Igor Semchenko

List of Publications by Year
in descending order

70	644	759055 12	642610 23
papers	citations	h-index	g-index

74	74	74	582
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Broadband Reflectionless Metasheets: Frequency-Selective Transmission and Perfect Absorption. Physical Review X, 2015, 5, .	2.8	126
2	Ground-plane-less bidirectional terahertz absorber based on omega resonators. Optics Letters, 2015, 40, 2084.	1.7	63
3	Modeling of Spirals with Equal Dielectric, Magnetic, and Chiral Susceptibilities. Electromagnetics, 2008, 28, 476-493.	0.3	33
4	Qubit-Based Memcapacitors and Meminductors. Physical Review Applied, 2016, 6, .	1.5	27
5	Transformation of the polarization of electromagnetic waves by helical radiators. Journal of Communications Technology and Electronics, 2007, 52, 850-855.	0.2	23
6	Reflection and transmission by a uniaxially bi-anisotropic slab under normal incidence of plane waves. Journal Physics D: Applied Physics, 1998, 31, 2458-2464.	1.3	22
7	Optimal helix shape: Equality of dielectric, magnetic, and chiral susceptibilities. Russian Physics Journal, 2009, 52, 472-479.	0.2	20
8	Highly transparent twist polarizer metasurface. Applied Physics Letters, 2017, 111, .	1.5	20
9	Perfect Narrowband Absorber Based on Patterned Graphene-Silica Multilayer Hyperbolic Metamaterials. Plasmonics, 2020, 15, 1869-1874.	1.8	20
10	Stored and absorbed energy of fields in lossy chiral single-component metamaterials. Physical Review B, 2018, 97, .	1.1	18
11	Study of the properties of artificial anisotropic structures with high chirality. Crystallography Reports, 2011, 56, 366-373.	0.1	16
12	Chiral metamaterial with unit negative refraction index. EPJ Applied Physics, 2009, 46, 32607.	0.3	15
13	Investigation of electromagnetic properties of a high absorptive, weakly reflective metamaterialâ€"substrate system with compensated chirality. Journal of Applied Physics, 2017, 121, .	1.1	14
14	Duality in Electromagnetics: Application to Tellegen Media. Electromagnetics, 1996, 16, 51-61.	0.3	12
15	Duality Once More Applied to Tellegen Media. Electromagnetics, 1997, 17, 205-211.	0.3	12
16	Helices of optimal shape for nonreflecting covering. EPJ Applied Physics, 2010, 49, 33002.	0.3	12
17	Electromagnetic Waves in Artificial Chiral Structures with Dielectric and Magnetic Properties. Electromagnetics, 2001, 21, 401-414.	0.3	11
18	Polarization Plane Rotation of Electromagnetic Waves by the Artificial Periodic Structure with One-Turn Helical Elements. Electromagnetics, 2006, 26, 219-233.	0.3	11

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19	High-performance terahertz refractive index sensor based on a hybrid graphene Tamm structure. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 2543.	0.9	11
20	Artificial Uniaxial Bianisotropic Media at Oblique Incidence of Electromagnetic Waves. Electromagnetics, 2002, 22, 71-84.	0.3	10
21	Inversion Method Characterization of Graphene-Based Coordination Absorbers Incorporating Periodically Patterned Metal Ring Metasurfaces. Nanomaterials, 2020, 10, 1102.	1.9	10
22	Radiation of circularly polarized microwaves by a plane periodic structure of Î© elements. Journal of Communications Technology and Electronics, 2007, 52, 1002-1005.	0.2	9
23	Reply to comment on `Reflection and transmission by a uniaxial bi-anisotropic slab under normal incidence of plane waves. Journal Physics D: Applied Physics, 1999, 32, 2705-2706.	1.3	8
24	Investigation of the properties of weakly reflective metamaterials with compensated chirality. Crystallography Reports, 2014, 59, 480-485.	0.1	8
25	Optimal arrangement of smooth helices in uniaxial 2D-arrays. , 2013, , .		7
26	Microwave analogy of optical properties of cholesteric liquid crystals with local chirality under normal incidence of waves. Journal Physics D: Applied Physics, 1999, 32, 3222-3226.	1.3	6
27	Polarization selectivity of electromagnetic radiation of deoxyribonucleic acid. Journal of Communications Technology and Electronics, 2007, 52, 996-1001.	0.2	6
28	Polarization Selectivity of Artificial Anisotropic Structures Based on DNA-Like Helices. Crystallography Reports, 2010, 55, 921-926.	0.1	6
29	Polarization selectivity of interaction of DNA molecules with X-ray radiation. Biophysics (Russian) Tj ETQq1 1 0.784314 rgBT /Overlock	0.2	6
30	View on the history of electromagnetics of metamaterials: Evolution of the congress series of complex media. Photonics and Nanostructures - Fundamentals and Applications, 2014, 12, 279-283.	1.0	6
31	The potential energy of non-resonant optimal bianisotropic particles in an electromagnetic field does not depend on time. EPJ Applied Metamaterials, 2014, 1, 4.	0.8	5
32	Optimal angular stability of reflectionless metasurface absorbers. Physical Review B, 2021, 103, .	1.1	5
33	High-Performance Tunable Multichannel Absorbers Coupled with Graphene-Based Grating and Dual-Tamm Plasmonic Structures. Plasmonics, 2022, 17, 287-294.	1.8	5
34	Optical Forces Acting on a Double DNA-Like Helix, Its Unwinding and Strands Rupture. Photonics, 2020, 7, 83.	0.9	4
35	Broadband infrared quarter wave plate realized through perpendicular-to-helical-axis wave propagation in a helix array. Optics Letters, 2013, 38, 3499.	1.7	3
36	A single-layer meta-atom absorber. , 2014, , .		3

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37	Helical Metamaterial Elements as RLC Circuit. Advanced Materials Research, 2015, 1117, 122-125.	0.3	3
38	Omega-Structured Substrate-Supported Metamaterial for the Transformation of Wave Polarization in THz Frequency Range. Advances in Intelligent Systems and Computing, 2018, , 72-80.	0.5	3
39	Light-induced elastic waves: A mechanism of the optical magnetic transition in manganese arsenide. Journal of Experimental and Theoretical Physics, 2004, 99, 811-814.	0.2	2
40	Realization of Negative Refraction in a Bifilar Prism-Type Array Metamaterial. Applied Physics Express, 2013, 6, 072601.	1.1	2
41	Absorptive weakly reflective metamaterial based on optimal rectangular omegas. , 2017, , .		2
42	Effective Electron Model of the Wire Helix Excitation at Microwaves: First Step to Optimization of Pitch Angle of Helix. , 2002, , 245-256.		2
43	INTERACTION OF ARTIFICIAL DNA-LIKE STRUCTURES IN THE MICROWAVE RANGE: POLARIZATION SELECTIVITY OF WAVE REFLECTION. Telecommunications and Radio Engineering (English Translation of Elektrosvyaz) Tj ETQq1 1 0.784314 rgBT /Ov		2
44	Polarization Properties of a Rectangular Balanced Omega Element in the THz Range. Lecture Notes in Networks and Systems, 2020, , 84-93.	0.5	2
45	<title>Artificial anisotropic chiral materials for decrease of reflection of electromagnetic waves from metallic surfaces</title>. , 2001, , .		1
46	<title>Optical activity and selective reflection of light in stratified periodic structure</title>. , 2001, , .		1
47	Selective optical properties of a multilayered periodic gyrotropic structure at an arbitrary angle of incidence of waves. Crystallography Reports, 2004, 49, 1032-1037.	0.1	1
48	REALIZATION OF LINEAR-TO-CIRCULAR POLARIZATION CONVERSION BY A SINGLE BIFILAR PARTICLE. Progress in Electromagnetics Research M, 2013, 31, 231-246.	0.5	1
49	Interaction Forces of Electric Currents and Charges in a Double DNA-like Helix and its Equilibrium. , 2018, , .		1
50	Design and Creation of Metal-Polymer Absorbing Metamaterials Using the Vacuum-Plasma Technologies. Lecture Notes in Networks and Systems, 2019, , 105-112.	0.5	1
51	The development of double-sided nonreflecting absorber of the terahertz waves on the basis of metamaterials. Journal of Physics: Conference Series, 2020, 1461, 012148.	0.3	1
52	Multi-focusing metalenses based on quadrangular frustum pyramid-shaped nanoantennas. Photonics and Nanostructures - Fundamentals and Applications, 2021, 46, 100957.	1.0	1
53	Propagation of Electromagnetic Waves in Artificial Anisotropic Uniform and Twisted Omega-Structures. , 2002, , 197-210.		1
54	DNA-like Helices as Nanosized Polarizers of Electromagnetic Waves. Frontiers in Nanotechnology, 0, 4, .	2.4	1

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55	Propagation of light in cholesteric liquid crystals with frequency dispersion. Journal of Applied Spectroscopy, 1982, 37, 1316-1319.	0.3	0
56	Nonlinear gyrotropy of cholesteric liquid crystals. Journal of Applied Spectroscopy, 1983, 38, 238-241.	0.3	0
57	Synchronous generation of a second harmonic in cholesteric liquid crystals. Coupled-wave approximation. Journal of Applied Spectroscopy, 1983, 39, 1264-1267.	0.3	0
58	Propagation of light in a medium with a rotating cholesteric anisotropy structure. Journal of Applied Spectroscopy, 1984, 41, 1299-1301.	0.3	0
59	Selective amplification of electromagnetic waves in a medium with a rotating uniaxial structure. Journal of Applied Spectroscopy, 1988, 49, 864-867.	0.3	0
60	The Influence of Induced Chiral Properties on the Transformation of Acoustic Waves Polarization in Piezoelectric Semiconductors. , 1997, , 219-226.		0
61	Artificial anisotropic chiral structures with dielectric and magnetic properties at oblique incidence of electromagnetic waves. , 0, , .		0
62	The Competition of Bragg Reflection and Fresnelâ€™S Reflection of Electromagnetic Waves in the Artificial Helicoidal Bianisotropic Media with Local Chirality. , 2002, , 307-318.		0
63	Cloak based on non-resonant straight wires. , 2013, , .		0
64	Microwave polarization converter consisting of rectangular omega resonators located on a dielectric substrate. , 2021, , .		0
65	Selective Reflection at an Oblique Incidence of Electromagnetic Waves onto Stratified Periodic Gyrotropic Structures. , 2002, , 271-280.		0
66	Optically Induced Rotating Spatially Uniform Structure in Chiral Media. , 1997, , 163-168.		0
67	Multifunctional Single-Layer Metasurface for Electromagnetic Wave Manipulations. , 2020, , .		0
68	Radiation Patterns of Double DNA-Like Helices as Elements of Metamaterials and Antenna Systems. Lecture Notes in Networks and Systems, 2020, , 135-143.	0.5	0
69	A metamaterial based on planar spirals as a electromagnetic waves polarization converter. Proceedings of the National Academy of Sciences of Belarus Physics and Mathematics Series, 2022, 58, 110-119.	0.1	0
70	MODELING, CREATING AND EXPERIMENTAL STUDY OF METASURFACES COVERING OBJECTS OF COMPLEX SHAPE. Problemy Fiziki, Matematiki I Tehniki, 2022, , 7-13.	0.0	0