

# Maxim R Shcherbakov

## List of Publications by Year in descending order

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96  
papers

2,592  
citations

304602

22  
h-index

189801

50  
g-index

98  
all docs

98  
docs citations

98  
times ranked

2571  
citing authors

#	ARTICLE	IF	CITATIONS
1	Externally Driven Nonlinear Time-Variant Metasurfaces. ACS Photonics, 2022, 9, 493-502.	3.2	11
2	Nonlinear response of Q-boosting metasurfaces beyond the time-bandwidth limit. Nanophotonics, 2022, 11, 4053-4061.	2.9	10
3	Third-harmonic light polarization control in magnetically resonant silicon metasurfaces. Optics Express, 2021, 29, 11605.	1.7	16
4	Electrically Actuated Varifocal Lens Based on Liquid-Crystal-Embedded Dielectric Metasurfaces. Nano Letters, 2021, 21, 3849-3856.	4.5	81
5	Deep Optical Switching on Subpicosecond Timescales in an Amorphous Ge Metamaterial. Advanced Optical Materials, 2021, 9, 2100240.	3.6	4
6	Resonant dielectric metasurfaces in strong optical fields. APL Materials, 2021, 9, 060701.	2.2	23
7	Generation of even and odd high harmonics in resonant metasurfaces using single and multiple ultra-intense laser pulses. Nature Communications, 2021, 12, 4185.	5.8	40
8	Tailoring Third-Harmonic Diffraction Efficiency by Hybrid Modes in High-Q Metasurfaces. Nano Letters, 2021, 21, 10438-10445.	4.5	23
9	Nonlinear and ultrafast effects. , 2020, , 223-248.		2
10	Frequency Conversion in a Time-Variant Dielectric Metasurface. Nano Letters, 2020, 20, 7052-7058.	4.5	45
11	Dark mode enhancing magneto-optical Kerr effect in multilayer magnetoplasmonic crystals. Physical Review B, 2020, 101, .	1.1	16
12	Enhanced Nonlinear Light Generation in Oligomers of Silicon Nanoparticles under Vector Beam Illumination. Nano Letters, 2020, 20, 3471-3477.	4.5	35
13	Observation and nonlinear optical probing of flat band states in high-Q dielectric metasurfaces. , 2020, , .		0
14	Nonlinear Light Generation Driven by Collective Magnetic Modes in Oligomers of Silicon Nanoparticles Excited by Vector Beams. , 2020, , .		0
15	Frequency Conversion in a Dielectric Time-Variant Metasurface via Optical Pumping. , 2020, , .		0
16	Numerical verification of nonlinear response beyond the efficiency-bandwidth limit in time-variant metasurfaces. AIP Conference Proceedings, 2020, , .	0.3	0
17	Tailoring Nonlinear Diffraction in Silicon Metasurfaces. , 2020, , .		0
18	Time-dependent metasurfaces for efficient all-optical switching at different frequencies. AIP Conference Proceedings, 2020, , .	0.3	0

#	ARTICLE	IF	CITATIONS
19	Thermo-optic Dielectric Metasurfaces for Polarization State Synthesizers and Active Lensing. , 2020, , .		0
20	High Harmonic Generation from a Large-gap Semiconductor Metasurface. , 2020, , .		0
21	Negative Extinction and Broadband Light-matter Interactions in High-Q Time-variant Metasurfaces. , 2020, , .		0
22	Electrically defined topological interface states of graphene surface plasmons based on a gate-tunable quantum Bragg grating. Nanophotonics, 2019, 8, 1417-1431.	2.9	8
23	Polarization states synthesizer based on a thermo-optic dielectric metasurface. Journal of Applied Physics, 2019, 126, 073102.	1.1	15
24	Tailored Nonlinear Anisotropy in Mie-Resonant Dielectric Oligomers. Advanced Optical Materials, 2019, 7, 1900447.	3.6	18
25	Interaction of semiconductor metasurfaces with short laser pulses: From nonlinear-optical response toward spatiotemporal shaping. Journal of Applied Physics, 2019, 126, .	1.1	14
26	Low-Power Absorption Saturation in Semiconductor Metasurfaces. ACS Photonics, 2019, 6, 2797-2806.	3.2	25
27	Photon acceleration and tunable broadband harmonics generation in nonlinear time-dependent metasurfaces. Nature Communications, 2019, 10, 1345.	5.8	82
28	Overcoming the efficiency-bandwidth tradeoff for optical harmonics generation using nonlinear time-variant resonators. Physical Review A, 2019, 100, .	1.0	18
29	Optical Coupling between Resonant Dielectric Nanoparticles and Dielectric Nanowires Probed by Third Harmonic Generation Microscopy. ACS Photonics, 2019, 6, 189-195.	3.2	11
30	Time-variant metasurfaces enable tunable spectral bands of negative extinction. Optica, 2019, 6, 1441.	4.8	22
31	Mid-IR applications of resonant semiconductor metasurfaces: from "perfect" diffraction gratings to tunable harmonics generation (Conference Presentation). , 2019, , .		0
32	Enhancing harmonics generation by time-variant metasurfaces. , 2019, , .		0
33	Plasmon induced modification of silicon nanocrystals photoluminescence in presence of gold nanostripes. Scientific Reports, 2018, 8, 4911.	1.6	22
34	Polarization-Dependent Second Harmonic Diffraction from Resonant GaAs Metasurfaces. ACS Photonics, 2018, 5, 1786-1793.	3.2	74
35	Optical coupling between resonant dielectric nanoparticles and dielectric waveguides probed by third harmonic generation microscopy. Journal of Physics: Conference Series, 2018, 1092, 012104.	0.3	1
36	Perfect Diffraction using All-Dielectric Bianisotropic Metagratings. , 2018, , .		1

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37	Intensity-dependent reflectance modulation of femtosecond laser pulses in GaAs nanocylinders with magnetic resonances. <i>Journal of Physics: Conference Series</i> , 2018, 1092, 012181.	0.3	1
38	Perfect Diffraction with Multiresonant Bianisotropic Metagratings. <i>ACS Photonics</i> , 2018, 5, 4303-4311.	3.2	52
39	Polarimetry Using Graphene-Integrated Anisotropic Metasurfaces. <i>ACS Photonics</i> , 2018, 5, 4283-4288.	3.2	35
40	Saturation of fluorescence from NV centers in Mie-resonant diamond particles. <i>Journal of Physics: Conference Series</i> , 2018, 1092, 012102.	0.3	1
41	Bianisotropic All-dielectric Metasurfaces for Efficient Diffraction of Mid-infrared Electromagnetic Waves. , 2018, , .		0
42	Nonlinear Manifestations of Photon Acceleration in Rapidly Evolving Semiconductor Metasurfaces. , 2018, , .		2
43	All-optical control of resonant semiconductor metasurfaces for nonlinear mid-IR nanophotonics (Conference Presentation). , 2018, , .		0
44	Multidirectional optical sorting of Mie resonant dielectric nanoparticles (Conference Presentation). , 2018, , .		0
45	Manifestations of photon acceleration in semiconductor metasurfaces (Conference Presentation). , 2018, , .		0
46	Third-harmonic generation from Mie-type resonances of isolated all-dielectric nanoparticles. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160281.	1.6	34
47	Nonlinear Symmetry Breaking in Symmetric Oligomers. <i>ACS Photonics</i> , 2017, 4, 454-461.	3.2	32
48	Enhancement of nonlinear-optical effects in silicon nanodisks driven by magnetic Mie resonances (Conference Presentation). , 2017, , .		0
49	Ultrafast all-optical tuning of direct-gap semiconductor metasurfaces. <i>Nature Communications</i> , 2017, 8, 17.	5.8	300
50	Optical Magnetism and Fundamental Modes of Nanodiamonds. <i>ACS Photonics</i> , 2017, 4, 1153-1158.	3.2	26
51	Nonlinear anisotropy in silicon nanoparticle oligomers. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	0
52	Near-Field Mapping of Optical Fabry-Pérot Modes in All-Dielectric Nanoantennas. <i>Nano Letters</i> , 2017, 17, 7629-7637.	4.5	17
53	Directional Optical Sorting of Silicon Nanoparticles. <i>ACS Photonics</i> , 2017, 4, 2312-2319.	3.2	35
54	Ultrafast modulation of femtosecond laser pulses in direct-gap semiconductor metasurfaces with magnetic resonances. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	0

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55	Magneto-optical effects from nanoparticles enhanced by Mie resonances. , 2017, , .		0
56	Ultrafast all-optical tuning of magnetic modes in GaAs metasurfaces. , 2017, , .		2
57	Magneto-optics enhanced by Mie resonances. , 2017, , .		0
58	Observation of Spontaneous Symmetry Breaking in Nanostructures. , 2016, , .		0
59	Free-carrier contribution to all-optical switching in Mie-resonant hydrogenated amorphous silicon nanodisks. Proceedings of SPIE, 2016, , .	0.8	0
60	Ultrafast control of third-order optical nonlinearities in fishnet metamaterials. Scientific Reports, 2016, 6, 28440.	1.6	16
61	Third harmonic generation in isolated all dielectric meta-atoms (Conference Presentation). , 2016, , .		0
62	SERS-active dielectric metamaterials based on periodic nanostructures. Optics Express, 2016, 24, 7133.	1.7	21
63	Localized-to-propagating surface plasmon transitions in gold nanoslit gratings. JETP Letters, 2016, 103, 46-50.	0.4	2
64	Optical properties of silicon nanocrystals covered by periodic array of gold nanowires. Physical Review B, 2016, 93, .	1.1	14
65	Multifold Enhancement of Third-Harmonic Generation in Dielectric Nanoparticles Driven by Magnetic Fano Resonances. Nano Letters, 2016, 16, 4857-4861.	4.5	176
66	Non-plasmonic nanostructures for subwavelength nonlinear optics (Conference Presentation). , 2016, , .		0
67	Enhanced third-harmonic generation in silicon oligomers driven by magnetic Fano resonance. , 2016, , .		0
68	Ultrafast Nonlinearities Driven by Magnetic Response in All-Dielectric Nanostructures. , 2016, , .		0
69	Nonlinear Interference and Tailorable Third-Harmonic Generation from Dielectric Oligomers. ACS Photonics, 2015, 2, 578-582.	3.2	124
70	Plasmon ruler with gold nanorod dimers: utilizing the second-order resonance. Optics Letters, 2015, 40, 1571.	1.7	6
71	Ultrafast All-Optical Switching with Magnetic Resonances in Nonlinear Dielectric Nanostructures. Nano Letters, 2015, 15, 6985-6990.	4.5	362
72	Nonlinear Properties of "Magnetic Light". Asia-Pacific Physics Newsletter, 2015, 04, 57-58.	0.0	1

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73	Third-Harmonic Generation from Silicon Oligomers and Metasurfaces. , 2015, , .		0
74	Femtosecond pulse shaping with plasmonic crystals. JETP Letters, 2015, 101, 787-792.	0.4	7
75	Femtosecond control of magneto-optical effects in magnetoplasmonic crystals. , 2015, , .		0
76	Third-harmonic spectroscopy of all-dielectric oligomers with both electric and magnetic resonances. , 2014, , .		0
77	Femtosecond intrapulse evolution of the magneto-optic Kerr effect in magnetoplasmonic crystals. Physical Review B, 2014, 90, .	1.1	14
78	Enhanced Third-Harmonic Generation in Silicon Nanoparticles Driven by Magnetic Response. Nano Letters, 2014, 14, 6488-6492.	4.5	522
79	Under- and over-water halves of Gyrinidae beetle eyes harbor different corneal nanocoatings providing adaptation to the water and air environments. Scientific Reports, 2014, 4, 6004.	1.6	28
80	Recent Advances in Nanoplasmonics and Magnetoplasmonics. Nanostructure Science and Technology, 2013, , 41-75.	0.1	2
81	Magnetic field-controlled femtosecond pulse shaping by magnetoplasmonic crystals. Journal of Applied Physics, 2013, 113, 17A947.	1.1	8
82	Shaping of Femtosecond Laser Pulses with Plasmonic Crystals. , 2013, , .		0
83	Handedness-sensitive emission of surface plasmon polaritons by elliptical nanohole ensembles. Optics Express, 2012, 20, 10538.	1.7	9
84	Ultrafast Polarization Shaping with Fano Plasmonic Crystals. Physical Review Letters, 2012, 108, 253903.	2.9	23
85	Contribution of the magnetic resonance to the third harmonic generation from a fishnet metamaterial. Physical Review B, 2012, 86, .	1.1	31
86	Near-field optical microscopy of plasmonic effects in anisotropic metamaterials. Physica C: Superconductivity and Its Applications, 2012, 479, 183-185.	0.6	1
87	Near-field optical polarimetry of plasmonic nanowires. JETP Letters, 2011, 93, 720-724.	0.4	8
88	Optical properties of 1D metal nanogratings. Journal of Surface Investigation, 2011, 5, 941-944.	0.1	0
89	Surface-plasmon relaxation dynamics in planar plasmonic crystals. , 2010, , .		0
90	Femtosecond relaxation dynamics of surface plasmon-polaritons in the vicinity of fano-type resonance. JETP Letters, 2010, 92, 575-579.	0.4	10

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91	Optical properties of one-dimensional subwave plasmonic nanostructures. JETP Letters, 2010, 92, 742-745.	0.4	1
92	Optical chirality in plasmonic arrays of subwavelength Z-shaped apertures. , 2010, , .		0
93	Full Poincaré sphere coverage with plasmonic nanoslit metamaterials at Fano resonance. Physical Review B, 2010, 82, .	1.1	37
94	Femtosecond dynamics of resonantly enhanced surface plasmons in planar plasmonic crystals. , 2010, , .		0
95	Plasmonic enhancement of linear birefringence and linear dichroism in anisotropic optical metamaterials. JETP Letters, 2009, 90, 433-437.	0.4	15
96	Plasmon-induced wavelength-dependent polarization switching in optical metamaterials. Proceedings of SPIE, 2009, , .	0.8	0