Viktor A Podolskiy

List of Publications by Citations

122 papers	7,205 citations	39 h-index	84 g-index
189 ext. papers	8,186 ext. citations	5.2 avg, IF	5.81 L-index

#	Paper	IF	Citations
122	Plasmonic nanorod metamaterials for biosensing. *Nature Materials*, **2009**, 8, 867-71	27	1272
121	Negative refraction in semiconductor metamaterials. *Nature Materials*, **2007**, 6, 946-50	27	634
120	Designed ultrafast optical nonlinearity in a plasmonic nanorod metamaterial enhanced by nonlocality. *Nature Nanotechnology*, **2011**, 6, 107-11	28.7	357
119	Strongly anisotropic waveguide as a nonmagnetic left-handed system. *Physical Review B*, **2005**, 71,	3.3	235
118	Stimulated emission of surface plasmon polaritons. *Physical Review Letters*, **2008**, 101, 226806	7.4	230
117	Plasmon modes and negative refraction in metal nanowire composites. *Optics Express*, **2003**, 11, 735-45	3.3	219
116	Compensation of loss in propagating surface plasmon polariton by gain in adjacent dielectric medium. *Optics Express*, **2008**, 16, 1385-92	3.3	216
115	Hyperbolic metamaterials: new physics behind a classical problem. *Optics Express*, **2013**, 21, 15048-64	3.3	214
114	Near-sighted superlens. *Optics Letters*, **2005**, 30, 75-7	3	213
113	Optical nonlocalities and additional waves in epsilon-near-zero metamaterials. *Physical Review Letters*, **2009**, 102, 127405	7.4	201
112	Nanowire metamaterials with extreme optical anisotropy. *Applied Physics Letters*, **2006**, 89, 261102	3.4	180
111	Nonlocal effects in effective-medium response of nanolayered metamaterials. *Applied Physics Letters*, **2007**, 90, 191109	3.4	178
110	PLASMON MODES IN METAL NANOWIRES AND LEFT-HANDED MATERIALS. *Journal of Nonlinear Optical Physics and Materials*, **2002**, 11, 65-74	0.8	176
109	Transparent conductive oxides: Plasmonic materials for telecom wavelengths. *Applied Physics Letters*, **2011**, 99, 021101	3.4	158
108	Highly confined optical modes in nanoscale metal-dielectric multilayers. *Physical Review B*, **2007**, 75,	3.3	157
107	Towards nano-scale photonics with micro-scale photons: the opportunities and challenges of mid-infrared plasmonics. *Nanophotonics*, **2013**, 2, 103-130	6.3	132
106	Nonmagnetic nanocomposites for optical and infrared negative-refractive-index media. *Journal of the Optical Society of America B: Optical Physics*, **2006**, 23, 498	1.7	128

105	Funneling light through a subwavelength aperture with epsilon-near-zero materials. *Physical Review Letters*, **2011**, 107, 133901	7.4	122
104	A proof of superlensing in the quasistatic regime, and limitations of superlenses in this regime due to anomalous localized resonance. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2005**, 461, 3999-4034	2.4	102
103	Metamaterial photonic funnels for subdiffraction light compression and propagation. *Physical Review B*, **2006**, 73,	3.3	88
102	Resonant light interaction with plasmonic nanowire systems. *Journal of Optics*, **2005**, 7, S32-S37		84
101	Scattering-free plasmonic optics with anisotropic metamaterials. *Physical Review Letters*, **2008**, 100, 066402	7.4	69
100	Near-field optical studies of semicontinuous metal films. *Physical Review B*, **2001**, 64,	3.3	68
99	Hypergratings: nanophotonics in planar anisotropic metamaterials. *Optics Letters*, **2009**, 34, 890-2	3	64
98	Spontaneous emission in non-local materials. *Light: Science and Applications*, **2017**, 6, e16273	16.7	61
97	Refractive index sensing with hyperbolic metamaterials: strategies for biosensing and nonlinearity enhancement. *Optics Express*, **2015**, 23, 14329-43	3.3	60
96	Active metamaterials: Sign of refractive index and gain-assisted dispersion management. *Applied Physics Letters*, **2007**, 91, 191103	3.4	59
95	Nonlocal optics of plasmonic nanowire metamaterials. *Physical Review B*, **2014**, 89,	3.3	56
94	Purcell effect in hyperbolic metamaterial resonators. *Physical Review B*, **2015**, 92,	3.3	54
93	Strong Coupling of Molecular and Mid-Infrared Perfect Absorber Resonances. *IEEE Photonics Technology Letters*, **2012**, 24, 31-33	2.2	52
92	Experimental observation of percolation-enhanced nonlinear light scattering from semicontinuous metal films. *Physical Review B*, **2001**, 64,	3.3	51
91	Optimizing the superlens: Manipulating geometry to enhance the resolution. *Applied Physics Letters* , **2005**, 87, 231113	3.4	50
90	Focus issue: hyperbolic metamaterials. *Optics Express*, **2013**, 21, 14895-7	3.3	49
89	Semiclassical description of chaos-assisted tunneling. *Physical Review Letters*, **2003**, 91, 263601	7.4	49
88	Chaos-assisted tunneling in dielectric microcavities. *Optics Letters*, **2005**, 30, 474-6	3	45

87	Looking into meta-atoms of plasmonic nanowire metamaterial. *Nano Letters*, **2014**, 14, 4971-6	11.5	44
86	Large local optical activity in fractal aggregates of nanoparticles. *Journal of the Optical Society of America B: Optical Physics*, **2001**, 18, 1896	1.7	44
85	Stimulated emission of surface plasmon polaritons in a microcylinder cavity. *Physical Review Letters*, **2011**, 106, 183903	7.4	41
84	Midinfrared semiconductor optical metamaterials. *Journal of Applied Physics*, **2009**, 105, 122411	2.5	41
83	Ultrasensitive non-resonant detection of ultrasound with plasmonic metamaterials. *Advanced Materials*, **2013**, 25, 2351-6	24	39
82	Homogeneous Hyperbolic Systems for Terahertz and Far-Infrared Frequencies. *Advances in OptoElectronics*, **2012**, 2012, 1-6	0.5	39
81	Hyperbolic and plasmonic properties of silicon/Ag aligned nanowire arrays. *Optics Express*, **2013**, 21, 14962-74	3.5	35
80	Gain-assisted slow to superluminal group velocity manipulation in nanowaveguides. *Physical Review Letters*, **2006**, 97, 223902	7.4	34
79	Strongly anisotropic media: the THz perspectives of left-handed materials. *Journal of Modern Optics* , **2005**, 52, 2343-2349	1.1	34
78	Engineering absorption and blackbody radiation in the far-infrared with surface phonon polaritons on gallium phosphide. *Applied Physics Letters*, **2014**, 104, 131105	3.4	33
77	Control of reflectance and transmittance in scattering and curvilinear hyperbolic metamaterials. *Applied Physics Letters*, **2012**, 101, 091105	3.4	30
76	Chaotic microlasers based on dynamical localization. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 10498-500	11.5	29
75	Resonance transmittance through a metal film with subwavelength holes. *IEEE Journal of Quantum Electronics*, **2002**, 38, 956-963	2	29
74	Nonlocal Effects in Transition Hyperbolic Metamaterials. *ACS Photonics*, **2017**, 4, 2470-2478	6.3	28
73	PERCOLATION AND FRACTAL COMPOSITES: OPTICAL STUDIES. *Journal of Nonlinear Optical Physics and Materials*, **2000**, 09, 105-116	0.8	25
72	Mid-infrared epsilon-near-zero modes in ultra-thin phononic films. *Applied Physics Letters*, **2017**, 111, 091105	3.4	24
71	Epsilon-Near-Zero Photonics Wires. *ACS Photonics*, **2016**, 3, 1045-1052	6.3	24
70	Diffractive interface theory: nonlocal susceptibility approach to the optics of metasurfaces. *Optics Express*, **2015**, 23, 2764-76	3.3	23

69	Geometry Defines Ultrafast Hot-Carrier Dynamics and Kerr Nonlinearity in Plasmonic Metamaterial Waveguides and Cavities. *Advanced Optical Materials*, **2017**, 5, 1700299	8.1	22
68	Near-field infrared absorption of plasmonic semiconductor microparticles studied using atomic force microscope infrared spectroscopy. *Applied Physics Letters*, **2013**, 102, 152110	3.4	22
67	Light emission in nonlocal plasmonic metamaterials. *Faraday Discussions*, **2015**, 178, 61-70	3.6	21
66	Plasmonic Nanolayer Composites: Coupled Plasmon Polaritons, Effective-Medium Response, and Subdiffraction Light Manipulation. *Journal of Nanomaterials*, **2007**, 2007, 1-8	3.2	21
65	The limitedness problem on distance automata: Hashiguchi's method revisited. *Theoretical Computer Science*, **2004**, 310, 147-158	1.1	21
64	Low-threshold lasing and broad-band multiphoton-excited light emission from Ag aggregate-adsorbate complexes in microcavity. *Journal of Modern Optics*, **2002**, 49, 645-662	1.1	20
63	Near-zero enhanced light transmission through a subwavelength slit. *Physical Review B*, **2014**, 89,	3.3	18
62	Quasi-planar optics: computing light propagation and scattering in planar waveguide arrays. *Journal of the Optical Society of America B: Optical Physics*, **2009**, 26, B102	1.7	18
61	Plasmon-enhanced absorption by optical phonons in metal-dielectric composites. *Europhysics Letters*, **2001**, 53, 364-370	1.6	18
60	Control of the Stokes Shift with Strong Coupling. *Advanced Optical Materials*, **2017**, 5, 1600941	8.1	17
59	Magneto-Optical Metamaterials: Nonreciprocal Transmission and Faraday Effect Enhancement. *Advanced Optical Materials*, **2019**, 7, 1801420	8.1	17
58	Enhanced Optical Transmission through MacEtch-Fabricated Buried Metal Gratings. *Advanced Materials*, **2016**, 28, 1441-8	24	16
57	Collective phenomena in photonic, plasmonic and hybrid structures. *Optics Express*, **2011**, 19, 22024-8	3.3	16
56	Dynamical localization in microdisk lasers. *Optics Express*, **2005**, 13, 5641-52	3.3	15
55	Plasmonic mid-infrared beam steering. *Applied Physics Letters*, **2010**, 96, 201112	3.4	14
54	Plasmonic and new plasmonic materials: general discussion. *Faraday Discussions*, **2015**, 178, 123-49	3.6	13
53	Terahertz transmission ellipsometry of vertically aligned multi-walled carbon nanotubes. *Applied Physics Letters*, **2012**, 101, 111107	3.4	13
52	Toward parametric amplification in plasmonic systems: second harmonic generation enhanced by surface plasmon polaritons. *Optics Express*, **2014**, 22, 7773-82	3.3	12

51	Applications of plasmonics: general discussion. *Faraday Discussions*, **2015**, 178, 435-66	3.6	11
50	Low-frequency nonlocal and hyperbolic modes in corrugated wire metamaterials. *Optics Express*, **2018**, 26, 17541-17548	3.3	10
49	Multiscale beam evolution and shaping in corrugated plasmonic systems. *Optics Express*, **2011**, 19, 9269-81	3.3	10
48	Analytical technique for subwavelength far field imaging. *Applied Physics Letters*, **2010**, 97, 101103	3.4	10
47	Chaos-assisted tunneling and dynamical localization in dielectric microdisk resonators. *IEEE Journal of Selected Topics in Quantum Electronics*, **2006**, 12, 40-51	3.8	10
46	Structural second-order nonlinearity in plasmonic metamaterials. *Optica*, **2018**, 5, 1502	8.6	10
45	Enhanced emission from ultra-thin long wavelength infrared superlattices on epitaxial plasmonic materials. *Applied Physics Letters*, **2020**, 116, 021102	3.4	9
44	Electrically Injected Parity Time‐Symmetric Single Transverse‐Mode Lasers. *Laser and Photonics Reviews*, **2019**, 13, 1800154	8.3	9
43	Interscale mixing microscopy: numerically stable imaging of wavelength- scale objects with sub-wavelength resolution and far field measurements. *Optics Express*, **2015**, 23, 2753-63	3.3	8
42	Singlet–Triplet Transition Rate Enhancement inside Hyperbolic Metamaterials. *Laser and Photonics Reviews*, **2019**, 13, 1900101	8.3	8
41	Level spacing distribution in systems with partially chaotic classical dynamics. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2007**, 362, 412-416	2.3	8
40	Interscale mixing microscopy: far-field imaging beyond the diffraction limit. *Optica*, **2016**, 3, 803	8.6	7
39	Far-field imaging by a planar lens: Diffraction versus superresolution. *Physical Review B*, **2007**, 76,	3.3	7
38	Engineering the Berreman mode in mid-infrared polar materials. *Optics Express*, **2020**, 28, 28590-28599	3.3	7
37	Metamaterials-based Salisbury screens with reduced angular sensitivity. *Applied Physics Letters*, **2014**, 105, 161105	3.4	6
36	Sub-diffraction negative and positive index modes in mid-infrared waveguides. *Optics Express*, **2008**, 16, 16404-9	3.3	6
35	Sub-diffraction light propagation in fibres with anisotropic dielectric cores. *Journal of Modern Optics*, **2006**, 53, 2315-2324	1.1	6
34	Enhanced room temperature infrared LEDs using monolithically integrated plasmonic materials. *Optica*, **2020**, 7, 1355	8.6	6

33	Low-diffraction beaming in plasmonic crystals. *Optics Letters*, **2012**, 37, 2976-8	3	5
32	. *IEEE Journal of Selected Topics in Quantum Electronics*, **2006**, 12, 66-70	3.8	5
31	Metamaterial coatings for broadband asymmetric mirrors. *Optics Letters*, **2007**, 32, 1770-2	3	5
30	Homogenization of nanowire-based composites with anisotropic unit-cell and layered substructure. *MRS Communications*, **2016**, 6, 23-29	2.7	4
29	Optical properties of metal nanowires **2003**,		4
28	Metasurface-enhanced transparency. *Journal of the Optical Society of America B: Optical Physics*, **2017**, 34, D42	1.7	4
27	Rigorous diffraction interface theory. *Applied Physics Letters*, **2017**, 110, 171108	3.4	3
26	Nonlocal Response of Plasmonic Nanorod Metamaterials **2012**,		3
25	Diffractive imaging route to sub-wavelength pixels. *Applied Physics Letters*, **2013**, 102, 241115	3.4	3
24	Enhanced bandwidth and reduced dispersion through stacking multiple optical metamaterials. *Optics Express*, **2011**, 19, 14990-8	3.3	3
23	Machine Learning-Based Diffractive Image Analysis with Subwavelength Resolution. *ACS Photonics*, **2021**, 8, 1448-1456	6.3	3
22	Surface plasmon enhanced spectroscopies and time and space resolved methods: general discussion. *Faraday Discussions*, **2015**, 178, 253-79	3.6	2
21	Directional emission of rhodamine 6G on top of a silver grating. *Optics Letters*, **2018**, 43, 2668-2671	3	2
20	Comment on All-Angle Broadband Negative Refraction of Metal Waveguide Arrays in the Visible Range: Theoretical Analysis and Numerical Demonstration *Physical Review Letters*, **2007**, 98,	7.4	2
19	Compensation of loss by optical gain in propagating surface plasmons **2007**,		2
18	Spontaneous Emission in Nonlocal Metamaterials with Spatial Dispersion. *Springer Series in Solid-state Sciences*, **2017**, 237-277	0.4	1
17	Efficient radiational outcoupling of electromagnetic energy from hyperbolic metamaterial resonators. *Scientific Reports*, **2020**, 10, 21854	4.9	1
16	ENZ-enhanced transmission through subwavelength slits **2011**,		1

15	Asymmetric reflectance and cluster size effects in silver percolation films. *Physical Review B*, **2011**, 84,	3.3	1
14	Enhancement of dispersion modulation in nanoscale waveguides. *Journal of the Optical Society of America B: Optical Physics*, **2008**, 25, C127	1.7	1
13	Discrete spectrum of anti-Stokes emission from metal particle-adsorbate complexes in a microcavity **2002**,		1
12	Optical nonlocalities and additional waves in epsilon-near-zero metamaterials **2009**,		1
11	Machine Learning-based Diffractive Imaging with Subwavelength Resolution **2020**,		1
10	Ballistic metamaterials. *Optica*, **2020**, 7, 1773	8.6	1
9	CoPhy -PGNN: Learning Physics-guided Neural Networks with Competing Loss Functions for Solving Eigenvalue Problems. *ACM Transactions on Intelligent Systems and Technology*,	8	1
8	Extending plasmonic response to the mid-wave infrared with all-epitaxial composites.. *Optics Letters*, **2022**, 47, 973-976	3	0
7	Single-transverse-mode broadband InAs quantum dot superluminescent light emitting diodes by parity-time symmetry. *Optics Express*, **2018**, 26, 30588-30595	3.3	0
6	Subdiffraction Limited Photonic Funneling of Light. *Advanced Optical Materials*, **2020**, 8, 2001321	8.1	0
5	Photonic Funnels: Subdiffraction Limited Photonic Funneling of Light (Advanced Optical Materials 24/2020). *Advanced Optical Materials*, **2020**, 8, 2070098	8.1	0
4	Angle-insensitive plasmonic nanorod metamaterial-based band-pass optical filters. *Optics Express*, **2021**, 29, 11562-11569	3.3	0
3	Stimulated emission in vicinity of the critical angle. *Applied Physics Letters*, **2021**, 119, 031102	3.4	0
2	CHAOTIC MICROLASERS BASED ON DYNAMICAL LOCALIZATION. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2006**, 16, 1835-1839	2	
1	Optical Transmission: Enhanced Optical Transmission through MacEtch-Fabricated Buried Metal Gratings (Adv. Mater. 7/2016). *Advanced Materials*, **2016**, 28, 1440-1440	24	