

Dmitry A. Bykov

List of Publications by Year in descending order

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107
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2,450
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186265

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times ranked

1192
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#	ARTICLE	IF	CITATIONS
1	Supporting Quadric Method for Designing Freeform Mirrors That Generate Prescribed Near-Field Irradiance Distributions. <i>Photonics</i> , 2022, 9, 118.	2.0	2
2	Designing stigmatic lenses with minimal Fresnel losses: erratum. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2022, 39, 152.	1.5	0
3	1D quasi-bound states in the continuum with large operation bandwidth in the k space for nonlinear optical applications. <i>Photonics Research</i> , 2022, 10, 1575.	7.0	18
4	Method for calculating the eikonal function and its application to design of diffractive optical elements for optical beam shaping. <i>Computer Optics</i> , 2022, 46, .	2.2	5
5	Broadband mirrors for surface plasmon polaritons using integrated high-contrast diffraction gratings. <i>Optics Express</i> , 2021, 29, 4022.	3.4	2
6	Spatial differentiation of optical beams using a resonant metal-dielectric-metal structure. <i>Journal of Optics (United Kingdom)</i> , 2021, 23, 023501.	2.2	16
7	Designing stigmatic lenses with minimal Fresnel losses. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2021, 38, 855.	1.5	7
8	Optical differentiator based on a trilayer metal-dielectric structure. <i>Computer Optics</i> , 2021, 45, .	2.2	3
9	Supporting quadric method for designing refractive optical elements generating prescribed irradiance distributions and wavefronts. <i>Optics Express</i> , 2021, 29, 26304.	3.4	13
10	Integrated diffraction gratings on the Bloch surface wave platform supporting bound states in the continuum. <i>Nanophotonics</i> , 2021, 10, 4331-4340.	6.0	13
11	Design of a stigmatic lens implementing a required ray mapping. <i>Applied Optics</i> , 2021, 60, 9138.	1.8	3
12	Hybrid design of diffractive optical elements for optical beam shaping. <i>Optics Express</i> , 2021, 29, 31875.	3.4	17
13	Gires-Tournois Interferometers for Modes of Dielectric Slab Waveguides. , 2021, , .		0
14	Optical Differentiator Based on a Three-Layer Metal-Dielectric Structure. , 2021, , .		0
15	Arbitrary-order optical differentiation in reflection by sequence of first-order differentiators. <i>Journal of Physics: Conference Series</i> , 2020, 1461, 012050.	0.4	1
16	Optical Properties of Resonant Diffraction Gratings with a Slowly Varying Period. , 2020, , .		0
17	The two reflector design problem for forming flat wavefront from a point source. , 2020, , .		0
18	Bound states in the continuum and strong phase resonances in integrated Gires-Tournois interferometer. <i>Nanophotonics</i> , 2020, 9, 83-92.	6.0	31

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19	Design and fabrication of freeform mirrors generating prescribed far-field irradiance distributions. <i>Applied Optics</i> , 2020, 59, 5006.	1.8	16
20	Design of diffractive lenses operating at several wavelengths. <i>Optics Express</i> , 2020, 28, 11705.	3.4	30
21	On the use of the supporting quadric method in the problem of designing double freeform surfaces for collimated beam shaping. <i>Optics Express</i> , 2020, 28, 22642.	3.4	20
22	Optimization method for designing double-surface refractive optical elements for an extended light source. <i>Optics Express</i> , 2020, 28, 24431.	3.4	18
23	Multiscale approach and linear assignment problem in designing mirrors generating far-field irradiance distributions. <i>Optics Letters</i> , 2020, 45, 3549.	3.3	4
24	Integrated Gires-Tournois interferometers based on evanescently coupled ridge resonators. <i>Optics Letters</i> , 2020, 45, 5065.	3.3	8
25	Optimal mass transportation problem in the design of freeform optical elements generating far-field irradiance distributions for plane incident beam. , 2020, , .		1
26	Integrated Spectral Filters Consisting of Several Dielectric Ridges on the Surface of a Slab Waveguide. , 2020, , .		0
27	Design and fabrication of a freeform mirror generating a uniform illuminance distribution in a rectangular region. <i>Computer Optics</i> , 2020, 44, .	2.2	8
28	Bound states in the continuum in composite structures consisting of two dielectric diffraction gratings with Lorentzian line shape. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	0
29	All-dielectric filters with a butterworth line-shape composed of several resonant structures. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	0
30	Coupled-wave formalism for bound states in the continuum in guided-mode resonant gratings. <i>Physical Review A</i> , 2019, 99, .	2.5	54
31	Optimal mass transportation problem in the design of freeform optical elements generating far-field irradiance distributions for plane incident beam. <i>Applied Optics</i> , 2019, 58, 9131.	1.8	9
32	Optimal mass transportation and linear assignment problems in the design of freeform refractive optical elements generating far-field irradiance distributions. <i>Optics Express</i> , 2019, 27, 13083.	3.4	28
33	Resonant properties of composite structures consisting of several resonant diffraction gratings. <i>Optics Express</i> , 2019, 27, 25814.	3.4	20
34	Improving the sensitivity of guided-mode resonance sensors under oblique incidence condition. <i>Optics Express</i> , 2019, 27, 30563.	3.4	13
35	Integrated flat-top reflection filters operating near bound states in the continuum. <i>Photonics Research</i> , 2019, 7, 1314.	7.0	62
36	Formulation of the inverse problem of calculating the optical surface for an illuminating beam with a plane wavefront as the Monge-Kantorovich problem. <i>Computer Optics</i> , 2019, 43, .	2.2	5

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37	Analytical design of flat-top transmission filters composed of several resonant structures. Optics Express, 2019, 27, 26786.	3.4	3
38	Cross-polarization mode coupling and exceptional points in photonic crystal slabs. Physical Review A, 2018, 97, .	2.5	25
39	Spatial integration and differentiation of optical beams in a slab waveguide by a dielectric ridge supporting high-Q resonances. Optics Express, 2018, 26, 25156.	3.4	48
40	Multifocal diffractive lens generating several fixed foci at different design wavelengths. Optics Express, 2018, 26, 4698.	3.4	22
41	Two-groove narrowband transmission filter integrated into a slab waveguide. Photonics Research, 2018, 6, 61.	7.0	29
42	First-order optical spatial differentiator based on a guided-mode resonant grating. Optics Express, 2018, 26, 10997.	3.4	78
43	Design of an axisymmetrical refractive optical element generating required illuminance distribution and wavefront. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2018, 35, 1949.	1.5	11
44	Beam shaping with a plano-freeform lens pair. Optics Express, 2018, 26, 19406.	3.4	34
45	Designing double freeform surfaces for collimated beam shaping with optimal mass transportation and linear assignment problems. Optics Express, 2018, 26, 24602.	3.4	43
46	Linear assignment problem in the design of freeform refractive optical elements generating prescribed irradiance distributions. Optics Express, 2018, 26, 27812.	3.4	42
47	Bound states in the continuum and high-Q resonances supported by a dielectric ridge on a slab waveguide. Photonics Research, 2018, 6, 1084.	7.0	73
48	ON THE RELATION BETWEEN THE PROPAGATION CONSTANT OF BLOCH SURFACE WAVES AND THE THICKNESS OF THE UPPER LAYER OF A PHOTONIC CRYSTAL. Computer Optics, 2018, 42, 22-27.	2.2	8
49	Design of an axisymmetric optical element generating a prescribed illuminance distribution and wavefront. Computer Optics, 2018, 42, 772-778.	2.2	1
50	Variational approach to eikonal function computation. Computer Optics, 2018, 42, 557-567.	2.2	1
51	Variational interpretation of the eikonal calculation problem from the condition of generating a prescribed irradiance distribution. Computer Optics, 2018, 42, 568-573.	2.2	5
52	A simple three-layer dielectric structure for spatiotemporal differentiation of optical signals. , 2018, , .		0
53	On-chip phase-shifted Bragg gratings and their application for spatiotemporal transformation of Bloch surface waves. , 2017, , .		0
54	Coupled-mode theory and Fano resonances in guided-mode resonant gratings: the conical diffraction mounting. Optics Express, 2017, 25, 1151.	3.4	15

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55	Use of aperiodic Fourier modal method for calculating complex-frequency eigenmodes of long-period photonic crystal slabs. <i>Optics Express</i> , 2017, 25, 27298.	3.4	5
56	Planar two-groove optical differentiator in a slab waveguide. <i>Optics Express</i> , 2017, 25, 22328.	3.4	28
57	Variational approach to calculation of light field eikonal function for illuminating a prescribed region. <i>Optics Express</i> , 2017, 25, 26378.	3.4	21
58	TEMPORAL DIFFERENTIATION AND INTEGRATION OF 3D OPTICAL PULSES USING PHASE-SHIFTED BRAGG GRATINGS. <i>Computer Optics</i> , 2017, 41, 13-21.	2.2	24
59	Analytical source-target mapping method for the design of freeform mirrors generating prescribed 2D intensity distributions. <i>Optics Express</i> , 2016, 24, 10962.	3.4	34
60	Analytical description of 3D optical pulse diffraction by a phase-shifted Bragg grating. <i>Optics Express</i> , 2016, 24, 18828.	3.4	19
61	Spatial differentiation of Bloch surface wave beams using an on-chip phase-shifted Bragg grating. <i>Journal of Optics (United Kingdom)</i> , 2016, 18, 115006.	2.2	23
62	Differentiating space-time optical signals using resonant nanophotonics structures. <i>Doklady Physics</i> , 2016, 61, 108-111.	0.7	10
63	Near-wavelength diffraction gratings for surface plasmon polaritons. <i>Optics Letters</i> , 2015, 40, 4935.	3.3	13
64	Phase-shifted Bragg gratings for Bloch surface waves. <i>Optics Express</i> , 2015, 23, 27034.	3.4	19
65	Photonic crystals with plasmonic patterns: novel type of the heterostructures for enhanced magneto-optical activity. <i>Journal Physics D: Applied Physics</i> , 2015, 48, 095001.	2.8	55
66	$\langle \text{mml:math} \rangle$ $\text{xmlns:mml}=\text{"http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{‰}\langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \hat{\sim} \langle \text{mml:mo} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:m} \rangle$ line shape in photonic crystal slabs. <i>Physical Review A</i> , 2015, 92, .	2.5	18
67	Spatial optical integrator based on phase-shifted Bragg gratings. <i>Optics Communications</i> , 2015, 338, 457-460.	2.1	49
68	Antireflection layers in low-scattering plasmonic optics. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2015, 14, 101-105.	2.0	4
69	Spatiotemporal coupled-mode theory of guided-mode resonant gratings. <i>Optics Express</i> , 2015, 23, 19234.	3.4	25
70	On the use of the supporting quadric method in the problem of the light field eikonal calculation. <i>Optics Express</i> , 2015, 23, 19605.	3.4	23
71	Spatiotemporal pulse shaping using resonant diffraction gratings. <i>Optics Letters</i> , 2015, 40, 3492.	3.3	23
72	RESONANT APPROXIMATION OF PHASE-SHIFTED BRAGG GRATING (PSBG) SPECTRA. <i>Computer Optics</i> , 2015, 39, 311-318.	2.2	4

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73	On the use of the fourier modal method for calculation of localized eigenmodes of integrated optical resonators. <i>Computer Optics</i> , 2015, 39, 663-673.	2.2	8
74	Optical computation of the Laplace operator using phase-shifted Bragg grating. <i>Optics Express</i> , 2014, 22, 25084.	3.4	104
75	Low-scattering surface plasmon refraction with isotropic materials. <i>Optics Express</i> , 2014, 22, 13547.	3.4	55
76	Phase modulation of Bloch surface waves with the use of a diffraction microrelief at the boundary of a one-dimensional photonic crystal. <i>JETP Letters</i> , 2014, 99, 63-66.	1.4	22
77	Spatial differentiation of optical beams using phase-shifted Bragg grating. <i>Optics Letters</i> , 2014, 39, 1278.	3.3	99
78	Magnetophotonic intensity effects in hybrid metal-dielectric structures. <i>Physical Review B</i> , 2014, 89, .	3.2	39
79	Resonant diffraction gratings for spatial differentiation of optical beams. <i>Quantum Electronics</i> , 2014, 44, 984-988.	1.0	39
80	SPATIAL INTEGRATION OF OPTICAL BEAMS USING PHASE-SHIFTED BRAGG GRATING. <i>Computer Optics</i> , 2014, 38, 372-376.	2.2	5
81	ON THE DIFFRACTION OF AN OPTICAL BEAM BY A PHASE SHIFTED BRAGG GRATING. <i>Computer Optics</i> , 2014, 38, 590-597.	2.2	4
82	ON THE COMPENSATION OF THE DIFFRACTION ORDERS OVERLAP EFFECT IN THE OFFNER SPECTROMETER. <i>Computer Optics</i> , 2014, 38, 777-781.	2.2	9
83	Plasmon-mediated magneto-optical transparency. <i>Nature Communications</i> , 2013, 4, 2128.	12.8	180
84	Time-domain differentiation of optical pulses in reflection and in transmission using the same resonant grating. <i>Journal of Optics (United Kingdom)</i> , 2013, 15, 105703.	2.2	34
85	Numerical Methods for Calculating Poles of the Scattering Matrix With Applications in Grating Theory. <i>Journal of Lightwave Technology</i> , 2013, 31, 793-801.	4.6	68
86	Analytical design of freeform optical elements generating an arbitrary-shape curve. <i>Applied Optics</i> , 2013, 52, 2521.	1.8	26
87	Resonant diffraction gratings for differentiation of optical signals in reflection and transmission. <i>Computer Optics</i> , 2013, 37, 138-145.	2.2	4
88	Stable algorithm for the computation of the electromagnetic field distribution of eigenmodes of periodic diffraction structures. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2012, 29, 2307.	1.5	7
89	Single-resonance diffraction gratings for time-domain pulse transformations: integration of optical signals. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2012, 29, 1734.	1.5	30
90	On the ability of resonant diffraction gratings to differentiate a pulsed optical signal. <i>Journal of Experimental and Theoretical Physics</i> , 2012, 114, 724-730.	0.9	21

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91	Integration of optical pulses by resonant diffraction gratings. JETP Letters, 2012, 95, 6-9.	1.4	10
92	Dynamics of surface plasmon polaritons in plasmonic crystals. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1111.	2.1	5
93	Temporal differentiation of optical signals using resonant gratings. Optics Letters, 2011, 36, 3509.	3.3	50
94	Giant transversal Kerr effect in magneto-plasmonic heterostructures: The scattering-matrix method. Journal of Experimental and Theoretical Physics, 2010, 110, 816-824.	0.9	44
95	Extraordinary magneto-optical effect of a change in the phase of diffraction orders in dielectric diffraction gratings. Journal of Experimental and Theoretical Physics, 2010, 111, 967-974.	0.9	28
96	Extraordinary magneto-optical effect of transmitted wave phase change in periodic diffraction structures. Technical Physics Letters, 2010, 36, 595-598.	0.7	1
97	Magneto-optical resonances in periodic dielectric structures magnetized in plane. Journal of Modern Optics, 2010, 57, 1611-1618.	1.3	9
98	On surface plasmon polariton wavepacket dynamics in metal-dielectric heterostructures. Journal of Physics Condensed Matter, 2010, 22, 395301.	1.8	6
99	Suppression of the spectral selectivity of two-layer phase-relief diffraction structures. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2009, 106, 621-626.	0.6	25
100	Optical properties of perforated metal-dielectric heterostructures magnetized in the plane. Physics of the Solid State, 2009, 51, 1656-1662.	0.6	8
101	Giant magneto-optical orientational effect in plasmonic heterostructures. Optics Letters, 2009, 34, 398.	3.3	39
102	Extraordinary transmission and giant magneto-optical transverse Kerr effect in plasmonic nanostructured films. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 1594.	2.1	88
103	Diffraction elements in the optical systems of modern optoelectronics. Journal of Optical Technology (A Translation of Opticheskii Zhurnal), 2009, 76, 395.	0.4	4
104	Diffraction gratings for generating varying-period interference patterns of surface plasmons. Journal of Optics, 2008, 10, 095204.	1.5	25
105	Faraday effect enhancement in metal-dielectric plasmonic systems. , 2007, 6581, 158.		7
106	Magneto-optical effects at the Rayleigh-Wood and plasmon anomalies. , 2007, 6728, 107.		4
107	Magneto-optical effects in the metal-dielectric gratings. Optics Communications, 2007, 278, 104-109.	2.1	55