Igor Semchenko

List of Publications by Year in descending order

70 papers	644 citations	759055 12 h-index	642610 23 g-index
74 all docs	74 docs citations	74 times ranked	582 citing authors

#	Article	IF	Citations
1	High-Performance Tunable Multichannel Absorbers Coupled with Graphene-Based Grating and Dual-Tamm Plasmonic Structures. Plasmonics, 2022, 17, 287-294.	1.8	5
2	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
3	MODELING, CREATING AND EXPERIMENTAL STUDY OF METASURFACES COVERING OBJECTS OF COMPLEX SHAPE. Problemy Fiziki, Matematiki I Tehniki, 2022, , 7-13.	0.0	0
4	Optimal angular stability of reflectionless metasurface absorbers. Physical Review B, 2021, 103, .	1.1	5
5	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
6	Multi-focusing metalenses based on quadrangular frustum pyramid-shaped nanoantennas. Photonics and Nanostructures - Fundamentals and Applications, 2021, 46, 100957.	1.0	1
7	Microwave polarization converter consisting of rectangular omega resonators located on a dielectric substrate. , 2021, , .		0
8	Optical Forces Acting on a Double DNA-Like Helix, Its Unwinding and Strands Rupture. Photonics, 2020, 7, 83.	0.9	4
9	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
10	Perfect Narrowband Absorber Based on Patterned Graphene-Silica Multilayer Hyperbolic Metamaterials. Plasmonics, 2020, 15, 1869-1874.	1.8	20
11	Inversion Method Characterization of Graphene-Based Coordination Absorbers Incorporating Periodically Patterned Metal Ring Metasurfaces. Nanomaterials, 2020, 10, 1102.	1.9	10
12	Multifunctional Single-Layer Metasurface for Electromagnetic Wave Manipulations. , 2020, , .		0
13	Polarization Properties of a Rectangular Balanced Omega Element in the THz Range. Lecture Notes in Networks and Systems, 2020, , 84-93.	0.5	2
14	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
15	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
16	Stored and absorbed energy of fields in lossy chiral single-component metamaterials. Physical Review B, 2018, 97, .	1.1	18
17	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
18	Interaction Forces of Electric Currents and Charges in a Double DNA-like Helix and its Equilibrium. , 2018, , .		1

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19	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
20	Highly transparent twist polarizer metasurface. Applied Physics Letters, 2017, 111, .	1.5	20
21	Absorptive weakly reflective metamaterial based on optimal rectangular omegas. , 2017, , .		2
22	Qubit-Based Memcapacitors and Meminductors. Physical Review Applied, 2016, 6, .	1.5	27
23	Broadband Reflectionless Metasheets: Frequency-Selective Transmission and Perfect Absorption. Physical Review X, 2015, 5, .	2.8	126
24	Ground-plane-less bidirectional terahertz absorber based on omega resonators. Optics Letters, 2015, 40, 2084.	1.7	63
25	Helical Metamaterial Elements as RLC Circuit. Advanced Materials Research, 2015, 1117, 122-125.	0.3	3
26	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
27	A single-layer meta-atom absorber. , 2014, , .		3
28	Investigation of the properties of weakly reflective metamaterials with compensated chirality. Crystallography Reports, 2014, 59, 480-485.	0.1	8
29	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
30	Optimal arrangement of smooth helices in uniaxial 2D-arrays. , 2013, , .		7
31	Cloak based on non-resonant straight wires. , 2013, , .		0
32	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
33	Realization of Negative Refraction in a Bifilar Prism-Type Array Metamaterial. Applied Physics Express, 2013, 6, 072601.	1.1	2
34	REALIZATION OF LINEAR-TO-CIRCULAR POLARIZATION CONVERSION BY A SINGLE BIFILAR PARTICLE. Progress in Electromagnetics Research M, 2013, 31, 231-246.	0.5	1
35	Study of the properties of artificial anisotropic structures with high chirality. Crystallography Reports, 2011, 56, 366-373.	0.1	16
36	INTERACTION OF ARTIFICIAL DNA-LIKE STRUCTURES IN THE MICROWAVE RANGE: POLARIZATION SELECTIVITY OF WAVE REFLECTION. Telecommunications and Radio Engineering (English Translation of Elektrosvyaz) Tj ETQq0 0 0 rgBT /Overlock 10	0.9	2

#	Article	IF	Citations
37	Polarization Selectivity of Artificial Anisotropic Structures Based on DNA-Like Helices. Crystallography Reports, 2010, 55, 921-926.	0.1	6
38	Polarization selectivity of interaction of DNA molecules with X-ray radiation. Biophysics (Russian) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7	0.2	6
39	Helices of optimal shape for nonreflecting covering. EPJ Applied Physics, 2010, 49, 33002.	0.3	12
40	Optimal helix shape: Equality of dielectric, magnetic, and chiral susceptibilities. Russian Physics Journal, 2009, 52, 472-479.	0.2	20
41	Chiral metamaterial with unit negative refraction index. EPJ Applied Physics, 2009, 46, 32607.	0.3	15
42	Modeling of Spirals with Equal Dielectric, Magnetic, and Chiral Susceptibilities. Electromagnetics, 2008, 28, 476-493.	0.3	33
43	Transformation of the polarization of electromagnetic waves by helical radiators. Journal of Communications Technology and Electronics, 2007, 52, 850-855.	0.2	23
44	Polarization selectivity of electromagnetic radiation of deoxyribonucleic acid. Journal of Communications Technology and Electronics, 2007, 52, 996-1001.	0.2	6
45	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
46	Polarization Plane Rotation of Electromagnetic Waves by the Artificial Periodic Structure with One-Turn Helical Elements. Electromagnetics, 2006, 26, 219-233.	0.3	11
47	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
48	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
49	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
50	Artificial Uniaxial Bianisotropic Media at Oblique Incidence of Electromagnetic Waves. Electromagnetics, 2002, 22, 71-84.	0.3	10
51	Effective Electron Model of the Wire Helix Excitation at Microwaves: First Step to Optimization of Pitch Angle of Helix. , 2002, , 245-256.		2
52	Selective Reflection at an Oblique Incidence of Electromagnetic Waves onto Stratified Periodic Gyrotropic Structures. , 2002, , 271-280.		0
53	Propagation of Electromagnetic Waves in Artificial Anisotropic Uniform and Twisted Omega-Structures. , 2002, , 197-210.		1
54	<title>Artificial anisotropic chiral materials for decrease of reflection of electromagnetic waves from metallic surfaces</title>. , 2001, , .		1

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55	Electromagnetic Waves in Artificial Chiral Structures with Dielectric and Magnetic Properties. Electromagnetics, 2001, 21, 401-414.	0.3	11
56	<title>Optical activity and selective reflection of light in stratified periodic structure</title>. , 2001, , .		1
57	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
58	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
59	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
60	Duality Once More Applied to Tellegen Media. Electromagnetics, 1997, 17, 205-211.	0.3	12
61	The Influence of Induced Chiral Properties on the Transformation of Acoustic Waves Polarization in Piezoelectric Semiconductors. , 1997, , 219-226.		0
62	Optically Induced Rotating Spatially Uniform Structure in Chiral Media. , 1997, , 163-168.		0
63	Duality in Electromagnetics: Application to Tellegen Media. Electromagnetics, 1996, 16, 51-61.	0.3	12
64	Selective amplification of electromagnetic waves in a medium with a rotating uniaxial structure. Journal of Applied Spectroscopy, 1988, 49, 864-867.	0.3	0
65	Propagation of light in a medium with a rotating cholesteric anisotropy structure. Journal of Applied Spectroscopy, 1984, 41, 1299-1301.	0.3	0
66	Nonlinear gyrotropy of cholesteric liquid crystals. Journal of Applied Spectroscopy, 1983, 38, 238-241.	0.3	0
67	Synchronous generation of a second harmonic in cholesteric liquid crystals. Coupled-wave approximation. Journal of Applied Spectroscopy, 1983, 39, 1264-1267.	0.3	0
68	Propagation of light in cholesteric liquid crystals with frequency dispersion. Journal of Applied Spectroscopy, 1982, 37, 1316-1319.	0.3	0
69	Artificial anisotropic chiral structures with dielectric and magnetic properties at oblique incidence of electromagnetic waves. , 0, , .		0
70	DNA-like Helices as Nanosized Polarizers of Electromagnetic Waves. Frontiers in Nanotechnology, 0, 4, .	2.4	1