Mikhail V Rybin

List of Publications by Year
in descending order

112 papers	4,022 citations	279798 23 h-index	118850 62 g-index
115 all docs	115 docs citations	115 times ranked	3596 citing authors

#	Article	IF	Citations
1	Fano resonances in photonics. Nature Photonics, 2017, 11, 543-554.	31.4	1,240
2	High- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Q</mml:mi></mml:math> Supercavity Modes in Subwavelength Dielectric Resonators. Physical Review Letters, 2017, 119, 243901.	7.8	474
3	Bound states in the continuum and Fano resonances in the strong mode coupling regime. Advanced Photonics, 2019, 1, 1.	11.8	247
4	Allâ€Dielectric Active Terahertz Photonics Driven by Bound States in the Continuum. Advanced Materials, 2019, 31, e1901921.	21.0	210
5	Fano Resonance between Mie and Bragg Scattering in Photonic Crystals. Physical Review Letters, 2009, 103, 023901.	7.8	187
6	Lightâ€Induced Tuning and Reconfiguration of Nanophotonic Structures. Laser and Photonics Reviews, 2017, 11, 1700108.	8.7	158
7	Supercavity lasing. Nature, 2017, 541, 164-165.	27.8	130
8	Phase diagram for the transition from photonic crystals to dielectric metamaterials. Nature Communications, 2015, 6, 10102.	12.8	122
9	Extended Bound States in the Continuum with Symmetryâ€Broken Terahertz Dielectric Metasurfaces. Advanced Optical Materials, 2021, 9, 2002001.	7.3	99
10	Switching from Visibility to Invisibility via Fano Resonances: Theory and Experiment. Scientific Reports, 2015, 5, 8774.	3.3	98
11	Fano interference governs wave transport in disordered systems. Nature Communications, 2012, 3, 914.	12.8	89
12	Mie scattering as a cascade of Fano resonances. Optics Express, 2013, 21, 30107.	3.4	83
13	Fano resonances in antennas: General control over radiation patterns. Physical Review B, 2013, 88, .	3.2	54
14	Guidedâ€Mode Resonances in Allâ€Dielectric Terahertz Metasurfaces. Advanced Optical Materials, 2020, 8, 1900959.	7.3	43
15	Lasing Action from Anapole Metasurfaces. Nano Letters, 2021, 21, 6563-6568.	9.1	43
16	Purcell effect and Lamb shift as interference phenomena. Scientific Reports, 2016, 6, 20599.	3.3	38
17	Selective manipulation of stop-bands in multi-component photonic crystals: Opals as an example. Physical Review B, 2008, 77, .	3.2	35
18	Bragg scattering induces Fano resonance in photonic crystals. Photonics and Nanostructures - Fundamentals and Applications, 2010, 8, 86-93.	2.0	35

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19	High Miller-index photonic bands in synthetic opals. Photonics and Nanostructures - Fundamentals and Applications, 2007, 5, 119-124.	2.0	33
20	Complex interaction of polarized light with three-dimensional opal-based photonic crystals: Diffraction and transmission studies. Photonics and Nanostructures - Fundamentals and Applications, 2006, 4, 146-154.	2.0	32
21	Band Structure of Photonic Crystals Fabricated by Two-Photon Polymerization. Crystals, 2015, 5, 61-73.	2.2	29
22	Transition from two-dimensional photonic crystals to dielectric metasurfaces in the optical diffraction with a fine structure. Scientific Reports, 2016, 6, 30773.	3.3	28
23	Disorder-Immune Photonics Based on Mie-Resonant Dielectric Metamaterials. Physical Review Letters, 2019, 123, 163901.	7.8	27
24	Bound states in the continuum in periodic structures with structural disorder. Nanophotonics, 2021, 10, 4313-4321.	6.0	25
25	Multifunctional and Transformative Metaphotonics with Emerging Materials. Chemical Reviews, 2022, 122, 15414-15449.	47.7	23
26	Dimensionality effects on the optical diffraction from opal-based photonic structures. Physical Review B, 2013, 87, .	3.2	22
27	Inverted yablonovite fabricated by the direct laser writing method and its photonic structure. JETP Letters, 2012, 95, 457-461.	1.4	20
28	Combining isolated scatterers into a dimer by strong optical coupling. Physical Review A, 2019, 99, .	2.5	20
29	Experimental Observation of Intrinsic Light Localization in Photonic Icosahedral Quasicrystals. Advanced Optical Materials, 2020, 8, 2001170.	7.3	18
30	Two-dimensional light diffraction from thin opal films. Physics of the Solid State, 2011, 53, 1056-1061.	0.6	17
31	Multiple Bragg diffraction in low-contrast photonic crystals based on synthetic opals. Physics of the Solid State, 2011, 53, 1105-1113.	0.6	17
32	Multiple Bragg diffraction in opal-based photonic crystals: Spectral and spatial dispersion. Physical Review B, 2014, 89, .	3.2	17
33	Switchable invisibility of dielectric resonators. Physical Review B, 2017, 95, .	3.2	16
34	Optical properties of honeycomb photonic structures. Physical Review A, 2017, 95, .	2.5	15
35	Toward Silicon-Based Metamaterials. ACS Photonics, 2018, 5, 4751-4757.	6.6	15
36	Chipless wireless temperature sensor based on quasi-BIC resonance. Applied Physics Letters, 2021, 119, .	3.3	14

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37	Dielectric metamaterials with electric response. Optics Letters, 2018, 43, 5516.	3.3	13
38	Experimental study of the photonic band structure of synthetic opals at a low dielectric contrast. Physics of the Solid State, 2007, 49, 2280-2289.	0.6	12
39	Effect of photonic crystal stop-band on photoluminescence of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>a</mml:mi><mml:mo>â^'</mml:mo><mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:mo>:</mml:mo><mml:mi mathvariant="normal">H</mml:mi></mml:mrow></mml:math>. Physical Review B, 2017, 95, .	3.2	12
40	Structural parameters of synthetic opals: Statistical analysis of electron microscopy images. Physics of the Solid State, 2008, 50, 1280-1286.	0.6	11
41	Anisotropy enables unusual waves. Nature Photonics, 2017, 11, 212-214.	31.4	11
42	Fabrication of submicron structures by three-dimensional laser lithography. JETP Letters, 2014, 99, 531-534.	1.4	10
43	Optical properties of woodpile photonic crystals produced by three-dimensional laser lithography. Physics of the Solid State, 2015, 57, 2494-2501.	0.6	10
44	Allâ€Dielectric Nanostructures with a Thermoresponsible Dynamic Polymer Shell. Angewandte Chemie - International Edition, 2021, 60, 12737-12741.	13.8	10
45	Optically Reconfigurable Spherical Geâ€Sbâ€Te Nanoparticles with Reversible Switching. Laser and Photonics Reviews, 2022, 16, .	8.7	10
46	Invisibility of a finite dielectric cylinder under Fano resonance conditions. Physics of the Solid State, 2015, 57, 1991-1996.	0.6	9
47	Control over Light Emission in Lowâ€Refractiveâ€Index Artificial Materials Inspired by Reciprocal Design. Advanced Optical Materials, 2022, 10, 2100785.	7.3	9
48	Cascades of Fano resonances in Mie scattering. Physics of the Solid State, 2014, 56, 580-587.	0.6	8
49	Inverse dispersion method for calculation of complex photonic band diagram and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="script">PT</mml:mi></mml:math>symmetry. Physical Review B, 2016, 93, .	3.2	8
50	Transition between a Photonic Crystal and a Metamaterial with Electric Response in Dielectric Structures. JETP Letters, 2019, 109, 340-344.	1.4	8
51	Light-Induced Color Switching of Single Metalâ€“Organic Framework Nanocrystals. Journal of Physical Chemistry Letters, 2022, 13, 777-783.	4.6	8
52	High-Q states and Strong mode coupling in high-index dielectric resonators.. Journal of Physics: Conference Series, 2018, 1124, 051058.	0.4	7
53	Unconventional light scattering from glassy photonic films and metasurfaces. Physical Review B, 2019, 99, .	3.2	7
54	On dip broadening in transmission spectra of synthetic opals. Physics of the Solid State, 2008, 50, 436-445.	0.6	5

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55	Selective stop-band switching in two-dimensional multicomponent photonic crystals. Physics of the Solid State, 2009, 51, 518-524.	0.6	5
56	Selective control of light beams in diffraction experiments on synthetic opals. Physics of the Solid State, 2011, 53, 1415-1424.	0.6	5
57	Photonic properties of two-dimensional high-contrast periodic structures: Numerical calculations. Physics of the Solid State, 2014, 56, 588-593.	0.6	5
58	Boron-doped transparent conducting nanodiamond films. Technical Physics Letters, 2011, 37, 322-325.	0.7	4
59	Glassy nanostructures fabricated by the direct laser writing method. Physics of the Solid State, 2012, 54, 1975-1980.	0.6	4
60	Optical properties of 2D photonic structures fabricated by direct laser writing. SN Applied Sciences, 2019, 1, 1.	2.9	4
61	Small-angle X-ray diffraction investigation of twinned opal-like structures. Physics of the Solid State, 2012, 54, 2073-2082.	0.6	3
62	Fano resonances in all-dielectric metamaterials. , 2013, , .		3
63	Modeling of formation mechanism and optical properties of Si/Au core-shell nanoparticles. , 2016, , .		3
64	Optical coupling of overlapping nanopillars. Optics Letters, 2021, 46, 1221.	3.3	3
65	Fano resonances in high-index dielectric photonic structures. , 2014, , .		2
66	Two modes of laser lithography fabrication of three-dimensional submicrometer structures. Physics of the Solid State, 2014, 56, 2166-2172.	0.6	2
67	Light scattering at dielectric metasurfaces. JETP Letters, 2017, 105, 352-356.	1.4	2
68	Optical downfolding method for calculating quasinormal modes of complex nanoparticles. Physical Review A, 2021, 103, .	2.5	2
69	Disorder-Immune Photonics Based on Mie-Resonant Dielectric Metamaterials. , 2019, , .		2
70	Band gaps in multicomponent photonic crystals: splitting effects and the inverse design problem. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 1767.	2.1	1
71	Peculiarities of the band structure of multi-component photonic crystals with different dimensions. Journal of Physics Condensed Matter, 2010, 22, 115401.	1.8	1
72	Multiscale modeling of all-dielectric metamaterials. , 2015, , .		1

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73	Transition from photonic crystals to dielectric metamaterials: A phase diagram and the order parameter. Proceedings of SPIE, 2016, , .	0.8	1
74	Optical laue diffraction on photonic structures designed by laser lithography. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2016, 120, 971-977.	0.6	1
75	Fabrication of spherical GeSbTe nanoparticles by laser printing technique. Journal of Physics: Conference Series, 2017, 917, 062017.	0.4	1
76	Mie bands in all-dielectric high-index metamaterials. , 2017, , .		1
77	Coupling regimes of high-index dimer. , 2018, , .		1
78	Evolution of Optical Diffraction Patterns on Disordered Woodpile Photonic Structures. Physics of the Solid State, 2018, 60, 1387-1393.	0.6	1
79	Transition from photonic crystals to dielectric metamaterials. Semiconductors and Semimetals, 2019, 100, 13-43.	0.7	1
80	Quasicrystal structure in metamaterial regime. AIP Conference Proceedings, 2020, , .	0.4	1
81	Optical Properties of Low-Contrast Opal-Based Photonic Crystals. Series in Optics and Optoelectronics, 2012, , 249-274.	0.0	1
82	Exceptional point and parity-time symmetry on dipole mie resonances in dimer. AIP Conference Proceedings, 2020, , .	0.4	1
83	Finding exceptional points in realistic systems using full-wave simulations. Journal of Physics: Conference Series, 2021, 2015, 012033.	0.4	1
84	Interlaced wire medium with quasicrystal lattice. Physical Review B, 2022, 105, .	3.2	1
85	<title>Bragg diffraction of light as a powerful tool in the study of photonic crystals</title>. , 2006, , .		0
86	Two-dimensional and 3D multi-component photonic crystals: theory and experiment. , 2008, , .		0
87	Disorder-induced Fano resonance in 1D photonic crystals. , 2011, , .		0
88	Optical diffraction from opal-based photonic structures: transition from 2D to 3D regimes. , 2012, , .		0
89	Inverted Yablonovite-like 3D photonic crystals fabricated by laser nanolithography. Proceedings of SPIE, 2012, , .	0.8	0
90	Fano resonance can make a homogeneous cylinder invisible: theoretical proposal and experimental demonstration. , 2016, , .		0

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91	Optical diffraction by two-dimensional photonic structures with hexagonal symmetry. Physics of the Solid State, 2016, 58, 1412-1419.	0.6	0
92	Quasi-crystalline and disordered photonic structures fabricated using direct laser writing. AIP Conference Proceedings, 2017, , .	0.4	0
93	Optical properties of GST nanoparticles fabricated by laser printing technique. AIP Conference Proceedings, 2017, , .	0.4	0
94	Silicon-based metamaterials: Phase transitions in periodic structures. , 2017, , .		0
95	Phase transitions in multiband periodic all-dielectric photonic structures. , 2017, , .		0
96	Optical diffraction from photonic-graphene metasurfaces. , 2017, , .		0
97	Invisibility cloaking of a high-index dielectric cylinder via Fano resonances. , 2017, , .		0
98	High-Q Supercavity States in High-Index Subwavelength All-Dielectric Resonators. , 2018, , .		0
99	Scattering of light from disordered photonic structures. Journal of Physics: Conference Series, 2018, 1092, 012139.	0.4	0
100	Strong Mode Coupling and High-Q Supercavity Modes in Subwavelength Dielectric Resonators. , 2018, , .		0
101	High-Q states in subwavelength dielectric resonators forming in strong mode coupling regime. , 2019, , .		0
102	Supercavity modes in silicon-based metasurfaces. AIP Conference Proceedings, 2020, , .	0.4	0
103	10.1007/s11451-008-3007-7. , 2010, 50, 436.		0
104	Multicomponent Photonic Crystals with Inhomogeneous Scatterers. Series in Optics and Optoelectronics, 2012, , 151-168.	0.0	0
105	High-Q resonances with low azimuthal indices in all-dielectric high-index nanoparticles. , 2017, , .		0
106	Active high-Q dielectric terahertz supercavities. , 2018, , .		0
107	Bound states in the continuum in dielectric waveguides of finite size. Journal of Physics: Conference Series, 2020, 1697, 012159.	0.4	0
108	Quadrupole-driven metamaterials. AIP Conference Proceedings, 2020, , .	0.4	0

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109	Optical properties of icosahedral quasicrystals. AIP Conference Proceedings, 2020, , .	0.4	0
110	Regimes of optical mode coupling: from core-shell single particle to dimer. Journal of Physics: Conference Series, 2020, 1461, 012029.	0.4	0
111	Transformation of guided modes into bound states in the continuum. Journal of Physics: Conference Series, 2021, 2015, 012078.	0.4	0
112	Temperature sensor tag based on supercavity mode of dielectric resonator. Journal of Physics: Conference Series, 2021, 2015, 012168.	0.4	0