

# Maxim Gorkunov

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2615246/publications.pdf>

Version: 2024-02-01

146  
papers

2,688  
citations

218592

26  
h-index

197736

49  
g-index

146  
all docs

146  
docs citations

146  
times ranked

2018  
citing authors

#	ARTICLE	IF	CITATIONS
1	Metasurfaces with Maximum Chirality Empowered by Bound States in the Continuum. <i>Physical Review Letters</i> , 2020, 125, 093903.	2.9	207
2	Nonlinearity of a metamaterial arising from diode insertions into resonant conductive elements. <i>Physical Review E</i> , 2003, 67, 065601.	0.8	182
3	Structural tunability in metamaterials. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	144
4	Mean-field theory of a nematic liquid crystal doped with anisotropic nanoparticles. <i>Soft Matter</i> , 2011, 7, 4348.	1.2	142
5	Metamaterial tuning by manipulation of near-field interaction. <i>Physical Review B</i> , 2010, 82, .	1.1	126
6	Effective magnetic properties of a composite material with circular conductive elements. <i>European Physical Journal B</i> , 2002, 28, 263-269.	0.6	121
7	Origin of Stretched Exponential Relaxation for Hopping-Transport Models. <i>Physical Review Letters</i> , 2003, 91, 176602.	2.9	121
8	Self-tuning mechanisms of nonlinear split-ring resonators. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	91
9	Effect of microscopic disorder on magnetic properties of metamaterials. <i>Physical Review E</i> , 2006, 73, 056605.	0.8	76
10	Bound States in the Continuum Underpin Near-Lossless Maximum Chirality in Dielectric Metasurfaces. <i>Advanced Optical Materials</i> , 2021, 9, 2100797.	3.6	71
11	Order-disorder molecular model of the smectic- $A$ smectic- $C$ phase transition in materials with conventional and anomalously weak layer contraction. <i>Physical Review E</i> , 2007, 76, 051705.	0.8	67
12	Theory of extraordinary light transmission through arrays of subwavelength slits. <i>Physical Review B</i> , 2008, 77, .	1.1	66
13	Extreme optical chirality of plasmonic nanohole arrays due to chiral Fano resonance. <i>Physical Review B</i> , 2016, 93, .	1.1	55
14	Tuning of a nonlinear metamaterial band gap by an external magnetic field. <i>Physical Review B</i> , 2004, 70, .	1.1	54
15	Three-wave coupling of microwaves in metamaterial with nonlinear resonant conductive elements. <i>Physical Review E</i> , 2004, 70, 066601.	0.8	49
16	Enhanced parametric processes in binary metamaterials. <i>Applied Physics Letters</i> , 2006, 88, 071912.	1.5	44
17	Molecular model for de Vries type smectic- $A$ smectic- $C$ phase transition in liquid crystals. <i>Physical Review E</i> , 2007, 75, 060701.	0.8	44
18	Extreme optical activity and circular dichroism of chiral metal hole arrays. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	43

#	ARTICLE	IF	CITATIONS
19	Eigenmodes for metal-dielectric light-transmitting nanostructures. <i>Physical Review B</i> , 2007, 76, .	1.1	42
20	Phase separation effects and the nematic–isotropic transition in polymer and low molecular weight liquid crystals doped with nanoparticles. <i>Soft Matter</i> , 2013, 9, 3578.	1.2	42
21	Suppressed absolute negative conductance and generation of high-frequency radiation in semiconductor superlattices. <i>Europhysics Letters</i> , 2006, 73, 934-940.	0.7	41
22	Tunability of wire-grid metamaterial immersed into nematic liquid crystal. <i>Journal of Applied Physics</i> , 2008, 103, .	1.1	40
23	Chiral visible light metasurface patterned in monocrystalline silicon by focused ion beam. <i>Scientific Reports</i> , 2018, 8, 11623.	1.6	35
24	Molecular model of biaxial ordering in nematic liquid crystals composed of flat molecules with four mesogenic groups. <i>Physical Review E</i> , 2010, 81, 061702.	0.8	32
25	Single-Handedness Chiral Optical Cavities. <i>ACS Photonics</i> , 2022, 9, 2652-2659.	3.2	32
26	Implications of the causality principle for ultra chiral metamaterials. <i>Scientific Reports</i> , 2015, 5, 9273.	1.6	26
27	Liquid crystal metasurfaces on micropatterned polymer substrates. <i>Optics Express</i> , 2018, 26, 20258.	1.7	26
28	Model-independent structure and resonant X-ray spectra of intermediate smectic phases. <i>Liquid Crystals</i> , 2006, 33, 1133-1141.	0.9	23
29	Transmission and diffraction properties of a narrow slit in a perfect metal. <i>Physical Review B</i> , 2010, 82, .	1.1	22
30	Fast Surface-Plasmon-Mediated Electro-Optics of a Liquid Crystal on a Metal Grating. <i>Physical Review Applied</i> , 2017, 8, .	1.5	22
31	Molecular models for ferroelectric liquid crystals with conventional and anomalously weak layer contraction. <i>European Physical Journal E</i> , 2008, 26, 395-404.	0.7	21
32	The semi-phenomenological model of antiferroelectricity in chiral smectic liquid crystals I. The structure of short pitch modes and a thermodynamical approach. <i>Liquid Crystals</i> , 1999, 26, 1107-1114.	0.9	20
33	Molecular models for the smectic A–smectic C phase transition in a system of biaxial molecules. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 295001.	0.7	20
34	Ordering of anisotropic nanoparticles in diblock copolymer lamellae: Simulations with dissipative particle dynamics and a molecular theory. <i>Journal of Chemical Physics</i> , 2017, 146, 144902.	1.2	20
35	Superperiodic Liquid-Crystal Metasurfaces for Electrically Controlled Anomalous Refraction. <i>ACS Photonics</i> , 2020, 7, 3096-3105.	3.2	20
36	Molecular theory of smectic ordering in liquid crystals with nanoscale segregation of different molecular fragments. <i>Physical Review E</i> , 2011, 84, 051704.	0.8	19

#	ARTICLE	IF	CITATIONS
37	Liquid-Crystal Metasurfaces Self-Assembled on Focused Ion Beam Patterned Polymer Layers: Electro-Optical Control of Light Diffraction and Transmission. ACS Applied Materials & Interfaces, 2020, 12, 30815-30823.	4.0	18
38	Metal nanoparticles with sharp corners: Universal properties of plasmon resonances. Europhysics Letters, 2013, 101, 57009.	0.7	17
39	Effect of nanoparticle chain formation on dielectric anisotropy of nematic composites. Physical Review E, 2015, 92, 032501.	0.8	17
40	Ferroelectric ordering in chiral smectic- $C^*$ liquid crystals determined by nonchiral intermolecular interactions. Physical Review E, 2008, 77, 031701.	0.8	15
41	Transmission and scattering properties of subwavelength slits in metals. Physical Review B, 2011, 83, .	1.1	15
42	Molecular Theory of Phase Separation in Nematic Liquid Crystals Doped with Spherical Nanoparticles. ChemPhysChem, 2014, 15, 1496-1501.	1.0	15
43	Spatial distribution and nematic ordering of anisotropic nanoparticles in lamellae and hexagonal phases of block copolymers. European Physical Journal E, 2016, 39, 126.	0.7	12
44	Plasmon electro-optic effect in a subwavelength metallic nanograting with a nematic liquid crystal. JETP Letters, 2016, 103, 25-29.	0.4	12
45	Short-pitch and long-pitch modes as a key for the understanding of phase sequences and types of ordering in antiferroelectric smectic liquid crystals. JETP Letters, 2000, 72, 57-61.	0.4	11
46	Universal plasmonic properties of two-dimensional nanoparticles possessing sharp corners. Physical Review B, 2013, 87, .	1.1	11
47	Precise local control of liquid crystal pretilt on polymer layers by focused ion beam nanopatterning. Beilstein Journal of Nanotechnology, 2019, 10, 1691-1697.	1.5	11
48	Feedback-controlled two-wave coupling in reflection geometry: application to lithium niobate crystals subjected to extremely high external electric fields. Applied Physics B: Lasers and Optics, 2003, 77, 43-48.	1.1	10
49	Microscopic origin of ferroelectricity in chiral smectic $C^*$ liquid crystals and ordering of "ferroelectric fishes" proposed by de Gennes. Liquid Crystals, 2009, 36, 1281-1288.	0.9	10
50	Liquid crystal on subwavelength metal gratings. Journal of Applied Physics, 2015, 117, 223108.	1.1	10
51	FIB-fabricated complex-shaped 3D chiral photonic silicon nanostructures. Journal of Microscopy, 2017, 268, 254-258.	0.8	10
52	Enhanced sensing of molecular optical activity with plasmonic nanohole arrays. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 315.	0.9	10
53	Molecular theory of liquid-crystal ordering in rod-coil diblock copolymers. Physical Review E, 2019, 100, 042701.	0.8	9
54	Short-pitch helicoidal modes in antiferroelectric liquid crystals and scattering of resonant X rays. JETP Letters, 1999, 69, 243-249.	0.4	8

#	ARTICLE	IF	CITATIONS
55	Regimes of feedback-controlled beam coupling. <i>Physical Review E</i> , 2005, 72, 016621.	0.8	8
56	Methods of crystal optics for studying electromagnetic phenomena in metamaterials: Review. <i>Crystallography Reports</i> , 2006, 51, 1048-1062.	0.1	8
57	Eigenmodes for the problem of extraordinary light transmission through subwavelength holes. <i>Europhysics Letters</i> , 2007, 80, 24002.	0.7	8
58	Molecular theory of layer contraction in smectic liquid crystals. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 465101.	0.7	8
59	Ferroelectricity in low-symmetry biaxial nematic liquid crystals. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 362101.	0.7	8
60	Optical properties of periodic arrays of subwavelength slits in a perfect metal. <i>Physical Review B</i> , 2011, 84, .	1.1	8
61	Tarnishing of silver subwavelength slit gratings and its effect on extraordinary optical transmission. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2014, 12, 122-129.	1.0	8
62	Micro- and nanostructures for the spatially periodic orientation of liquid crystals obtained by focused ion beam milling. <i>JETP Letters</i> , 2017, 105, 174-178.	0.4	8
63	Deformed lying helix transition and lasing effect in cholesteric LC layers at spatially periodic boundary conditions. <i>Liquid Crystals</i> , 2020, 47, 384-398.	0.9	8
64	The effect of a local field on Raman scattering in a uniaxial crystal. <i>Journal of Experimental and Theoretical Physics</i> , 1997, 85, 97-103.	0.2	7
65	Suppressed absolute negative conductance and generation of high-frequency radiation in semiconductor superlattices. <i>Europhysics Letters</i> , 2006, 74, 567-567.	0.7	7
66	Photorefractive manipulation of light pulses. <i>Physical Review A</i> , 2008, 77, .	1.0	7
67	Phase behavior and orientational ordering in block copolymers doped with anisotropic nanoparticles. <i>Physical Review E</i> , 2018, 97, 042706.	0.8	7
68	Deceleration and shape-transformation of light pulses during phase conjugation in photorefractive media. <i>Applied Physics B: Lasers and Optics</i> , 2009, 95, 545-549.	1.1	6
69	Plasmonic resonances of nanowires with periodically corrugated cross sections. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2012, 29, 3248.	0.9	6
70	Critical behavior of optical singularities near sharp metal corners and tips. <i>Physical Review B</i> , 2014, 89, .	1.1	6
71	Optical control of plasmonic grating transmission by photoinduced anisotropy. <i>Journal of Optics (United Kingdom)</i> , 2017, 19, 074001.	1.0	6
72	Molecular theory of the tilting transition and computer simulations of the tilted lamellar phase of rod-coil diblock copolymers. <i>Journal of Chemical Physics</i> , 2020, 152, 184906.	1.2	6

#	ARTICLE	IF	CITATIONS
73	The semi-phenomenological model of antiferroelectricity in chiral smectic liquid crystals II. The phase transitions and phase diagrams. <i>Liquid Crystals</i> , 1999, 26, 1115-1122.	0.9	5
74	On the measurement of the orientational order parameters in biaxial liquid crystals using the polarised infrared technique. <i>Liquid Crystals</i> , 2010, 37, 1569-1576.	0.9	5
75	Stable nonequilibrium composites based on liquid-crystalline polymers and cadmium selenide nanoparticles. <i>Polymer Science - Series A</i> , 2014, 56, 488-497.	0.4	5
76	Induced orientational order of anisotropic nanoparticles in the lamellae phase of diblock copolymers. <i>Molecular Crystals and Liquid Crystals</i> , 2017, 647, 405-414.	0.4	5
77	Liquid crystal microlenses based on binary surface alignment controlled by focused ion beam treatment. <i>Optics Letters</i> , 2021, 46, 3376.	1.7	5
78	Metamaterials Tunable with Liquid Crystals. <i>Springer Series in Materials Science</i> , 2015, , 237-253.	0.4	5
79	Switchable optical metasurfaces based on nematic liquid crystal. , 2019, , .		5
80	Lasing in liquid crystal systems with a deformed lying helix. <i>Optics Letters</i> , 2020, 45, 4328.	1.7	5
81	Corrugated silicon metasurface optimized within the Rayleigh hypothesis for anomalous refraction at large angles. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019, 36, 2118.	0.9	5
82	Double-sided liquid crystal metasurfaces for electrically and mechanically controlled broadband visible anomalous refraction. <i>Nanophotonics</i> , 2022, 11, 3901-3912.	2.9	5
83	Plasmons localized at nanoscale perturbations of flat metal surface. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2014, 31, 1607.	0.9	4
84	Selective excitation of plasmons superlocalized at sharp perturbations of metal nanoparticles. <i>Europhysics Letters</i> , 2015, 110, 57004.	0.7	4
85	Nematic liquid crystals doped with nanoparticles: Phase behavior and dielectric properties. <i>Series in Sof Condensed Matter</i> , 2016, , 135-175.	0.1	4
86	Orientational ordering of nanorods in diblock copolymers. <i>Liquid Crystals</i> , 2017, , 1-9.	0.9	4
87	Plasmonic Enhancement of Photocurrent in a Hybrid Structure with a Subwavelength Aluminum Grating. <i>JETP Letters</i> , 2018, 107, 464-469.	0.4	4
88	Microscopic Studies of Alignment Layers Processed by a Focused Ion Beam for the Creation of Liquid Crystal Metasurfaces. <i>Crystallography Reports</i> , 2021, 66, 673-681.	0.1	4
89	Liquid-crystal metasurfaces: Self-assembly for versatile optical functionality. <i>Europhysics Letters</i> , 2021, 136, 24001.	0.7	4
90	The semi-phenomenological model of antiferroelectricity in chiral smectic liquid crystals III. Dielectric spectroscopy. <i>Liquid Crystals</i> , 1999, 26, 1123-1128.	0.9	3

#	ARTICLE	IF	CITATIONS
91	Theoretical analysis of the resonant X-ray and optical scattering in the ferroelectric phases of chiral smectic liquid crystals. <i>Ferroelectrics</i> , 2000, 244, 19-29.	0.3	3
92	Theory of critical enhancement of photorefractive beam coupling. <i>Physical Review E</i> , 2002, 65, 046623.	0.8	3
93	Formation of moving light domains during photorefractive feedback-controlled beam coupling. <i>Optics Communications</i> , 2003, 216, 225-231.	1.0	3
94	Fabrication of complex shape 3D photonic nanostructures by FIB lithography. , 2015, , .		3
95	Light transmission coefficients by subwavelength aluminum gratings with dielectric layers. <i>Journal of Experimental and Theoretical Physics</i> , 2016, 123, 778-783.	0.2	3
96	Nematic liquid crystal alignment on subwavelength metal gratings. <i>Beilstein Journal of Nanotechnology</i> , 2018, 9, 42-47.	1.5	3
97	Density Functional Approach to the Molecular Theory of Rod-Coil Diblock Copolymers. <i>Polymer Science - Series A</i> , 2020, 62, 562-577.	0.4	3
98	Liquid Crystal Ordering in the Hexagonal Phase of Rod-Coil Diblock Copolymers. <i>Polymers</i> , 2020, 12, 1262.	2.0	3
99	Molecular-statistical theory of elasticity in nematic liquid crystals composed of polar and nonpolar molecules. <i>Physical Review E</i> , 2021, 103, 052701.	0.8	3
100	Critical enhancement of nonlinear response in fast photorefractive crystals. <i>Journal of Experimental and Theoretical Physics</i> , 2002, 94, 470-481.	0.2	2
101	Surface effects in thin films of antiferroelectric smectic liquid crystals in terms of the short-pitch long-pitch competition model. <i>European Physical Journal E</i> , 2002, 9, 27-34.	0.7	2
102	Theory of periodic states for feedback-controlled photorefractive nonlinear systems. <i>Journal of Experimental and Theoretical Physics</i> , 2004, 98, 896-907.	0.2	2
103	Feedback-Controlled Photorefractive Beam Coupling. , 2006, , 163-201.		2
104	Photorefractive deceleration of light pulses. <i>Journal of Experimental and Theoretical Physics</i> , 2008, 106, 668-677.	0.2	2
105	On the role of fluctuations at the boundary of Earth's solid core. <i>Crystallography Reports</i> , 2010, 55, 638-645.	0.1	2
106	Elementary processes of light transformation for slit structures in real and perfect metals. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2012, 10, 409-415.	1.0	2
107	Macroscopic view of light pressure on a continuous medium. <i>Physical Review A</i> , 2013, 88, .	1.0	2
108	Electrooptical effect in the plasmon structure glass-In <sub>2</sub> O <sub>3</sub> : Sn ferroelectric-Al with a subwavelength grating. <i>Journal of Experimental and Theoretical Physics</i> , 2017, 125, 469-475.	0.2	2

#	ARTICLE	IF	CITATIONS
109	Liquid-Crystal Ordering and Microphase Separation in the Lamellar Phase of Rod-Coil-Rod Triblock Copolymers. <i>Molecular Theory and Computer Simulations. Polymers</i> , 2021, 13, 3392.	2.0	2
110	Nonlinear repolarization processes in ferroelectric liquid-crystal thin films. <i>Journal of Experimental and Theoretical Physics</i> , 1997, 84, 506-515.	0.2	1
111	Directing light with liquid crystal metasurfaces. <i>Journal of Physics: Conference Series</i> , 2020, 1461, 012052.	0.3	1
112	Corrugated dielectric metasurfaces for anomalous refraction in near-grazing directions. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	1
113	Fluctuational spatial dispersion in achiral liquid crystals. <i>Journal of Experimental and Theoretical Physics</i> , 1998, 87, 101-105.	0.2	0
114	General Equation of Director Alternating Azimuth Motion in a FLC Cell and Electrooptical Applications. <i>Molecular Crystals and Liquid Crystals</i> , 1998, 321, 189-196.	0.3	0
115	Specific selective reflections in the ferrielectric phases of chiral smectic liquid crystals. <i>Ferroelectrics</i> , 2000, 247, 307-320.	0.3	0
116	Modeling of optical properties of nanosize metal-dielectric gratings within the eigenmode approach. <i>Nanotechnologies in Russia</i> , 2010, 5, 259-265.	0.7	0
117	Analysing and manipulating near-field interaction in metamaterials. , 2010, , .		0
118	Tuning methods for metamaterials. <i>Proceedings of SPIE</i> , 2010, , .	0.8	0
119	Peculiarities of elementary transformation processes for 2D metal-dielectric structures. , 2011, , .		0
120	Light pressure on right-handed and left-handed continuous media. , 2013, , .		0
121	Tailoring plasmonic resonances of nanowires by corrugation and corners. , 2013, , .		0
122	The effect of tarnish on extraordinary optical transmission of silver subwavelength slit gratings. , 2013, , .		0
123	Field singularities and super-localized plasmons at sharp metal corners and tips. , 2014, , .		0
124	Optical activity and circular dichroism of 3D-chiral holes: Symmetry, causality, reciprocity and reversibility aspects. , 2014, , .		0
125	Confining light with superlocalized plasmon resonances. , 2015, , .		0
126	Plasmonic nature of extreme optical chirality of subwavelength hole arrays. , 2015, , .		0



#	ARTICLE	IF	CITATIONS
127	Plasmonic hole arrays with extreme optical chirality in linear and nonlinear regimes. , 2016, , .		0
128	Voltage-tunable optical transmission of subwavelength metal gratings filled with liquid crystals. , 2016, , .		0
129	3D-chiral transparent single-crystal silicon metasurface for visible light. , 2017, , .		0
130	Plasmon-mediated electrical and optical control of light transmitting hybrid metal gratings. , 2017, , .		0
131	Electro-Optic Effect in Thin Films of a Dielectric and a Ferroelectric with Subwavelength Aluminum Grating. Crystallography Reports, 2018, 63, 117-120.	0.1	0
132	Features of Light Transmission and Stark Effect in a Plasmonic Nanostructure Comprising Organic Semiconductor and Subwavelength Aluminum Grating. Crystallography Reports, 2018, 63, 977-982.	0.1	0
133	Nonlinear diffraction of light on near-surface microdomain structures. Quantum Electronics, 2019, 49, 144-149.	0.3	0
134	The Rayleigh Hypothesis for Metasurface Optimization: Anomalous Grazing Refraction by Corrugated Silicon. , 2019, , .		0
135	Controlling liquid crystal alignment by micro-patterned substrates. Journal of Physics: Conference Series, 2020, 1461, 012089.	0.3	0
136	Bound States in the Continuum Employed for Maximizing Metasurface Chirality. , 2021, , .		0
137	Different Mechanisms of Translational Symmetry Breaking in Liquid-Crystal Coilâ€“Rodâ€“Coil Triblock Copolymers. Symmetry, 2021, 13, 1834.	1.1	0
138	Metamaterial Tuning Using near-Field Interaction. , 2010, , .		0
139	Second Harmonic Generation in Chiral Nanoholes. , 2019, , .		0
140	Millisecond-fast electro-optics of liquid-crystal-metasurfaces. AIP Conference Proceedings, 2020, , .	0.3	0
141	Millisecond-Fast Switchable Photonic Metasurfaces Based on Liquid Crystal. , 2020, , .		0
142	Dielectric Fourier metasurfaces as wide-angle Y-junction switches. Journal of Optics (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 142 T	1.0	0
143	Second Harmonic Generation in Arrays of Nanoholes in a Silver Film. Journal of Experimental and Theoretical Physics, 2020, 131, 558-565.	0.2	0
144	Functional Photonic Elements Based on Liquid Crystal Metasurfaces. Journal of Physics: Conference Series, 2021, 2015, 012050.	0.3	0

#	ARTICLE	IF	CITATIONS
145	Wide-angle Reconfigurable Refraction by Silicon Fourier Metasurfaces. Journal of Physics: Conference Series, 2021, 2015, 012005.	0.3	0
146	Dielectric Fourier Metasurfaces for Wide-Angle Reconfigurable Anomalous Refraction. , 2021, , .		0