

Viktoriia E Babicheva

List of Publications by Year in descending order

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Version: 2024-02-01

101
papers

2,422
citations

201575

27
h-index

206029

48
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101
all docs

101
docs citations

101
times ranked

2202
citing authors

#	ARTICLE	IF	CITATIONS
1	Resonant Lattice Kerker Effect in Metasurfaces With Electric and Magnetic Optical Responses. <i>Laser and Photonics Reviews</i> , 2017, 11, 1700132.	4.4	190
2	Transparent conducting oxides for electro-optical plasmonic modulators. <i>Nanophotonics</i> , 2015, 4, 165-185.	2.9	141
3	Multipole analysis of dielectric metasurfaces composed of nonspherical nanoparticles and lattice invisibility effect. <i>Physical Review B</i> , 2019, 99, .	1.1	126
4	Towards CMOS-compatible nanophotonics: Ultra-compact modulators using alternative plasmonic materials. <i>Optics Express</i> , 2013, 21, 27326.	1.7	125
5	Plasmonic and silicon spherical nanoparticle antireflective coatings. <i>Scientific Reports</i> , 2016, 6, 22136.	1.6	119
6	Structural Colors Enabled by Lattice Resonance on Silicon Nitride Metasurfaces. <i>ACS Nano</i> , 2020, 14, 5678-5685.	7.3	91
7	Nonradiating Silicon Nanoantenna Metasurfaces as Narrowband Absorbers. <i>ACS Photonics</i> , 2018, 5, 2596-2601.	3.2	86
8	Metasurfaces with Electric Quadrupole and Magnetic Dipole Resonant Coupling. <i>ACS Photonics</i> , 2018, 5, 2022-2033.	3.2	81
9	Experimental demonstration of titanium nitride plasmonic interconnects. <i>Optics Express</i> , 2014, 22, 12238.	1.7	76
10	Analytical model of resonant electromagnetic dipole-quadrupole coupling in nanoparticle arrays. <i>Physical Review B</i> , 2019, 99, .	1.1	66
11	Reflection compensation mediated by electric and magnetic resonances of all-dielectric metasurfaces [Invited]. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2017, 34, D18.	0.9	62
12	Enhanced Electron Photoemission by Collective Lattice Resonances in Plasmonic Nanoparticle-Array Photodetectors and Solar Cells. <i>Plasmonics</i> , 2014, 9, 283-289.	1.8	60
13	Photonic-band-gap engineering for volume plasmon polaritons in multiscale multilayer hyperbolic metamaterials. <i>Physical Review A</i> , 2014, 90, .	1.0	58
14	Finite-width plasmonic waveguides with hyperbolic multilayer cladding. <i>Optics Express</i> , 2015, 23, 9681.	1.7	58
15	Lattice effect influence on the electric and magnetic dipole resonance overlap in a disk array. <i>Nanophotonics</i> , 2018, 7, 1663-1668.	2.9	58
16	Plasmonic waveguides cladded by hyperbolic metamaterials. <i>Optics Letters</i> , 2014, 39, 4663.	1.7	56
17	Multipole lattice effects in high refractive index metasurfaces. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	56
18	Internal photoemission from plasmonic nanoparticles: comparison between surface and volume photoelectric effects. <i>Nanoscale</i> , 2014, 6, 4716.	2.8	52

#	ARTICLE	IF	CITATIONS
19	Long-range plasmonic waveguides with hyperbolic cladding. <i>Optics Express</i> , 2015, 23, 31109.	1.7	48
20	Plasmonic modulator optimized by patterning of active layer and tuning permittivity. <i>Optics Communications</i> , 2012, 285, 5500-5507.	1.0	43
21	Ultrafast Dynamics of Metal Plasmons Induced by 2D Semiconductor Excitons in Hybrid Nanostructure Arrays. <i>ACS Photonics</i> , 2016, 3, 2389-2395.	3.2	42
22	Lattice effect in Mie-resonant dielectric nanoparticle array under oblique light incidence. <i>MRS Communications</i> , 2018, 8, 1455-1462.	0.8	42
23	Near-field edge fringes at sharp material boundaries. <i>Optics Express</i> , 2017, 25, 23935.	1.7	39
24	Interplay and coupling of electric and magnetic multipole resonances in plasmonic nanoparticle lattices. <i>MRS Communications</i> , 2018, 8, 712-717.	0.8	39
25	Nanoscopy reveals surface-metallic black phosphorus. <i>Light: Science and Applications</i> , 2016, 5, e16162-e16162.	7.7	37
26	Near-Field Surface Waves in Few-Layer MoS ₂ . <i>ACS Photonics</i> , 2018, 5, 2106-2112.	3.2	37
27	Hot Electron Photoemission from Plasmonic Nanostructures: The Role of Surface Photoemission and Transition Absorption. <i>ACS Photonics</i> , 2015, 2, 1039-1048.	3.2	33
28	Plasmonic modulator based on gain-assisted metal-semiconductor-metal waveguide. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2012, 10, 389-399.	1.0	29
29	Second harmonic generation in metasurfaces with multipole resonant coupling. <i>Nanophotonics</i> , 2020, 9, 3545-3556.	2.9	26
30	Germanium Metasurfaces with Lattice Kerker Effect in Near-Infrared Photodetectors. <i>ACS Nano</i> , 2022, 16, 5994-6001.	7.3	26
31	Plasmonic finite-thickness metal-semiconductor-metal waveguide as ultra-compact modulator. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2013, 11, 323-334.	1.0	25
32	Resonant suppression of light transmission in high-refractive-index nanoparticle metasurfaces. <i>Optics Letters</i> , 2018, 43, 5186.	1.7	25
33	Bismuth ferrite as low-loss switchable material for plasmonic waveguide modulator. <i>Optics Express</i> , 2014, 22, 28890.	1.7	24
34	Applicability of multipole decomposition to plasmonic- and dielectric-lattice resonances. <i>Journal of Chemical Physics</i> , 2022, 156, 114104.	1.2	24
35	Enhancement of the Purcell factor in multiperiodic hyperboliclike metamaterials. <i>Physical Review A</i> , 2016, 93, .	1.0	22
36	Long-range propagation of plasmon and phonon polaritons in hyperbolic-metamaterial waveguides. <i>Journal of Optics (United Kingdom)</i> , 2017, 19, 124013.	1.0	21

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37	Lattice Zenneck Modes on Subwavelength Antennas. <i>Laser and Photonics Reviews</i> , 2019, 13, 1800267.	4.4	21
38	Lattice effect for enhanced hot-electron generation in nanoelectrodes. <i>Optical Materials Express</i> , 2021, 11, 3232.	1.6	18
39	Collective effects and coupling phenomena in resonant optical metasurfaces: introduction. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019, 36, CEC1.	0.9	16
40	Directional scattering by the hyperbolic-medium antennas and silicon particles. <i>MRS Advances</i> , 2018, 3, 1913-1917.	0.5	15
41	Multipole Resonances in Transdimensional Lattices of Plasmonic and Silicon Nanoparticles. <i>MRS Advances</i> , 2019, 4, 713-722.	0.5	15
42	Giant Photogalvanic Effect in Noncentrosymmetric Plasmonic Nanoparticles. <i>Physical Review X</i> , 2014, 4, .	2.8	14
43	Multiperiodicity in plasmonic multilayers: General description and diversity of topologies. <i>Physical Review A</i> , 2014, 90, .	1.0	14
44	Nanoscopy of Phase Separation in In _x Ga _{1-x} N Alloys. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 23160-23166.	4.0	13
45	Lattice Resonances in Transdimensional WS ₂ Nanoantenna Arrays. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 2005.	1.3	13
46	Electron photoemission in plasmonic nanoparticle arrays: analysis of collective resonances and embedding effects. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 116, 929-940.	1.1	12
47	Lattice Kerker effect in the array of hexagonal boron nitride antennas. <i>MRS Advances</i> , 2018, 3, 2783-2788.	0.5	12
48	Semiconductor nanopillars for programmable directional lasing emissions. <i>MRS Advances</i> , 2021, 6, 234-240.	0.5	12
49	Role of propagating slit mode in enhanced transmission through slit arrays in a metallic films. <i>Optical and Quantum Electronics</i> , 2009, 41, 299-313.	1.5	11
50	Localized surface plasmon modes in a system of two interacting metallic cylinders. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2012, 29, 1263.	0.9	11
51	Surface plasmon polariton modulator with optimized active layer. , 2012, , .		10
52	Retrieval of Effective Parameters of Subwavelength Periodic Photonic Structures. <i>Crystals</i> , 2014, 4, 417-426.	1.0	9
53	Bulk photoemission from metal films and nanoparticles. <i>Quantum Electronics</i> , 2015, 45, 50-58.	0.3	8
54	A plasmonic modulator based on metal-insulator-metal waveguide with barium titanate core. <i>Photonics Letters of Poland</i> , 2013, 5, .	0.2	8

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55	Mode Coupling and Rabi Splitting in Transdimensional Photonic Lattices. , 2020, , .		7
56	Transition absorption as a mechanism of surface photoelectron emission from metals. Physica Status Solidi - Rapid Research Letters, 2015, 9, 570-574.	1.2	6
57	Nanostructured Tungsten Disulfide WS ₂ as Mie Scatterers and Nanoantennas. MRS Advances, 2020, 5, 1819-1826.	0.5	5
58	Finite-thickness metal-semiconductor-metal waveguide as plasmonic modulator. , 2012, , .		4
59	Van der Waals transdimensional photonic lattices with strong coupling to high-index thin layers. , 2020, , .		3
60	Resonant and scattering properties of tungsten disulfide WS ₂ nanoantennas. , 2020, , .		3
61	Surface Plasmon Polariton Modulator with Periodic Patterning of Indium Tin Oxide Layers. , 2011, , .		2
62	Plasmonic modulator based on thin metal-semiconductor-metal waveguide with gain core. Proceedings of SPIE, 2013, , .	0.8	2
63	Plasmonic modulator using CMOS-compatible material platform. , 2014, , .		2
64	Transition Metal Dichalcogenide Nanoantennas Lattice. MRS Advances, 2019, 4, 2283-2288.	0.5	2
65	Towards CMOS-Compatible Negative-Index Metastructures. , 2021, , .		2
66	Extraordinary Transmission and Suppression of Transmission of Dual Metal Gratings with Subwavelength Slits. , 2010, , .		1
67	Anomalous transmission of electromagnetic wave through periodic arrays of subwavelength slits arranged on thin metal films. Optics and Spectroscopy (English Translation of Optika i Tj ETQq1 1 0.784314 rgBT 10verlock 10 Tf 50		1
68	Role of surface plasmon polaritons in anomalous transmission of an electromagnetic wave through two arrays with subwavelength slits. Physics of the Solid State, 2011, 53, 804-809.	0.2	1
69	CMOS Compatible Ultra-Compact Modulator. , 2014, , .		1
70	Nanophotonic Modulator with Bismuth Ferrite as Low-loss Switchable Material. , 2015, , .		1
71	TOWARDS UNDERSTANDING AND CONTROL OF NANOSCALE PHASE SEGREGATION IN INDIUM-GALLIUM-NITRIDE ALLOYS. , 2017, , 183-207.		1
72	Transdimensional photonic lattices with multipole Mie-resonant nanoantennas. , 2020, , .		1

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73	Collective Resonances of Lossy Material Nanoantennas. , 2021, , .		1
74	Transdimensional photonic lattices with Mie-resonant nanoantennas. , 2019, , .		1
75	Extraordinary Transmission Through Slit Arrays In Metal Films. , 2009, , .		0
76	Surface plasmon polariton excitation and extraordinary optical transmission in metallic grating structures with subwavelength slits. , 2010, , .		0
77	Light passage through a film with subwavelength slits. Bulletin of the Lebedev Physics Institute, 2010, 37, 309-310.	0.1	0
78	Light modulation abilities of nanostructures. , 2012, , .		0
79	Populating the large-wavevector realm: Bloch volume plasmon polaritons in hyperbolic and extremely anisotropic metamaterials. , 2014, , .		0
80	Multi-Periodic Photonic Hyper-Crystals: Volume Plasmon Polaritons and the Purcell Effect. , 2014, , .		0
81	Surface and Volume Photoemission of Hot Electrons from Plasmonic Nanoantennas. , 2014, , .		0
82	Retrieving constitutive parameters of plasmonic multilayers from reflection and transmission coefficients. , 2014, , .		0
83	Multi-periodicity induces prominent optical phenomena in plasmonic multilayers. , 2014, , .		0
84	Bismuth ferrite for active control of surface plasmon polariton modes. , 2014, , .		0
85	Hot electron photoemission from plasmonic nanoparticles: Role of transient absorption in surface mechanism. , 2014, , .		0
86	Plasmonic nanocone arrays as photoconductive and photovoltaic metamaterials. , 2014, , .		0
87	Bulk photovoltaic effect in photoconductive metamaterials based on cone-shaped nanoparticles. Proceedings of SPIE, 2014, , .	0.8	0
88	Multilayer Cladding with Hyperbolic Dispersion for Plasmonic Waveguides. , 2015, , .		0
89	Substrate-mediated antireflective properties of silicon nanoparticle array. , 2016, , .		0
90	Subwavelength optics with hyperbolic metamaterials: Waveguides, scattering, and optical topological transitions. , 2016, , .		0

#	ARTICLE	IF	CITATIONS
91	Ultrafast charge and energy exchanges at hybrid interfaces involving 2D semiconductors (Conference) Tj ETQq1 1 0.784314 µgBT /Overl		
92	Reflection compensation with all-dielectric metasurfaces. , 2017, , .		0
93	Programmable Metastructures for Directional Light Emission. , 2021, , .		0
94	Hybrid Photonic Lattice with Mode Coupling and Rabi Splitting. , 2021, , .		0
95	Plasmonics and hot electrons: feature issue introduction. Optical Materials Express, 0, , .	1.6	0
96	Multipole Resonances for Directional Lasing and Wavefront Shaping. , 2021, , .		0
97	Surface Plasmon Polariton Excitation and Extraordinary Optical Transmission in Metallic Grating Structures with Subwavelength Slits. , 2010, , .		0
98	Control of Electric and Magnetic Resonances in Nanoparticle Metasurfaces. , 2018, , .		0
99	Absorption enhancement of dielectric metasurfaces with the Kerker effect (Conference Presentation). , 2018, , .		0
100	Transmission and reflection features of all-dielectrics metasurfaces with electric and magnetic resonances. , 2019, , .		0
101	van der Waals metasurfaces based on hyperbolic-medium antennas. , 2019, , .		0