Viktoriia E Babicheva

List of Publications by Citations

66 papers	1,616 citations	24 h-index	38 g-index
101 ext. papers	2,033 ext. citations	3.9 avg, IF	5.61 L-index

#	Paper	IF	Citations
66	Resonant Lattice Kerker Effect in Metasurfaces With Electric and Magnetic Optical Responses. *Laser and Photonics Reviews*, **2017**, 11, 1700132	8.3	125
65	Transparent conducting oxides for electro-optical plasmonic modulators. *Nanophotonics*, **2015**, 4, 165-185	6.3	100
64	Towards CMOS-compatible nanophotonics: ultra-compact modulators using alternative plasmonic materials. *Optics Express*, **2013**, 21, 27326-37	3.3	98
63	Plasmonic and silicon spherical nanoparticle antireflective coatings. *Scientific Reports*, **2016**, 6, 22136	4.9	91
62	Multipole analysis of dielectric metasurfaces composed of nonspherical nanoparticles and lattice invisibility effect. *Physical Review B*, **2019**, 99,	3.3	65
61	Experimental demonstration of titanium nitride plasmonic interconnects. *Optics Express*, **2014**, 22, 12238-47	3.3	65
60	Nonradiating Silicon Nanoantenna Metasurfaces as Narrowband Absorbers. *ACS Photonics*, **2018**, 5, 2596-2601	6.3	56
59	Metasurfaces with Electric Quadrupole and Magnetic Dipole Resonant Coupling. *ACS Photonics*, **2018**, 5, 2022-2033	6.3	55
58	Enhanced Electron Photoemission by Collective Lattice Resonances in Plasmonic Nanoparticle-Array Photodetectors and Solar Cells. *Plasmonics*, **2014**, 9, 283-289	2.4	53
57	Photonic-band-gap engineering for volume plasmon polaritons in multiscale multilayer hyperbolic metamaterials. *Physical Review A*, **2014**, 90,	2.6	51
56	Reflection compensation mediated by electric and magnetic resonances of all-dielectric metasurfaces [Invited]. *Journal of the Optical Society of America B: Optical Physics*, **2017**, 34, D18	1.7	48
55	Analytical model of resonant electromagnetic dipole-quadrupole coupling in nanoparticle arrays. *Physical Review B*, **2019**, 99,	3.3	46
54	Plasmonic waveguides cladded by hyperbolic metamaterials. *Optics Letters*, **2014**, 39, 4663-6	3	44
53	Finite-width plasmonic waveguides with hyperbolic multilayer cladding. *Optics Express*, **2015**, 23, 9681-9	3.3	41
52	Long-range plasmonic waveguides with hyperbolic cladding. *Optics Express*, **2015**, 23, 31109-19	3.3	38
51	Lattice effect influence on the electric and magnetic dipole resonance overlap in a disk array. *Nanophotonics*, **2018**, 7, 1663-1668	6.3	38
50	Internal photoemission from plasmonic nanoparticles: comparison between surface and volume photoelectric effects. *Nanoscale*, **2014**, 6, 4716-27	7.7	36

49	Ultrafast Dynamics of Metal Plasmons Induced by 2D Semiconductor Excitons in Hybrid Nanostructure Arrays. *ACS Photonics*, **2016**, 3, 2389-2395	6.3	34
48	Plasmonic modulator optimized by patterning of active layer and tuning permittivity. *Optics Communications*, **2012**, 285, 5500-5507	2	34
47	Structural Colors Enabled by Lattice Resonance on Silicon Nitride Metasurfaces. *ACS Nano*, **2020**, 14, 5678-5685	16.7	33
46	Nanoscopy reveals surface-metallic black phosphorus. *Light: Science and Applications*, **2016**, 5, e16162	16.7	31
45	Near-field edge fringes at sharp material boundaries. *Optics Express*, **2017**, 25, 23935-23944	3.3	29
44	Hot Electron Photoemission from Plasmonic Nanostructures: The Role of Surface Photoemission and Transition Absorption. *ACS Photonics*, **2015**, 2, 1039-1048	6.3	26
43	Lattice effect in Mie-resonant dielectric nanoparticle array under oblique light incidence. *MRS Communications*, **2018**, 8, 1455-1462	2.7	25
42	Near-Field Surface Waves in Few-Layer MoS2. *ACS Photonics*, **2018**, 5, 2106-2112	6.3	24
41	Plasmonic modulator based on gain-assisted metal□semiconductor□metal waveguide. *Photonics and Nanostructures - Fundamentals and Applications*, **2012**, 10, 389-399	2.6	24
40	Bismuth ferrite as low-loss switchable material for plasmonic waveguide modulator. *Optics Express*, **2014**, 22, 28890-7	3.3	21
39	Multipole lattice effects in high refractive index metasurfaces. *Journal of Applied Physics*, **2021**, 129, 040902	2.5	21
38	Enhancement of the Purcell factor in multiperiodic hyperboliclike metamaterials. *Physical Review A*, **2016**, 93,	2.6	19
37	Plasmonic finite-thickness metal□semiconductor□metal waveguide as ultra-compact modulator. *Photonics and Nanostructures - Fundamentals and Applications*, **2013**, 11, 323-334	2.6	18
36	Resonant suppression of light transmission in high-refractive-index nanoparticle metasurfaces. *Optics Letters*, **2018**, 43, 5186-5189	3	18
35	Long-range propagation of plasmon and phonon polaritons in hyperbolic-metamaterial waveguides. *Journal of Optics (United Kingdom)*, **2017**, 19, 124013	1.7	17
34	Interplay and coupling of electric and magnetic multipole resonances in plasmonic nanoparticle lattices. *MRS Communications*, **2018**, 8, 712-717	2.7	16
33	Multiperiodicity in plasmonic multilayers: General description and diversity of topologies. *Physical Review A*, **2014**, 90,	2.6	14
32	Directional scattering by the hyperbolic-medium antennas and silicon particles. *MRS Advances*, **2018**, 3, 1913-1917	0.7	12

31	Electron photoemission in plasmonic nanoparticle arrays: analysis of collective resonances and embedding effects. *Applied Physics A: Materials Science and Processing*, **2014**, 116, 929-940	2.6	12
30	Nanoscopy of Phase Separation in InxGa1-xN Alloys. *ACS Applied Materials & Interfaces*, **2016**, 8, 23160-6	9.5	11
29	Second harmonic generation in metasurfaces with multipole resonant coupling. *Nanophotonics*, **2020**, 9, 3545-3556	6.3	11
28	Multipole Resonances in Transdimensional Lattices of Plasmonic and Silicon Nanoparticles. *MRS Advances*, **2019**, 4, 713-722	0.7	10
27	Localized surface plasmon modes in a system of two interacting metallic cylinders. *Journal of the Optical Society of America B: Optical Physics*, **2012**, 29, 1263	1.7	9
26	Retrieval of Effective Parameters of Subwavelength Periodic Photonic Structures. *Crystals*, **2014**, 4, 417-426	2.5	8
25	Surface plasmon polariton modulator with optimized active layer **2012**,		8
24	Lattice Kerker effect in the array of hexagonal boron nitride antennas. *MRS Advances*, **2018**, 3, 2783-2788	0.7	8
23	Lattice Resonances in Transdimensional WS2 Nanoantenna Arrays. *Applied Sciences (Switzerland)*, **2019**, 9, 2005	2.6	7
22	Bulk photoemission from metal films and nanoparticles. *Quantum Electronics*, **2015**, 45, 50-58	1.8	7
21	Lattice Zenneck Modes on Subwavelength Antennas. *Laser and Photonics Reviews*, **2019**, 13, 1800267	8.3	7
20	Giant Photogalvanic Effect in Noncentrosymmetric Plasmonic Nanoparticles. *Physical Review X*, **2014**, 4,	9.1	6
19	Role of propagating slit mode in enhanced transmission through slit arrays in a metallic films. *Optical and Quantum Electronics*, **2009**, 41, 299-313	2.4	6
18	Collective effects and coupling phenomena in resonant optical metasurfaces: introduction. *Journal of the Optical Society of America B: Optical Physics*, **2019**, 36, CEC1	1.7	6
17	Transition absorption as a mechanism of surface photoelectron emission from metals. *Physica Status Solidi - Rapid Research Letters*, **2015**, 9, 570-574	2.5	4
16	A plasmonic modulator based on metal-insulator-metal waveguide with barium titanate core. *Photonics Letters of Poland*, **2013**, 5,	2.1	4
15	Applicability of multipole decomposition to plasmonic- and dielectric-lattice resonances.. *Journal of Chemical Physics*, **2022**, 156, 114104	3.9	4
14	Lattice effect for enhanced hot-electron generation in nanoelectrodes. *Optical Materials Express*, **2021**, 11, 3232	2.6	3

List of Publications

13	Finite-thickness metal-semiconductor-metal waveguide as plasmonic modulator **2012**,		2
12	Surface Plasmon Polariton Modulator with Periodic Patterning of Indium Tin Oxide Layers **2011**,		2
11	Transition Metal Dichalcogenide Nanoantennas Lattice. *MRS Advances*, **2019**, 4, 2283-2288	0.7	2
10	TOWARDS UNDERSTANDING AND CONTROL OF NANOSCALE PHASE SEGREGATION IN INDIUM-GALLIUM-NITRIDE ALLOYS **2017**, 183-207		1
9	Nanostructured Tungsten Disulfide WS2 as Mie Scatterers and Nanoantennas. *MRS Advances*, **2020**, 5, 1819-1826	0.7	1
8	Plasmonic modulator based on thin metal-semiconductor-metal waveguide with gain core **2013**,		1
7	CMOS Compatible Ultra-Compact Modulator **2014**,		1
6	Plasmonic modulator using CMOS-compatible material platform **2014**,		1
5	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	0.8	1
4	Transdimensional photonic lattices with Mie-resonant nanoantennas **2019**,		1
3	Semiconductor nanopillars for programmable directional lasing emissions. *MRS Advances*, **2021**, 6, 234-240	0.7	1
2	Anomalous transmission of electromagnetic wave through periodic arrays of subwavelength slits arranged on thin metal films. *Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)*, **2011**, 110, 119-123	0.7	0
1	Light passage through a film with subwavelength slits. *Bulletin of the Lebedev Physics Institute*, **2010**, 37, 309-310	0.5	