

Ekaterina Shamonina

List of Publications by Year in descending order

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130
papers

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citations

186265
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docs citations

133
times ranked

1273
citing authors

#	ARTICLE	IF	CITATIONS
1	A Metamaterial Position Sensor Based on Magnetoinductive Waves. IEEE Open Journal of Antennas and Propagation, 2021, 2, 259-268.	3.7	11
2	Magnetoinductive waves in attenuating media. Scientific Reports, 2021, 11, 7679.	3.3	6
3	On wireless power transfer between coils in the presence of radiation. Journal Physics D: Applied Physics, 2021, 54, 405502.	2.8	9
4	Wireless power transfer in attenuating media. AIP Advances, 2021, 11, 115303.	1.3	4
5	Wireless power transfer through asymmetric topological edge states in diatomic chains of coupled meta-atoms. Applied Physics Letters, 2020, 117, .	3.3	21
6	A Method for Optimising Superdirectivity of Coupled Meta-Atoms via Planar Directivity Evaluation. IEEE Open Journal of Antennas and Propagation, 2020, 1, 300-308.	3.7	2
7	Superdirective dimers of coupled self-resonant split ring resonators: Analytical modelling and numerical and experimental validation. Scientific Reports, 2020, 10, 274.	3.3	6
8	3-D Printed Bandpass Filters With Coupled Vertically Extruded Split Ring Resonators. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 4341-4352.	4.6	21
9	Kramers-Kronig relations for magnetoinductive waves. Physical Review B, 2019, 100, .	3.2	4
10	Wireless power transfer in the presence of a conducting interface: Analytical solution. IET Microwaves, Antennas and Propagation, 2019, 13, 725-731.	1.4	2
11	A Meta-Material Position Sensor Based on Magneto-Inductive Waves. , 2019, , .		1
12	Coupling between coils in the presence of conducting medium. IET Microwaves, Antennas and Propagation, 2019, 13, 55-62.	1.4	14
13	Analytical model of the fundamental mode of 3D square split ring resonators. Journal of Applied Physics, 2019, 125, .	2.5	22
14	Meta-Molecular Devices. , 2018, , .		0
15	A Complete Circuit Model for Two Coils inside a Dissipative Medium. , 2018, , .		0
16	Planar Directivity of a Dipole Array. , 2018, , .		0
17	Optimization of Meta-atoms for 3D Printed Metamaterial Structures. , 2018, , .		0
18	Superdirectivity from arrays of strongly coupled meta-atoms. Journal of Applied Physics, 2018, 124, .	2.5	12

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19	Fields and coupling between coils embedded in conductive environments. EPJ Applied Metamaterials, 2018, 5, 2.	1.5	7
20	Mapping directivity of coupled dimers of meta-atoms. , 2017, , .		1
21	Analytical solution for the magnetic coupling of two coils immersed in a conductive medium. , 2017, , .		1
22	Superdirectivity for coupled dimers of meta-atoms at MHz. , 2017, , .		2
23	Analytical formulation for the capacitance of 3D square split ring resonators. , 2017, , .		0
24	Wireless power transfer in the presence of a conducting interface: an analytical solution. , 2017, , .		4
25	Superdirective meta-arrays at telecommunication wavelengths. , 2017, , .		1
26	Impact of a conducting medium on the coupling of meta-atoms. , 2016, , .		3
27	Programmable magnetoinductive devices. , 2016, , .		3
28	Experimental demonstration of superdirectivity for coupled dimers of meta-atoms. , 2016, , .		6
29	Retrieval of coupling coefficients for dense metamaterials. , 2016, , .		2
30	Retrieval of electric and magnetic coupling coefficients. , 2015, , .		1
31	‘Poynting vector optics’ for superdirective dimers. , 2015, , .		0
32	Maximum directivity of arbitrary dipole arrays. IET Microwaves, Antennas and Propagation, 2015, 9, 101-107.	1.4	20
33	Surface polaritons in magnetic metamaterials from perspective of effective-medium and circuit models. Journal of Applied Physics, 2015, 117, 163910.	2.5	8
34	Near-field superdirectivity for coupled dimers of meta-atoms. , 2014, , .		1
35	Surface polaritons born by inter-element coupling in magnetic metamaterials. , 2014, , .		0
36	Circuit model optimization of a nano split ring resonator dimer antenna operating in infrared spectral range. Journal of Applied Physics, 2014, 116, .	2.5	8

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37	Dispersion effects in Fakir's bed of nails metamaterial waveguides. Journal of Applied Physics, 2014, 115, 054903.	2.5	8
38	Superdirective meta-molecules, 2014, .		8
39	Band structures of mono- and diatomic metamaterials with inter-element coupling. , 2013, , .		1
40	Superdirectivity by virtue of coupling between meta-atoms. , 2013, , .		12
41	Mapping inter-element coupling in metamaterials: Scaling down to infrared. Journal of Applied Physics, 2012, 111, 094904.	2.5	49
42	Magnetoinductive polaritons: Hybrid modes of metamaterials with interelement coupling. Physical Review B, 2012, 85, .	3.2	14
43	Coupling mechanisms in nano-U dimers. , 2011, , .		0
44	Near-field image transfer by magneto-inductive arrays: A modal perspective. Metamaterials, 2011, 5, 8-25.	2.2	8
45	Dimer and polymer metamaterials with alternating electric and magnetic coupling. Physical Review B, 2011, 84, .	3.2	17
46	Replicating resonance behavior of plasmonic nanoparticles with simpler building blocks. , 2011, , .		0
47	Solid-state traveling-wave amplifiers and oscillators in the THz range: effect of electron collisions. European Physical Journal D, 2010, 59, 233-240.	1.3	3
48	Introduction to the Special Issue on Metamaterials. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 363-366.	2.9	1
49	Interacting waves on chains of split-ring resonators in the presence of retardation. Applied Physics Letters, 2010, 97, 011108.	3.3	11
50	Generalized Brillouin diagrams for evanescent waves in metamaterials with interelement coupling. Physical Review B, 2010, 81, .	3.2	14
51	Surface waves at an interface of two metamaterial structures with interelement coupling. Physical Review B, 2010, 82, .	3.2	19
52	Terahertz instability of surface optical-phonon polaritons that interact with surface plasmon polaritons in the presence of electron drift. Physics of Plasmas, 2010, 17, 102103.	1.9	13
53	Slow waves on magnetic metamaterials and on chains of plasmonic nanoparticles: Driven solutions in the presence of retardation. Journal of Applied Physics, 2009, 106, 104908.	2.5	24
54	Plasmonic excitations in metallic nanoparticles: Resonances, dispersion characteristics and near-field patterns. Optics Express, 2009, 17, 8447.	3.4	17

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55	Analytical formulation for the resonant frequency of split rings. Journal of Applied Physics, 2009, 105, .	2.5	140
56	Magnetoinductive Waves II. , 2009, , .		0
57	Magnetoinductive Waves I. , 2009, , .		0
58	Slow waves in magnetic metamaterials: history, fundamentals and applications. Physica Status Solidi (B): Basic Research, 2008, 245, 1471-1482.	1.5	24
59	Parametric amplification in coupled magnetoinductive waveguides. Journal Physics D: Applied Physics, 2007, 40, 6879-6887.	2.8	29
60	Experimental study of a bi-periodic magnetoinductive waveguide: comparison with theory. IET Microwaves, Antennas and Propagation, 2007, 1, 80.	1.4	22
61	Mechanism of subwavelength imaging with bilayered magnetic metamaterials: Theory and experiment. Journal of Applied Physics, 2007, 101, 073903.	2.5	47
62	Transmission properties of two shifted magnetoinductive waveguides. Microwave and Optical Technology Letters, 2007, 49, 1054-1058.	1.4	13
63	Tailoring of the subwavelength focus. Microwave and Optical Technology Letters, 2007, 49, 2228-2231.	1.4	8
64	Higher order interactions in magneto-inductive waveguides. Metamaterials, 2007, 1, 44-51.	2.2	28
65	Metamaterials: How the subject started. Metamaterials, 2007, 1, 12-18.	2.2	100
66	Coupling mechanisms for split ring resonators: Theory and experiment. Physica Status Solidi (B): Basic Research, 2007, 244, 1170-1175.	1.5	97
67	Parametric amplification of magnetoinductive waves supported by metamaterial arrays. Physica Status Solidi (B): Basic Research, 2007, 244, 1176-1180.	1.5	11
68	Near Field Imaging with Magnetic Metamaterials: Theory and Experiment. , 2006, , .		1
69	Magneto-inductive waveguide devices. IET Microwaves Antennas and Propagation, 2006, 153, 111.	1.2	87
70	An experimental study of the properties of magnetoinductive waves in the presence of retardation. Journal of Magnetism and Magnetic Materials, 2006, 300, 29-32.	2.3	28
71	Properties of magnetically coupled metamaterial elements. Journal of Magnetism and Magnetic Materials, 2006, 300, 38-43.	2.3	39
72	Tailoring the near-field guiding properties of magnetic metamaterials with two resonant elements per unit cell. Physical Review B, 2006, 73, .	3.2	58

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73	Rotational resonance of magnetoinductive waves: Basic concept and application to nuclear magnetic resonance. <i>Journal of Applied Physics</i> , 2006, 99, 123908.	2.5	28
74	Visualising subwavelength phenomena in metamaterials. , 2005, , .		0
75	Dispersion characteristics of magneto-inductive waves made up by doubly periodic elements. , 2005, 5955, 66.		0
76	Effect of radiation on dispersion of magneto-inductive waves in a metamaterial. , 2005, , .		2
77	Positive and negative refraction of magnetoinductive waves in two dimensions. <i>European Physical Journal B</i> , 2005, 46, 301-308.	1.5	31
78	Absorbing terminations for magneto-inductive waveguides. <i>IET Microwaves Antennas and Propagation</i> , 2005, 152, 77.	1.2	17
79	Resonant frequencies of a split-ring resonator: Analytical solutions and numerical simulations. <i>Microwave and Optical Technology Letters</i> , 2005, 44, 133-136.	1.4	67
80	Resonant frequencies of a combination of split rings: Experimental, analytical and numerical study. <i>Microwave and Optical Technology Letters</i> , 2005, 46, 473-476.	1.4	45
81	Phonon-like dispersion curves of magnetoinductive waves. <i>Applied Physics Letters</i> , 2005, 87, 072501.	3.3	65
82	2D metamaterials with hexagonal structure: spatial resonances and near field imaging. <i>Optics Express</i> , 2005, 13, 9299.	3.4	35
83	A theory of metamaterials based on periodically loaded transmission lines: Interaction between magnetoinductive and electromagnetic waves. <i>Journal of Applied Physics</i> , 2005, 97, 064909.	2.5	93
84	Diamagnetic properties of metamaterials: a magnetostatic analogy. <i>European Physical Journal B</i> , 2004, 41, 307-312.	1.5	12
85	Experimental and theoretical study of magneto-inductive waves supported by one-dimensional arrays of ϵ -swiss rolls. <i>Journal of Applied Physics</i> , 2004, 95, 4488-4493.	2.5	56
86	Magneto-inductive waves supported by metamaterial elements: components for a one-dimensional waveguide. <i>Journal Physics D: Applied Physics</i> , 2004, 37, 362-367.	2.8	76
87	Properties of a metamaterial element: Analytical solutions and numerical simulations for a singly split double ring. <i>Journal of Applied Physics</i> , 2004, 95, 3778-3784.	2.5	85
88	Polarization properties of light-induced scattering in Bi ₁₂ TiO ₂₀ crystals: theory and experiment for diagonal geometry. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003, 20, 677.	2.1	2
89	Dispersion characteristics of magneto-inductive waves: comparison between theory and experiment. <i>Electronics Letters</i> , 2003, 39, 215.	1.0	126
90	Optimization of Diffraction Efficiency and Gain for Two-Wave Mixing in Cubic (111)-Cut Photorefractive Piezocrystals. <i>Ferroelectrics</i> , 2002, 266, 641-669.	0.6	2

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91	Magneto-inductive waveguide. Electronics Letters, 2002, 38, 371.	1.0	219
92	Magnetoinductive waves in one, two, and three dimensions. Journal of Applied Physics, 2002, 92, 6252-6261.	2.5	366
93	Optimization of Diffraction Efficiency and Gain for Two-Wave Mixing in Cubic (111)-Cut Photorefractive Piezocrystals. Ferroelectrics, 2002, 266, 305-333.	0.6	10
94	Short dipole as a receiver: effective aperture shapes and streamlines of the Poynting vector. IET Microwaves Antennas and Propagation, 2002, 149, 153-159.	1.2	16
95	Configurations Optimizing the Directivity of Planar Arrays. AEU - International Journal of Electronics and Communications, 2002, 56, 115-119.	2.9	7
96	Effective magnetic properties of a composite material with circular conductive elements. European Physical Journal B, 2002, 28, 263-269.	1.5	121
97	Imaging, compression and Poynting vector streamlines for negative permittivity materials. Electronics Letters, 2001, 37, 1243.	1.0	95
98	Parallel subsystem: An almost precise solution for two-wave mixing in sillenites. Journal of the Optical Society of America B: Optical Physics, 2001, 18, 1137.	2.1	0
99	Reflection holograms in sillenite crystals for double-exposure interferometry. Optical Materials, 2001, 18, 119-122.	3.6	7
100	Energy exchange optimization in (110)-cut BTO crystal by choice of interacting waves polarization. Optical Materials, 2001, 18, 131-133.	3.6	4
101	Optimization of diffraction efficiency and gain for two-wave mixing in cubic (111)-cut photorefractive piezocrystals. Optical Materials, 2001, 18, 135-138.	3.6	2
102	A systematic approach to diffusion recording in photorefractive sillenite crystals. Optical Materials, 2001, 18, 139-142.	3.6	2
103	Diffusion recording in photorefractive sillenite crystals: an analytical approach for engineering purposes. Optics Communications, 2000, 180, 183-190.	2.1	5
104	The effect of bulk light absorption on running photorefractive holograms. Journal of Optics, 2000, 2, 34-38.	1.5	0
105	Photorefractive light scattering families in (111)-cut Bi ₁₂ TiO ₂₀ crystals with an external electric ac field. Physical Review E, 2000, 63, 016607.	2.1	2
106	Resonant vectorial wave coupling in cubic photorefractive crystals. Journal of the Optical Society of America B: Optical Physics, 2000, 17, 985.	2.1	8
107	Feedback-controlled running holograms in strongly absorbing photorefractive materials. Journal of the Optical Society of America B: Optical Physics, 2000, 17, 1517.	2.1	15
108	Two-wave mixing in (111)-cut Bi ₁₂ SiO ₂₀ and Bi ₁₂ TiO ₂₀ crystals: Characterization and comparison with the general orientation. Physical Review E, 2000, 62, 2863-2870.	2.1	12

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109	Gain optimization with respect to the thickness of a sillenite crystal. Applied Physics B: Lasers and Optics, 1999, 68, 923-929.	2.2	11
110	Theory of photorefractive vectorial wave coupling in cubic crystals. Physical Review E, 1999, 60, 3332-3352.	2.1	73
111	Measurement of the electric screening field in Bi12TiO20. Journal of Applied Physics, 1999, 85, 1317-1321.	2.5	2
112	Rigorous three-dimensional theory of subharmonic instability in sillenites. Journal of the Optical Society of America B: Optical Physics, 1999, 16, 1099.	2.1	5
113	Oscillatory regime of two-beam coupling in cubic λ -43m crystals. , 1999, , .		0
114	Gain Optimization at Two-Wave Mixing in Cubic Photorefractive Piezocrystals of (111)-Cut. , 1999, , .		0
115	Optical activity in photorefractive Bi12TiO20. Optics Communications, 1998, 146, 62-68.	2.1	19
116	Giant momentary readout produced by switching electric fields during two-wave mixing in sillenites. Optics Letters, 1998, 23, 1435.	3.3	18
117	Optimum orientation of volume phase gratings in sillenite crystals: is it always [111]?. Journal of the Optical Society of America B: Optical Physics, 1998, 15, 2552.	2.1	20
118	Phase modulation in two-wave mixing for dynamically recorded gratings in photorefractive materials. Journal of the Optical Society of America B: Optical Physics, 1997, 14, 1741.	2.1	31
119	Shape-asymmetry of the diffraction efficiency in Bi12TiO20 crystals: the simultaneous influence of absorption and higher harmonics. Optics Communications, 1997, 141, 132-136.	2.1	15
120	Stochastic photorefractive backscattering from LiNbO_3 crystals. Optics Letters, 1996, 21, 854.	3.3	10
121	Investigation of stochastic photorefractive backscattering. Journal of the Optical Society of America B: Optical Physics, 1996, 13, 2242.	2.1	8
122	Investigation of two-wave mixing in arbitrary oriented sillenite crystals. Applied Physics B: Lasers and Optics, 1996, 64, 49-56.	2.2	13
123	Modelling of two wave mixing experiments in sillenite crystals. Computer Physics Communications, 1996, 96, 61-86.	7.5	2
124	Excitation of higher spatial harmonics by a moving light pattern in sillenites. Optics Communications, 1996, 131, 315-321.	2.1	13
125	Dynamic holography with nonplane waves in sillenites. Optical and Quantum Electronics, 1996, 28, 25-42.	3.3	8
126	Investigation of photorefractive subharmonics in the absence of wave mixing. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 1621.	2.1	22

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127	Space-charge waves in photorefractive ferroelectrics. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 1642.	2.1	31
128	Verification of the standard model of the photorefractive nonlinearity in BSO crystals. Optics Communications, 1994, 108, 31-36.	2.1	19
129	Exact solution of the Bragg-difEraction problem in sillenites. Journal of the Optical Society of America B: Optical Physics, 1994, 11, 1813.	2.1	28
130	Thickness Dependence of the Optimum Orientation of Volume Phase Gratings in Optically Active Piezoelectric Sillenite Crystals. , 0, , .		0