Viktor A Podolskiy

List of Publications by Year in descending order

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		66343	40979
187	8,779	42	93
papers	citations	h-index	g-index
189	189	189	7626
109	109	109	7636
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Extending plasmonic response to the mid-wave infrared with all-epitaxial composites. Optics Letters, 2022, 47, 973.	3.3	1
2	<i>CoPhy</i> -PGNN: Learning Physics-guided Neural Networks with Competing Loss Functions for Solving Eigenvalue Problems. ACM Transactions on Intelligent Systems and Technology, 2022, 13, 1-23.	4.5	14
3	Stimulated Emission with Evanescent Gain in the Total Internal Reflection Geometry. , $2021, , .$		O
4	Diffractive Characterization of Sub-wavelength Objects with Machine Learning., 2021,,.		0
5	Angle-insensitive plasmonic nanorod metamaterial-based band-pass optical filters. Optics Express, 2021, 29, 11562.	3.4	4
6	Machine Learning-Based Diffractive Image Analysis with Subwavelength Resolution. ACS Photonics, 2021, 8, 1448-1456.	6.6	17
7	Stimulated emission in vicinity of the critical angle. Applied Physics Letters, 2021, 119, 031102.	3.3	1
8	Subdiffraction Limited Photonic Funneling of Light. Advanced Optical Materials, 2020, 8, 2001321.	7.3	1
9	Photonic Funnels: Subdiffraction Limited Photonic Funneling of Light (Advanced Optical Materials) Tj ETQq $1\ 1\ 0$.784314 r	gBŢ /Overlo <mark>c</mark> k
10	Efficient radiational outcoupling of electromagnetic energy from hyperbolic metamaterial resonators. Scientific Reports, 2020, 10, 21854.	3.3	1
11	Enhanced emission from ultra-thin long wavelength infrared superlattices on epitaxial plasmonic materials. Applied Physics Letters, 2020, 116, .	3.3	17
12	Machine Learning-based Diffractive Imaging with Subwavelength Resolution. , 2020, , .		2
13	Enhanced room temperature infrared LEDs using monolithically integrated plasmonic materials. Optica, 2020, 7, 1355.	9.3	9
14	Ballistic metamaterials. Optica, 2020, 7, 1773.	9.3	2
15	Monolithic Semiconductor Plasmonic Devices. , 2020, , .		O
16	Engineering the Berreman mode in mid-infrared polar materials. Optics Express, 2020, 28, 28590.	3.4	14
17	Singlet–Triplet Transition Rate Enhancement inside Hyperbolic Metamaterials. Laser and Photonics Reviews, 2019, 13, 1900101.	8.7	10
18	Magnetoâ€Optical Metamaterials: Nonreciprocal Transmission and Faraday Effect Enhancement. Advanced Optical Materials, 2019, 7, 1801420.	7.3	38

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19	Electrically Injected Parity Time–Symmetric Single Transverse–Mode Lasers. Laser and Photonics Reviews, 2019, 13, 1800154.	8.7	23
20	Strong Structural Nonlinearity from Plasmonic Metamaterials in the Infrared. , 2019, , .		0
21	Field Enhancement and Ultrafast Plasmonics In Nonlocal Transitional Metamaterials., 2019,,.		O
22	Low-frequency nonlocal and hyperbolic modes in corrugated wire metamaterials. Optics Express, 2018, 26, 17541.	3.4	15
23	Directional emission of rhodamine 6G on top of a silver grating. Optics Letters, 2018, 43, 2668.	3.3	3
24	Structural second-order nonlinearity in plasmonic metamaterials. Optica, 2018, 5, 1502.	9.3	21
25	Structural Second Order Nonlinearity in Metamaterials. , 2018, , .		О
26	Directional Spontaneous Emission of Dye on Top of Silver Grating Metasurface., 2018,,.		0
27	Diffractive optics approach towards subwavelength pixels. , 2018, , .		О
28	Single-transverse-mode broadband InAs quantum dot superluminescent light emitting diodes by parity-time symmetry. Optics Express, 2018, 26, 30588.	3.4	1
29	Spontaneous Emission in Nonlocal Metamaterials with Spatial Dispersion. Springer Series in Solid-state Sciences, 2017, , 237-277.	0.3	1
30	Spontaneous emission in non-local materials. Light: Science and Applications, 2017, 6, e16273-e16273.	16.6	75
31	Rigorous diffraction interface theory. Applied Physics Letters, 2017, 110, .	3.3	8
32	Control of the Stokes Shift with Strong Coupling. Advanced Optical Materials, 2017, 5, 1600941.	7.3	23
33	Nonlocal Effects in Transition Hyperbolic Metamaterials. ACS Photonics, 2017, 4, 2470-2478.	6.6	37
34	Mid-infrared epsilon-near-zero modes in ultra-thin phononic films. Applied Physics Letters, 2017, 111, .	3.3	37
35	Geometry Defines Ultrafast Hotâ€Carrier Dynamics and Kerr Nonlinearity in Plasmonic Metamaterial Waveguides and Cavities. Advanced Optical Materials, 2017, 5, 1700299.	7.3	25
36	Metasurface-enhanced transparency. Journal of the Optical Society of America B: Optical Physics, 2017, 34, D42.	2.1	4

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37	Interscale mixing microscopy: far-field imaging beyond the diffraction limit. , 2017, , .		O
38	Magneto-optical nanowire metamaterials., 2017,,.		0
39	Rigorous Diffraction Interface Theory. , 2017, , .		0
40	Optical Transmission: Enhanced Optical Transmission through MacEtchâ€Fabricated Buried Metal Gratings (Adv. Mater. 7/2016). Advanced Materials, 2016, 28, 1440-1440.	21.0	0
41	Epsilon-Near-Zero Photonics Wires. ACS Photonics, 2016, 3, 1045-1052.	6.6	26
42	Interscale mixing microscopy: far-field imaging beyond the diffraction limit. Optica, 2016, 3, 803.	9.3	9
43	Homogenization of nanowire-based composites with anisotropic unit-cell and layered substructure. MRS Communications, 2016, 6, 23-29.	1.8	5
44	Enhanced Optical Transmission through MacEtchâ€Fabricated Buried Metal Gratings. Advanced Materials, 2016, 28, 1441-1448.	21.0	21
45	Homogenization of nanowire-based composites with anisotropic unit cell and layered substructure. , 2016, , .		0
46	Buried Extraordinary Optical Transmission. , 2016, , .		0
47	Multiscale Metasurfaces for Enhanced Light Extraction. , 2016, , .		2
48	Purcell effect in hyperbolic metamaterial resonators. Physical Review B, 2015, 92, .	3.2	62
49	Refractive index sensing with hyperbolic metamaterials: strategies for biosensing and nonlinearity enhancement. Optics Express, 2015, 23, 14329.	3.4	82
50	Applications of plasmonics: general discussion. Faraday Discussions, 2015, 178, 435-466.	3. 2	17
51	Plasmonic and new plasmonic materials: general discussion. Faraday Discussions, 2015, 178, 123-149.	3.2	16
52	Surface plasmon enhanced spectroscopies and time and space resolved methods: general discussion. Faraday Discussions, 2015, 178, 253-279.	3.2	3
53	Diffractive interface theory: nonlocal susceptibility approach to the optics of metasurfaces. Optics Express, 2015, 23, 2764.	3.4	26
54	Interscale mixing microscopy: numerically stable imaging of wavelength- scale objects with sub-wavelength resolution and far field measurements. Optics Express, 2015, 23, 2753.	3.4	10

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55	Light emission in nonlocal plasmonic metamaterials. Faraday Discussions, 2015, 178, 61-70.	3.2	22
56	Diffraction Interface Theory: A nonlocal approach to metasurfaces. , 2015, , .		0
57	Light Emission in Nonlocal Plasmonic Nanowire Metamaterials. , 2015, , .		0
58	All Semiconductor Negative-Index Plasmonic Absorbers. , 2014, , .		0
59	Mid-IR Plasmonics with Engineered Semiconductor Metals. , 2014, , .		0
60	Toward parametric amplification in plasmonic systems: Second harmonic generation enhanced by surface plasmon polaritons. Optics Express, 2014, 22, 7773.	3.4	14
61	Metamaterials-based Salisbury screens with reduced angular sensitivity. Applied Physics Letters, 2014, 105, .	3.3	7
62	Engineering absorption and blackbody radiation in the far-infrared with surface phonon polaritons on gallium phosphide. Applied Physics Letters, 2014, 104, .	3.3	41
63	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>ε</mml:mi>-near-zero enhanced light transmission through a subwavelength slit. Physical Review B, 2014, 89, .</mml:math 	3.2	19
64	Additional Waves in Nonlocal Nanowire Metamaterials. , 2014, , .		0
65	Looking into Meta-Atoms of Plasmonic Nanowire Metamaterial. Nano Letters, 2014, 14, 4971-4976.	9.1	57
66	Nonlocal optics of plasmonic nanowire metamaterials. Physical Review B, 2014, 89, .	3.2	74
67	Numerically Stable Reconstruction of Wavelength-Scale Objects with Sub-Wavelength Resolution. , 2014, , .		0
68	Angle-independent Salisbury screens based on nonlocal nanowire metamaterials. , 2014, , .		0
69	Ultrasensitive Nonâ€Resonant Detection of Ultrasound with Plasmonic Metamaterials. Advanced Materials, 2013, 25, 2351-2356.	21.0	54
70	Near-field infrared absorption of plasmonic semiconductor microparticles studied using atomic force microscope infrared spectroscopy. Applied Physics Letters, 2013, 102, .	3.3	27
71	Diffractive imaging route to sub-wavelength pixels. Applied Physics Letters, 2013, 102, .	3.3	4
72	Hyperbolic and plasmonic properties of Silicon/Ag aligned nanowire arrays. Optics Express, 2013, 21, 14962.	3.4	36

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73	Hyperbolic metamaterials: new physics behind a classical problem. Optics Express, 2013, 21, 15048.	3.4	270
74	Focus issue: hyperbolic metamaterials. Optics Express, 2013, 21, 14895.	3.4	59
75	Towards nano-scale photonics with micro-scale photons: the opportunities and challenges of mid-infrared plasmonics. Nanophotonics, 2013, 2, 103-130.	6.0	173
76	Nonlocal Optics of Plasmonic Nanowire Metamaterials. , 2013, , .		0
77	Meta-Gratings for Highly-Compact Holographic Imaging Systems. , 2013, , .		0
78	Low-diffraction beaming in plasmonic crystals. Optics Letters, 2012, 37, 2976.	3.3	6
79	Terahertz transmission ellipsometry of vertically aligned multi-walled carbon nanotubes. Applied Physics Letters, 2012, 101, 111107.	3.3	13
80	Low-Diffraction Modes in Plasmonic Crystals. , 2012, , .		0
81	Nonlocal Response of Plasmonic Nanorod Metamaterials. , 2012, , .		3
82	Control of reflectance and transmittance in scattering and curvilinear hyperbolic metamaterials. Applied Physics Letters, 2012, 101, 091105.	3.3	35
83	Making the mid-infrared nano with designer plasmonic materials. , 2012, , .		0
84	Hyperbolic metamaterials platforms for tuning reflectance, transmittance and absorption. Proceedings of SPIE, 2012, , .	0.8	0
85	Strong Coupling of Molecular and Mid-Infrared Perfect Absorber Resonances. IEEE Photonics Technology Letters, 2012, 24, 31-33.	2.5	64
86	Homogeneous Hyperbolic Systems for Terahertz and Far-Infrared Frequencies. Advances in OptoElectronics, 2012, 2012, 1-6.	0.6	50
87	Terahertz Ellipsometry of Vertically Grown Carbon Nanotubes. , 2012, , .		0
88	Interscale mixing for high-resolution and highly-compact imaging systems. , 2012, , .		0
89	Transparent conductive oxides: Plasmonic materials for telecom wavelengths. Applied Physics Letters, 2011, 99, .	3.3	179
90	Funneling Light through a Subwavelength Aperture with Epsilon-Near-Zero Materials. Physical Review Letters, 2011, 107, 133901.	7.8	144

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91	Multiscale beam evolution and shaping in corrugated plasmonic systems. Optics Express, 2011, 19, 9269.	3.4	13
92	Enhanced bandwidth and reduced dispersion through stacking multiple optical metamaterials. Optics Express, 2011, 19, 14990.	3.4	5
93	Collective phenomena in photonic, plasmonic and hybrid structures. Optics Express, 2011, 19, 22024.	3.4	19
94	Designed ultrafast optical nonlinearity in a plasmonic nanorod metamaterial enhanced by nonlocality. Nature Nanotechnology, 2011, 6, 107-111.	31.5	432
95	ENZ-enhanced transmission through subwavelength slits., 2011,,.		1
96	Funneling Light Through a Subwavelength Aperture Using Epsilon-Near-Zero Materials., 2011,,.		0
97	Stimulated Emission of Surface Plasmon Polaritons in a Microcylinder Cavity. Physical Review Letters, 2011, 106, 183903.	7.8	42
98	Asymmetric reflectance and cluster size effects in silver percolation films. Physical Review B, 2011, 84,	3.2	1
99	Active mid-infrared plasmonic beam steering devices. Proceedings of SPIE, 2010, , .	0.8	0
100	Evolution of Beaming Pattern in Corrugated Mid-IR Plasmonic Structures. , 2010, , .		0
101	Plasmonic mid-infrared beam steering. Applied Physics Letters, 2010, 96, .	3.3	17
102	Analytical technique for subwavelength far field imaging. Applied Physics Letters, 2010, 97, 101103.	3.3	16
103	Analytical Technique for Determining the Size of Subwavelength Focal Spots in far Field., 2010, , .		0
104	High-Performance Sensing with Plasmonic Nanorod Metamaterials. , 2010, , .		1
105	Surface Plasmon Polaritons in Silver-Gold Sandwich Structure. , 2009, , .		0
106	Plasmonic nanorod metamaterials for biosensing. Nature Materials, 2009, 8, 867-871.	27.5	1,529
107	Hypergratings: nanophotonics in planar anisotropic metamaterials. Optics Letters, 2009, 34, 890.	3.3	73
108	Optical Nonlocalities and Additional Waves in Epsilon-Near-Zero Metamaterials. Physical Review Letters, 2009, 102, 127405.	7.8	249

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109	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.	2.1	19
110	Midinfrared semiconductor optical metamaterials. Journal of Applied Physics, 2009, 105, .	2.5	54
111	Hypergratings: far-field subwavelength focusing in planar metamaterials. Proceedings of SPIE, 2009, , .	0.8	0
112	Optical nonlocalities and additional waves in epsilon-near-zero metamaterials., 2009,,.		1
113	Modeling Asymmetric Reflectance in Semicontinuous Metal Films Using Generalized Ohm's Law. , 2009, , .		0
114	Stimulated Emission in Microring Cavity with Gold Core. , 2009, , .		0
115	Design of hyper-gratings for far field subwavelength focusing in planar geometry. , 2009, , .		1
116	Hypergratings: Sub-Diffraction Optics with Anisotropic Plasmonic Metamaterials., 2009,,.		0
117	Stimulated Emission of Surface Plasmon Polaritons. Physical Review Letters, 2008, 101, 226806.	7.8	269
118	Enhancement of dispersion modulation in nanoscale waveguides. Journal of the Optical Society of America B: Optical Physics, 2008, 25, C127.	2.1	1
119	Compensation of loss in propagating surface plasmon polariton by gain in adjacent dielectric medium. Optics Express, 2008, 16, 1385.	3.4	253
120	Sub-diffraction negative and positive index modes in mid-infrared waveguides. Optics Express, 2008, 16, 16404.	3.4	6
121	Scattering-Free Plasmonic Optics with Anisotropic Metamaterials. Physical Review Letters, 2008, 100, 066402.	7.8	77
122	Scattering-free plasmonic optics with anisotropic metamaterials. , 2008, , .		0
123	Anisotropic metamaterials for purely 2-D optics. , 2008, , .		0
124	Gain-assisted dispersion management in negative-index materials., 2007,,.		0
125	Nonlocal effects in effective medium response of nanolayered metamaterials. , 2007, , .		1
126	Far-field imaging by a planar lens: Diffraction versus superresolution. Physical Review B, 2007, 76, .	3.2	9

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127	Compensation of loss by optical gain in propagating surface plasmons. , 2007, , .		2
128	Diffraction and dispersion management in active nanostructured metamaterials., 2007,,.		0
129	Metamaterial coatings for broadband asymmetric mirrors. Optics Letters, 2007, 32, 1770.	3.3	8
130	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, .	7.8	4
131	Nonlocal effects in effective-medium response of nanolayered metamaterials. Applied Physics Letters, 2007, 90, 191109.	3.3	214
132	Active metamaterials: Sign of refractive index and gain-assisted dispersion management. Applied Physics Letters, 2007, 91, .	3.3	71
133	Highly confined optical modes in nanoscale metal-dielectric multilayers. Physical Review B, 2007, 75, .	3.2	194
134	Plasmonic Nanolayer Composites: Coupled Plasmon Polaritons, Effective-Medium Response, and Subdiffraction Light Manipulation. Journal of Nanomaterials, 2007, 2007, 1-8.	2.7	21
135	Guided Modes Supported by Nanoscale Metal-Dielectric Multilayers. , 2007, , .		0
136	Level spacing distribution in systems with partially chaotic classical dynamics. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 362, 412-416.	2.1	9
137	Negative refraction in semiconductor metamaterials. Nature Materials, 2007, 6, 946-950.	27.5	763
138	Theoretical studies of loss compensation in active planar plasmonic structures., 2007,,.		3
139	Elongation of the surface plasmon polariton propagation length without gain., 2007,,.		0
140	Nanowire metamaterials with extreme optical anisotropy. Applied Physics Letters, 2006, 89, 261102.	3.3	221
141	Nonmagnetic nanocomposites for optical and infrared negative-refractive-index media. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 498.	2.1	159
142	Chaos-assisted tunneling and dynamical localization in dielectric microdisk resonators. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 40-51.	2.9	11
143	Surface-plasmon quantum cascade microlasers with highly deformed resonators. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 66-70.	2.9	6
144	Chaos-Assisted Tunnelling and Dynamical Localization in Optical Microresonators. , 2006, , .		0

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145	Gain-Assisted Slow to Superluminal Group Velocity Manipulation in Nanowaveguides. Physical Review Letters, 2006, 97, 223902.	7.8	38
146	Imaging properties of anisotropy-based negative index composites. , 2006, , .		0
147	Metamaterial photonic funnels for subdiffraction light compression and propagation. Physical Review B, 2006, 73, .	3.2	112
148	Subwavelength light guiding in photonic funnels. , 2006, , .		0
149	Optimizing the superlens geometry. , 2006, , .		0
150	CHAOTIC MICROLASERS BASED ON DYNAMICAL LOCALIZATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 1835-1839.	1.7	0
151	Sub-diffraction light propagation in fibres with anisotropic dielectric cores. Journal of Modern Optics, 2006, 53, 2315-2324.	1.3	6
152	Spiral whispering-gallery resonators. , 2005, , .		0
153	Chaotic microlasers based on dynamical localization in whispering-gallery resonators with surface roughness. , 2005, , .		0
154	Non-magnetic materials with negative refractive index. , 2005, , .		0
155	Light in Strongly Anisotropic Media: Towards Left-Handed Materials at Optical Frequencies. , 2005, , FTuX4.		0
156	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.	2.1	118
157	Optimizing the superlens: Manipulating geometry to enhance the resolution. Applied Physics Letters, 2005, 87, 231113.	3.3	64
158	Composite materials with giant anisotropy and negative index of refraction., 2005,,.		0
159	Dynamical localization in microdisk lasers. Optics Express, 2005, 13, 5641.	3.4	16
160	Near-sighted superlens. Optics Letters, 2005, 30, 75.	3.3	255
161	Chaos-assisted tunneling in dielectric microcavities. Optics Letters, 2005, 30, 474.	3.3	53
162	Strongly anisotropic media: the THz perspectives of left-handed materials. Journal of Modern Optics, 2005, 52, 2343-2349.	1.3	45

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163	Strongly anisotropic waveguide as a nonmagnetic left-handed system. Physical Review B, 2005, 71, .	3.2	289
164	Resonant light interaction with plasmonic nanowire systems. Journal of Optics, 2005, 7, S32-S37.	1.5	97
165	Light in Microresonators and Chaos Theory. , 2005, , .		0
166	Chaotic microlasers based on dynamical localization. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 10498-10500.	7.1	36
167	The limitedness problem on distance automata: Hashiguchi's method revisited. Theoretical Computer Science, 2004, 310, 147-158.	0.9	23
168	Non-magnetic left handed nanostructured material., 2004,,.		0
169	Plasmon modes and negative refraction in metal nanowire composites. Optics Express, 2003, 11, 735.	3.4	251
170	Semiclassical Description of Chaos-Assisted Tunneling. Physical Review Letters, 2003, 91, 263601.	7.8	58
171	Optical properties of metal nanowires. , 2003, , .		5
172	Chaos-assisted tunneling in whispering-gallery resonators. , 2003, 4969, 167.		1
173	Plasmonic nanowires as left-handed media. , 2003, , .		0
174	<title>Plasmonic nanophotonics: manipulating light and sensing molecules</title> ., 2002, , .		0
175	Discrete spectrum of anti-Stokes emission from metal particle-adsorbate complexes in a microcavity., 2002,,.		2
176	<title>Light management at nanoscale</title> ., 2002, , .		0
177	Giant enhancement of spectral emissions from molecules adsorbed on fractal/microcavity composite media., 2002,,.		0
178	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.	1.3	22
179	PLASMON MODES IN METAL NANOWIRES AND LEFT-HANDED MATERIALS. Journal of Nonlinear Optical Physics and Materials, 2002, 11, 65-74.	1.8	211
180	Resonance transmittance through a metal film with subwavelength holes. IEEE Journal of Quantum Electronics, 2002, 38, 956-963.	1.9	35

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181	Near-field optical studies of semicontinuous metal films. Physical Review B, 2001, 64, .	3.2	78
182	Large local optical activity in fractal aggregates of nanoparticles. Journal of the Optical Society of America B: Optical Physics, 2001, 18, 1896.	2.1	53
183	Experimental observation of percolation-enhanced nonlinear light scattering from semicontinuous metal films. Physical Review B, 2001, 64, .	3.2	54
184	Plasmon-enhanced absorption by optical phonons in cermets., 2001,,.		0
185	Plasmon-enhanced absorption by optical phonons in metal-dielectric composites. Europhysics Letters, 2001, 53, 364-370.	2.0	18
186	PERCOLATION AND FRACTAL COMPOSITES: OPTICAL STUDIES. Journal of Nonlinear Optical Physics and Materials, 2000, 09, 105-116.	1.8	27
187	Physicsâ€Informed Machine Learning for Optical Modes in Composites. Advanced Photonics Research, 0, , 2200073.	3.6	O