Dmitry N Chigrin

List of Publications by Year
in descending order

101 papers	3,074 citations	201385 27 h-index	155451 55 g-index
105 all docs	105 docs citations	105 times ranked	3646 citing authors

#	Article	IF	Citations
1	Graphene microheater for phase change chalcogenides based integrated photonic components [Invited]. Optical Materials Express, 2022, 12, 1991.	1.6	7
2	The Potential of Combining Thermal Scanning Probes and Phaseâ€Change Materials for Tunable Metasurfaces. Advanced Optical Materials, 2021, 9, 2001243.	3.6	19
3	Nanopatterning of Phase-Change Material Thin Films For Tunable Photonics. , 2021, , .		0
4	The Potential of Combining Thermal Scanning Probes and Phaseâ€Change Materials for Tunable Metasurfaces (Advanced Optical Materials 2/2021). Advanced Optical Materials, 2021, 9, 2170008.	3.6	1
5	Dynamic flow enables longâ€term maintenance of 3â€D vascularized human skin models. Applied Materials Today, 2021, 25, 101213.	2.3	10
6	Multiphysics simulations of adaptive metasurfaces at the meta-atom length scale. Nanophotonics, 2020, 9, 675-681.	2.9	12
7	Optimizing the Geometry of Photoacoustically Active Gold Nanoparticles for Biomedical Imaging. ACS Photonics, 2020, 7, 646-652.	3.2	49
8	Programmable Metasurfaces: Advanced Optical Programming of Individual Metaâ€Atoms Beyond the Effective Medium Approach (Adv. Mater. 29/2019). Advanced Materials, 2019, 31, 1970210.	11.1	1
9	Advanced Optical Programming of Individual Metaâ€Atoms Beyond the Effective Medium Approach. Advanced Materials, 2019, 31, e1901033.	11.1	47
10	Highly Confined and Switchable Mid-Infrared Surface Phonon Polariton Resonances of Planar Circular Cavities with a Phase Change Material. Nano Letters, 2019, 19, 2549-2554.	4.5	43
11	Strong Photoacoustic Signal Enhancement by Coating Gold Nanoparticles with Melanin for Biomedical Imaging. Advanced Functional Materials, 2018, 28, 1705607.	7.8	60
12	Strong Coupling Effects Between IR-Inactive Zone Folded LO Phonon and Localized Surface Phonon Polariton Modes in SiC Nanopillars. NATO Science for Peace and Security Series B: Physics and Biophysics, 2018, , 417-418.	0.2	0
13	Controlled Gold Nanorod Reorientation and Hexagonal Order in Micromolded Gold Nanorod@pNIPAM Microgel Chain Arrays. Small, 2017, 13, 1603054.	5.2	7
14	High-Order Multipole Resonances in Cuboidal Surface Phonon Polariton Nanoresonators. NATO Science for Peace and Security Series B: Physics and Biophysics, 2017, , 501-502.	0.2	0
15	Phonon-Polaritonic Bowtie Nanoantennas: Controlling Infrared Thermal Radiation at the Nanoscale. ACS Photonics, 2017, 4, 1753-1760.	3.2	114
16	Aspect-ratio driven evolution of high-order resonant modes and near-field distributions in localized surface phonon polariton nanostructures. Scientific Reports, 2016, 6, 32959.	1.6	25
17	Emission Quenching of Magnetic Dipole Transitions near a Metal Nanoparticle. ACS Photonics, 2016, 3, 27-34.	3.2	32
18	Enhanced emission extraction and selective excitation of NV centers with allâ€“dielectric nanoantennas. Laser and Photonics Reviews, 2015, 9, 385-391.	4.4	24

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19	Metal membrane with dimer slots as a universal polarizer. Proceedings of SPIE, 2014, , .	0.8	0
20	All-dielectric nanoantenna for single NV center radiation collection enhancement. , 2014, , .		0
21	Reversible Optical Switching of Infrared Antenna Resonances with Ultrathin Phase-Change Layers Using Femtosecond Laser Pulses. ACS Photonics, 2014, 1, 833-839.	3.2	181
22	Enhanced infrared spectroscopy using small-gap antennas prepared with two-step evaporation nanosphere lithography. Optics Express, 2014, 22, 14425.	1.7	31
23	Dichroism, chirality, and polarization eigenstates in Babinet nanoslot-dimer membrane metamaterials. Photonics and Nanostructures - Fundamentals and Applications, 2013, 11, 353-361.	1.0	5
24	Optically active Babinet planar metamaterial film for terahertz polarization manipulation. Laser and Photonics Reviews, 2013, 7, 810-817.	4.4	27
25	Optical Properties of Single Infrared Resonant Circular Microcavities for Surface Phonon Polaritons. Nano Letters, 2013, 13, 5051-5055.	4.5	101
26	Plasmonic Smart Dust for Probing Local Chemical Reactions. Nano Letters, 2013, 13, 1816-1821.	4.5	104
27	Using Low-Loss Phase-Change Materials for Mid-Infrared Antenna Resonance Tuning. Nano Letters, 2013, 13, 3470-3475.	4.5	257
28	Electro-optical switching by liquid-crystal controlled metasurfaces. Optics Express, 2013, 21, 8879.	1.7	163
29	Slot-dimer babinet metamaterials as polarization shapers for terahertz waves. , 2013, , .		0
30	Plasmonic dimer metamaterials and metasurfaces for polarization control of terahertz and optical waves. , 2013, , .		1
31	An explicit finite-difference method to calculate liquid crystal re-orientation dynamics. , 2012, , .		1
32	Comparison of the resonant frequency in graphene and metallic nano-antennas. AIP Conference Proceedings, 2012, , .	0.3	18
33	Graphene wire medium: Homogenization and application. , 2012, , .		0
34	Preface: The Fifth International Workshop on Theoretical and Computational Nano-Photonics 2012. , 2012, , .		0
35	Dichroism versus chirality in plasmonic dimer metamaterials: A multipole approach. , 2012, , .		0
36	Spectral shifts in optical nanoantenna-enhanced hydrogen sensors. Optical Materials Express, 2012, 2, 111.	1.6	61

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37	Characterization of graphene-based nano-antennas in the terahertz band. , 2012, , .		46
38	Evolution of a quantum emitter near plasmonic nano-structures. , 2012, , .		0
39	Graphene hyperlens for terahertz radiation. Physical Review B, 2012, 86, .	1.1	84
40	Graphene-based nano-patch antenna for terahertz radiation. Photonics and Nanostructures - Fundamentals and Applications, 2012, 10, 353-358.	1.0	331
41	Anisotropic anti-rod dimer metamaterial film for terahertz polarization manipulation. , 2012, , .		0
42	Efficient construction of maximally localized photonic Wannier functions: locality criterion and initial conditions. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1951.	0.9	5
43	Plasmonic rod dimers as elementary planar chiral meta-atoms. Optics Letters, 2011, 36, 2278.	1.7	30
44	TaCoNa-Photonics 2010. Photonics and Nanostructures - Fundamentals and Applications, 2011, 9, 295.	1.0	0
45	Local photonic modes in periodic or random, dielectric, and lasing media. Applied Physics B: Lasers and Optics, 2011, 105, 163-180.	1.1	2
46	Plasmonic nanoparticle monomers and dimers: from nanoantennas to chiral metamaterials. Applied Physics B: Lasers and Optics, 2011, 105, 81-97.	1.1	38
47	Scattering of terahertz radiation on a graphene-based nano-antenna. AIP Conference Proceedings, 2011, , .	0.3	18
48	Preface: The Fourth International Workshop on Theoretical and Computational Nanophotonics. , 2011, , .		0
49	Light Emission and Scattering in Plasmonic Nano-Structures. , 2011, , .		0
50	Monochromatic Wannier Functions in the Theory of 2D Photonic Crystals and Photonic Crystal Fibers. , 2011, , .		0
51	Wavelength self-switching in bistable microlasers. , 2010, , .		0
52	Light Scattering on Nanowire Antennas: A Semi-Analytical Approach. , 2010, , .		0
53	TaCoNa-Photonics 2009. Photonics and Nanostructures - Fundamentals and Applications, 2010, 8, 209.	1.0	0
54	Plasmonic Dimers as Planar Chiral Meta-Atoms. , 2010, , .		0

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55	Spatial distribution of the emission intensity in a photonic crystal: Self-interference of Bloch eigenwaves. Physical Review A, 2009, 79, .	1.0	6
56	Bistability and mode interaction in microlasers. Physical Review A, 2009, 79, .	1.0	15
57	TaCoNa-Photonics 2008. Journal of Optics, 2009, 11, 110201.	1.5	0
58	Control of cavity modes in coupled periodic waveguides. , 2009, , .		0
59	Optical memory based on ultrafast wavelength switching in a bistable microlaser. Optics Letters, 2009, 34, 3310.	1.7	9
60	Spatial distribution of Cherenkov radiation in periodic dielectric media. Journal of Optics, 2009, 11, 114008.	1.5	5
61	Theory of Cherenkov radiation in periodic dielectric media: Emission spectrum. Physical Review A, 2009, 79, .	1.0	24
62	Ultrafast wavelength switching in bistable microlasers for optical memory applications. , 2009, , .		0
63	Numerical time-domain simulation of planar chiral metamaterials. , 2009, , .		1
64	Slow-light dispersion in coupled periodic waveguides. Journal of the Optical Society of America B: Optical Physics, 2008, 25, C65.	0.9	34
65	Dispersionless tunneling of slow light in antisymmetric photonic crystal couplers. Optics Express, 2008, 16, 1104.	1.7	29
66	Experimental observation of slow light tunneling in coupled periodic waveguides. , 2008, , .		0
67	Bistability and ultrafast mode switching in microlasers. , 2008, , .		0
68	Photonic crystal couplers for slow light. , 2008, , .		4
69	Observation of Slow Light Tunneling in Coupled Periodic Waveguides. , 2008, , .		0
70	Switchable Lasing in Multimode Microcavities. Physical Review Letters, 2007, 99, 073902.	2.9	49
71	Strong mode coupling, bistable lasing, and switching mode dynamics in twin coupled microcavities. Proceedings of SPIE, 2007, , .	0.8	1
72	Coupled nanopillar waveguides optical properties and applications. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 3647-3661.	0.8	9

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73	Selective lasing in multimode periodic and non-periodic nanopillar waveguides. Physica Status Solidi (B): Basic Research, 2007, 244, 1211-1218.	0.7	12
74	Numerical modelling of lasing in microstructures. Physica Status Solidi (B): Basic Research, 2007, 244, 3515-3527.	0.7	15
75	Polariton bandstructure of disordered metallic photonic crystal slabs. Physica Status Solidi (B): Basic Research, 2007, 244, 1262-1269.	0.7	10
76	Preface: phys. stat. sol. (b) 244/10. Physica Status Solidi (B): Basic Research, 2007, 244, 3417-3418.	0.7	0
77	Out-of-phase coupled periodic waveguides: a â€œcouplonicâ€•approach. Optical and Quantum Electronics, 2007, 39, 837-847.	1.5	11
78	Low-loss resonant modes in deterministically aperiodic nanopillar waveguides. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 2265.	0.9	9
79	Nanopillar coupled periodic waveguides: from basic properties to applications. , 2006, , .		1
80	Directionality of light emission in three-dimensional opal-based photonic crystals (Invited Paper). , 2005, 5825, 160.		1
81	Numerical characterization of nanopillar photonic crystal waveguides and directional couplers. Optical and Quantum Electronics, 2005, 37, 331-341.	1.5	21
82	Photonic quasicrystals for application in WDM systems. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 997-1001.	0.8	9
83	Resonant add-drop filter based on a photonic quasicrystal. Optics Express, 2005, 13, 826.	1.7	76
84	PHOTONIC FREQUENCY-SENSITIVE COMPONENTS BASED ON COUPLED NANOPILLAR PERIODIC WAVEGUIDES. , 2005, , .		0
85	Radiation pattern of a classical dipole in a photonic crystal: Photon focusing. Physical Review E, 2004, 70, 056611.	0.8	20
86	Nanopillars photonic crystal waveguides. Optics Express, 2004, 12, 617.	1.7	56
87	Light propagation in opal heterojunctions. , 2004, , .		2
88	Light emission in a directional photonic bandgap. Physica Status Solidi A, 2003, 197, 662-672.	1.7	21
89	Self-guiding in two-dimensional photonic crystals. Optics Express, 2003, 11, 1203.	1.7	214
90	Light extinction in bulk and thin film opal photonic crystals. Synthetic Metals, 2003, 139, 601-604.	2.1	8

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91	Three Dimensional Photonic Crystals in the Visible Regime. Progress in Electromagnetics Research, 2003, 41, 307-335.	1.6	44
92	<title>Self-guiding in two-dimensional photonic crystals</title>. , 2002, , .		4
93	Periodic thin-film interference filters as one-dimensional photonic crystals. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2001, 91, 484-489.	0.2	26
94	Observation of total omnidirectional reflection from a one-dimensional dielectric lattice. Applied Physics A: Materials Science and Processing, 1999, 68, 25-28.	1.1	241
95	All-dielectric one-dimensional periodic structures for total omnidirectional reflection and partial spontaneous emission control. Journal of Lightwave Technology, 1999, 17, 2018-2024.	2.7	127
96	<title>Free-coordinate formalism for nonlinear photoanisotropy optics description and light propagation effects in periodic anisotropic structures</title>. , 1998, 3580, 2.		4
97	Generalization of the Effective Medium Method for Continuously Inhomogeneous Media. Electromagnetics, 1997, 17, 287-294.	0.3	0
98	Emission studies of dyes in a strong 3-dimensional photonic bandgap environment. , 0, , .		0
99	Octagonal photonic quasicrystal based add-drop filter. , 0, , .		0
100	Add-drop resonance filter based on photonic quasicrystal. , 0, , .		0
101	Emission modification in heterostructured opal photonic crystals. , 0, , .		0