics Letters, 2021, 118, .	1.5	12
13	Coupled Scholte modes supported by soft elastic plates in water. Physical Review E, 2021, 103, 063002.	0.8	3
14	Complex Permittivity and Permeability of Composite Materials Based on Carbonyl Iron Powder Over an Ultrawide Frequency Band. Physical Review Applied, 2021, 16, .	1.5	9
15	Experimental characterization of acoustic beaming from an elastic plate by coupled symmetric leaky Lamb modes. Physical Review B, 2021, 104, .	1.1	3
16	Near-field electromagnetic coupling between helices. Journal Physics D: Applied Physics, 2021, 54, 445108.	1.3	5
17	Excitation of Airborne Acoustic Surface Modes Driven by a Turbulent Flow. AIAA Journal, 2021, 59, 5011-5019.	1.5	5
18	Unidirectional emission and reconfigurability of channeled spin waves from a vortex core in a teardrop-shaped nanopatch. Physical Review B, 2021, 104, .	1.1	2

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19	Designing the collective non-local responses of metasurfaces. Communications Physics, 2021, 4, .	2.0	12
20	Designing Metasurfaces to Manipulate Antenna Radiation. , 2021, , .		0
21	Broadband negative-index surface-waves on arrays of capped helices. Physical Review Research, 2021, 3, .	1.3	0
22	Slow acoustic surface modes through the use of hidden geometry. Scientific Reports, 2021, 11, 22010.	1.6	2
23	Underwater Focusing of Sound by Umklapp Diffraction. Physical Review Applied, 2021, 16, .	1.5	2
24	Extraordinary Transmission and Radiation From Finite by Infinite Arrays of Slots. IEEE Transactions on Antennas and Propagation, 2020, 68, 581-586.	3.1	4
25	Experimental Demonstration of Artificial Magnetic Conductors Constructed of Magnetically Coupled Helices. , 2020, , .		1
26	Hippopede curves for modeling radial spin waves in an azimuthally graded magnonic landscape. Physical Review B, 2020, 102, .	1.1	0
27	Excitation of airborne acoustic surface modes driven by a turbulent flow. , 2020, , .		1
28	Coupling and confinement of current in thermoacoustic phased arrays. Science Advances, 2020, 6, eabb2752.	4.7	5
29	Microwave Superdirectivity with Dimers of Helical Elements. Physical Review Applied, 2020, 13, .	1.5	2
30	Strong, omnidirectional radar backscatter from subwavelength, 3D printed metacubes. IET Microwaves, Antennas and Propagation, 2020, 14, 1862-1868.	0.7	10
31	Graded index confined spin waves in a mixed Bloch-NÃ©el domain wall. Physical Review B, 2020, 102, .	1.1	1
32	3D-printed Metasurfaces of Capped Helices Providing Broadband Negative Mode Index. , 2020, , .		1
33	Coupled edge modes supported by a microwave metasurface. Optics Letters, 2020, 45, 1778.	1.7	0
34	Experimental characterisation of the bound acoustic surface modes supported by honeycomb and hexagonal hole arrays. Scientific Reports, 2019, 9, 15773.	1.6	6
35	Metasurface bilayer for slow microwave surface waves. Physical Review B, 2019, 100, .	1.1	4
36	The waveguiding of sound using lines of resonant holes. Scientific Reports, 2019, 9, 11508.	1.6	9

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37	Optimizing the performance of aerosol photoacoustic cells using a finite element model. Part 2: Application to a two-resonator cell. <i>Aerosol Science and Technology</i> , 2019, 53, 1128-1148.	1.5	9
38	Optimizing the performance of aerosol photoacoustic cells using a finite element model. Part 1: Method validation and application to single-resonator multipass cells. <i>Aerosol Science and Technology</i> , 2019, 53, 1107-1127.	1.5	12
39	Broadband, slow sound on a glide-symmetric meander-channel surface. <i>Journal of the Acoustical Society of America</i> , 2019, 145, 3190-3194.	0.5	10
40	Diffraction by a truncated planar array of dipoles: A Wiener-Hopf approach. <i>Wave Motion</i> , 2019, 89, 28-42.	1.0	8
41	A Ferrite-Filled Cavity Resonator for Electronic Article Surveillance on Metallic Packaging. <i>IEEE Transactions on Magnetics</i> , 2019, 55, 1-10.	1.2	1
42	Underwater acoustic surface waves on a periodically perforated metal plate. <i>Journal of the Acoustical Society of America</i> , 2019, 146, 4569-4575.	0.5	5
43	Dynamics of spiral spin waves in magnetic nanopatches: Influence of thickness and shape. <i>Physical Review B</i> , 2019, 100, .	1.1	8
44	Superdirective Antennas of Coupled Helical Elements. , 2019, , .		0
45	A Broadband Stripline Technique for Characterizing Relative Permittivity and Permeability. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2019, 67, 231-238.	2.9	10
46	Experimental observation of photonic nodal line degeneracies in metacrystals. <i>Nature Communications</i> , 2018, 9, 950.	5.8	80
47	Investigating the nature of chiral near-field interactions. <i>Physical Review B</i> , 2018, 97, .	1.1	9
48	Ideal Weyl points and helicoid surface states in artificial photonic crystal structures. <i>Science</i> , 2018, 359, 1013-1016.	6.0	250
49	Microwave edge modes on a metasurface with glide symmetry. <i>Physical Review B</i> , 2018, 98, .	1.1	11
50	Mimicking graphene physics with a plane hexagonal wire mesh. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	0
51	Isotropic Backward Waves Supported by a Spiral Array Metasurface. <i>Scientific Reports</i> , 2018, 8, 7098.	1.6	4
52	The acoustic phase resonances and surface waves supported by a compound rigid grating. <i>Scientific Reports</i> , 2018, 8, 10701.	1.6	6
53	Strong beaming of microwave surface waves with complementary split-ring-resonator arrays. <i>Scientific Reports</i> , 2018, 8, 12102.	1.6	4
54	Thin structured rigid body for acoustic absorption. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	28

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55	Fully carbon metasurface: Absorbing coating in microwaves. Journal of Applied Physics, 2017, 121, .	1.1	26
56	High index metasurfaces for graded lenses using glide symmetry. , 2017, , .		2
57	Mimicking glide symmetry dispersion with coupled slot metasurfaces. Applied Physics Letters, 2017, 111, .	1.5	35
58	Theoretical and experimental exploration of finite sample size effects on the propagation of surface waves supported by slot arrays. Physical Review B, 2017, 95, .	1.1	14
59	Direct observation of topological surface-state arcs in photonic metamaterials. Nature Communications, 2017, 8, 97.	5.8	110
60	A broadband metasurface Luneburg lens for microwave surface waves. Applied Physics Letters, 2017, 111, .	1.5	22
61	Gapless states in microwave artificial graphene. Applied Physics Letters, 2017, 110, .	1.5	9
62	Designer surface plasmon dispersion on a one-dimensional periodic slot metasurface with glide symmetry. Optics Letters, 2017, 42, 3375.	1.7	48
63	On the extraordinary optical transmission in parallel plate waveguides for non-TEM modes. Optics Express, 2017, 25, 24670.	1.7	8
64	EXPLORING CARBON NANOTUBES/BATIO3/FE3O4 NANOCOMPOSITES AS MICROWAVE ABSORBERS. Progress in Electromagnetics Research C, 2016, 66, 77-85.	0.6	15
65	Direct observation of negative-index microwave surface waves. Scientific Reports, 2016, 6, 22018.	1.6	22
66	On the origin of pure optical rotation in twisted-cross metamaterials. Scientific Reports, 2016, 6, 30307.	1.6	5
67	Fluid mobility over corrugated surfaces in the Stokes regime. Physics of Fluids, 2016, 28, 083101.	1.6	3
68	Broadband metasurface for surface wave lenses. , 2016, , .		3
69	Topological modes in one-dimensional solids and photonic crystals. Physical Review B, 2016, 93, .	1.1	7
70	Acoustic transmission through compound subwavelength slit arrays. Physical Review B, 2016, 94, .	1.1	14
71	Omnidirectional surface wave cloak using an isotropic homogeneous dielectric coating. Scientific Reports, 2016, 6, 30984.	1.6	10
72	Resonantly induced transparency for metals with low angular dependence. Applied Physics Letters, 2016, 109, 241601.	1.5	3

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73	Spatial transformations: from fundamentals to applications. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140365.	1.6	2
74	Boundary-Layer Effects on Acoustic Transmission Through Narrow Slit Cavities. Physical Review Letters, 2015, 115, 044302.	2.9	76
75	The Effect of Rotational Disorder on the Microwave Transmission of Checkerboard Metal Square Arrays. Scientific Reports, 2015, 5, 16608.	1.6	8
76	Independently controlling permittivity and diamagnetism in broadband, low-loss, isotropic metamaterials at microwave frequencies. Applied Physics Letters, 2015, 106, .	1.5	8
77	Total absorption by a low-loss dielectric thin layer on top of a metallic metasurface. , 2015, , .		0
78	Polarization conversion from a thin cavity array in the microwave regime. Scientific Reports, 2015, 5, 9366.	1.6	31
79	Experimental verification of total absorption by a low-loss thin dielectric layer. Applied Physics Letters, 2015, 106, .	1.5	4
80	Surface plasmons at the Brillouin zone boundary of an oblique lattice. Applied Physics Letters, 2015, 106, .	1.5	3
81	Measurement of Photon Sorting at Microwave Frequencies in a Cavity Array Metasurface. IEEE Transactions on Antennas and Propagation, 2015, 63, 4521-4524.	3.1	2
82	Broadband impedance-matched electromagnetic structured ferrite composite in the megahertz range. Applied Physics Letters, 2014, 104, 221905.	1.5	3
83	Ferrite-filled cavities for compact planar resonators. Applied Physics Letters, 2014, 104, 022405.	1.5	1
84	Broadband and broadangle extraordinary acoustic transmission through subwavelength apertures surrounded by fluids. New Journal of Physics, 2014, 16, 083044.	1.2	7
85	An acoustic double fishnet using Helmholtz resonators. Journal of the Acoustical Society of America, 2014, 136, 980-984.	0.5	9
86	Massively Sub-wavelength Guiding of Electromagnetic Waves. Scientific Reports, 2014, 4, 7495.	1.6	37
87	Microwave Transmission Through an Array of Ring Slots in a Metal Sheet Capped With Concentric Metal Rings. IEEE Transactions on Antennas and Propagation, 2013, 61, 458-461.	3.1	5
88	Microwave surface waves supported by a tapered geometry metasurface. Applied Physics Letters, 2013, 103, .	1.5	8
89	Thin metamaterial Luneburg lens for surface waves. Physical Review B, 2013, 87, .	1.1	83
90	Resonantly overcoming metal opacity. Applied Physics Letters, 2013, 102, 011120.	1.5	6

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91	Broadband and low loss high refractive index metamaterials in the microwave regime. Applied Physics Letters, 2013, 102, 091108.	1.5	10
92	Control of the stop band of an acoustic double fishnet. Journal of the Acoustical Society of America, 2013, 134, 1754-1759.	0.5	4
93	Direct mapping of surface plasmon dispersion using imaging scatterometry. Applied Physics Letters, 2013, 102, .	1.5	13
94	Heavily loaded ferrite-polymer composites to produce high refractive index materials at centimetre wavelengths. APL Materials, 2013, 1, .	2.2	9
95	Surface plasmons on zig-zag gratings. Optics Express, 2012, 20, 23921.	1.7	7
96	Light localization, photon sorting, and enhanced absorption in subwavelength cavity arrays. Optics Express, 2012, 20, 24226.	1.7	21
97	Surface wave resonances supported on a square array of square metallic pillars. Applied Physics Letters, 2012, 100, .	1.5	21
98	Resonant microwave transmission from a double layer of subwavelength metal square arrays: Evanescent handedness. Physical Review B, 2012, 86, .	1.1	2
99	Electromagnetic response of closely spaced metal meshes. Physical Review B, 2012, 86, .	1.1	2
100	Surface waves at microwave frequencies excited on a zigzag metasurface. Physical Review B, 2012, 86, .	1.1	8
101	Microwave resonances of ultrathin hexagonally symmetric microcavity arrays. Journal of Applied Physics, 2012, 112, .	1.1	6
102	Low acoustic transmittance through a holey structure. Physical Review B, 2012, 85, .	1.1	17
103	Metamaterial tunnel barrier gives broadband microwave transmission. Journal of Applied Physics, 2011, 109, 013104.	1.1	12
104	Multi-modal transmission of microwaves through hole arrays. Optics Express, 2011, 19, 13793.	1.7	5
105	MICROWAVE TRANSMISSION OF A HEXAGONAL ARRAY OF TRIANGULAR METAL PATCHES. Progress in Electromagnetics Research M, 2011, 20, 219-229.	0.5	3
106	Structurally dictated anisotropic "designer surface plasmons". Applied Physics Letters, 2011, 99, 181107.	1.5	6
107	Subwavelength lateral confinement of microwave surface waves. Applied Physics Letters, 2011, 99, .	1.5	33
108	Otto coupling to a transverse-electric-polarized mode on a metamaterial surface. Physical Review B, 2011, 84, .	1.1	4

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109	Babinet's principle and the band structure of surface waves on patterned metal arrays. Journal of Applied Physics, 2010, 107, .	1.1	9
110	Resonantly inverted microwave transmissivity threshold of metal grids. New Journal of Physics, 2010, 12, 063007.	1.2	13
111	Microwave response of hole and patch arrays. Physical Review B, 2010, 82, .	1.1	2
112	Circuit modeling of the transmissivity of stacked two-dimensional metallic meshes. Optics Express, 2010, 18, 13309.	1.7	63
113	Microwave transmission through a metal capped array of holes in a metal sheet. Optics Express, 2010, 18, 23916.	1.7	2
114	Phase resonances on metal gratings of identical, equally spaced alternately tapered slits. Applied Physics Letters, 2009, 95, 041905.	1.5	21
115	Microwave transmissivity of a metamaterial's dielectric stack. Applied Physics Letters, 2009, 95, .	1.5	14
116	Thin resonant structures for angle and polarization independent microwave absorption. Applied Physics Letters, 2009, 94, 041913.	1.5	35
117	Surface plasmon polaritons on deep, narrow-ridged rectangular gratings. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 1228.	0.9	20
118	Microwave Surface-Plasmon-Like Modes on Thin Metamaterials. Physical Review Letters, 2009, 102, 073901.	2.9	142
119	Prism coupling to 'designer' surface plasmons. Optics Express, 2008, 16, 20441.	1.7	37
120	Importance of diffraction in determining the dispersion of designer surface plasmons. Physical Review B, 2008, 78, .	1.1	53
121	Optical Control over Surface-Plasmon-Polariton-Assisted THz Transmission through a Slit Aperture. Physical Review Letters, 2008, 100, 123901.	2.9	125
122	Surface plasmons on metamaterials. , 2008, , .		0
123	Transmission of microwave radiation through a sub-wavelength slit with internal structure. Proceedings of SPIE, 2008, , .	0.8	0
124	Light circulation and weaving in periodically patterned structures. Physical Review B, 2008, 77, .	1.1	22
125	Angle-independent microwave absorption by ultrathin microcavity arrays. Journal of Applied Physics, 2008, 104, 043105.	1.1	20
126	Tuning the polarization state of enhanced transmission in gratings. Applied Physics Letters, 2008, 92, 191105.	1.5	19

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127	Transmission of microwaves through a stepped subwavelength slit. Applied Physics Letters, 2007, 91, 251106.	1.5	28
128	Coupled surface-plasmon-like modes between metamaterial. Physical Review B, 2007, 76, .	1.1	10
129	Resonant absorption of electromagnetic fields by surface plasmons buried in a multilayered plasmonic nanostructure. Physical Review B, 2006, 74, .	1.1	61
130	Waveguide Arrays as Plasmonic Metamaterials: Transmission below Cutoff. Physical Review Letters, 2006, 96, 073904.	2.9	73
131	Microwave Transmission of a Compound Metal Grating. Physical Review Letters, 2006, 96, 257402.	2.9	71
132	The resonant electromagnetic fields of an array of metallic slits acting as Fabry-Perot cavities. Journal of Applied Physics, 2006, 99, 124903.	1.1	74
133	One-way diffraction grating. Physical Review E, 2006, 74, 056611.	0.8	68
134	Resonant transmission of microwaves through a finite length subwavelength metallic slit. New Journal of Physics, 2005, 7, 250-250.	1.2	7
135	Microwave Transmission through a Single Subwavelength Annular Aperture in a Metal Plate. Physical Review Letters, 2005, 94, 193902.	2.9	40
136	Low angular-dispersion microwave absorption of a metal dual-period nondiffracting hexagonal grating. Applied Physics Letters, 2005, 86, 184103.	1.5	9
137	Experimental Verification of Designer Surface Plasmons. Science, 2005, 308, 670-672.	6.0	749
138	Enhanced microwave transmission through a single subwavelength aperture surrounded by concentric grooves. Journal of Optics, 2005, 7, S152-S158.	1.5	41
139	Surface-topography-induced enhanced transmission and directivity of microwave radiation through a subwavelength circular metal aperture. Applied Physics Letters, 2004, 84, 2040-2042.	1.5	98
140	Squeezing Millimeter Waves into Microns. Physical Review Letters, 2004, 92, 143904.	2.9	107
141	Finite Conductance Governs the Resonance Transmission of Thin Metal Slits at Microwave Frequencies. Physical Review Letters, 2004, 92, 147401.	2.9	111
142	Microwaves: thin metal slits and liquid crystals. , 2004, , .		1
143	Low angular-dispersion microwave absorption of a dual-pitch nondiffracting metal bigrating. Applied Physics Letters, 2003, 83, 806-808.	1.5	7
144	<title>Remarkable transmission of radiation through a wall of long metallic bricks</title>. , 2002, , .		2

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145	Gratingless enhanced microwave transmission through a subwavelength aperture in a thick metal plate. Applied Physics Letters, 2002, 81, 4661-4663.	1.5	106
146	Excitation of remarkably nondispersive surface plasmons on a nondiffracting, dual-pitch metal grating. Applied Physics Letters, 2002, 80, 2410-2412.	1.5	38
147	Remarkable transmission of microwaves through a wall of long metallic bricks. Applied Physics Letters, 2001, 79, 2844-2846.	1.5	19
148	The coupling of microwave radiation to surface plasmon polaritons and guided modes via dielectric gratings. Journal of Applied Physics, 2000, 87, 2677-2683.	1.1	16
149	Coupling of near-grazing microwave photons to surface plasmon polaritons via a dielectric grating. Physical Review E, 2000, 61, 5900-5906.	0.8	18
150	Selective transmission through very deep zero-order metallic gratings at microwave frequencies. Applied Physics Letters, 2000, 77, 2789-2791.	1.5	100
151	A surface plasmon study of the optical dielectric function of indium. Journal of Modern Optics, 2000, 47, 1227-1235.	0.6	8
152	The influence of grating profile on surface plasmon polariton resonances recorded in different diffracted orders. Journal of Modern Optics, 1999, 46, 2157-2186.	0.6	16
153	Grating-coupled surface plasmons at microwave frequencies. Journal of Applied Physics, 1999, 86, 1791-1795.	1.1	40
154	Surface plasmon-polariton study of the optical dielectric function of titanium nitride. Journal of Modern Optics, 1998, 45, 2051-2062.	0.6	41
155	Azimuth-angle-dependent reflectivity data from metallic gratings. Journal of Modern Optics, 1998, 45, 1019-1028.	0.6	22
156	Optical excitation of surface plasmon polaritons on 90° and 60° bi-gratings. Journal of Modern Optics, 1996, 43, 1351-1360.	0.6	14