

Alex Krasnok

List of Publications by Year in descending order

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Version: 2024-02-01

151
papers

7,336
citations

57631

44
h-index

54797

84
g-index

153
all docs

153
docs citations

153
times ranked

5879
citing authors

#	ARTICLE	IF	CITATIONS
1	All-dielectric optical nanoantennas. <i>Optics Express</i> , 2012, 20, 20599.	1.7	490
2	Topological polaritons and photonic magic angles in twisted $\hat{\pm}$ -MoO ₃ bilayers. <i>Nature</i> , 2020, 582, 209-213.	13.7	413
3	Nonlinear metasurfaces: a paradigm shift in nonlinear optics. <i>Materials Today</i> , 2018, 21, 8-21.	8.3	403
4	All-dielectric nanophotonics: the quest for better materials and fabrication techniques. <i>Optica</i> , 2017, 4, 814.	4.8	328
5	Tunable nanophotonics enabled by chalcogenide phase-change materials. <i>Nanophotonics</i> , 2020, 9, 1189-1241.	2.9	294
6	Coherent perfect absorbers: linear control of light with light. <i>Nature Reviews Materials</i> , 2017, 2, .	23.3	280
7	Nanophotonic engineering of far-field thermal emitters. <i>Nature Materials</i> , 2019, 18, 920-930.	13.3	261
8	Optical nanoantennas. <i>Physics-Uspexhi</i> , 2013, 56, 539-564.	0.8	207
9	Moiré Hyperbolic Metasurfaces. <i>Nano Letters</i> , 2020, 20, 3217-3224.	4.5	167
10	Superdirective dielectric nanoantennas. <i>Nanoscale</i> , 2014, 6, 7354-7361.	2.8	165
11	Tuning of Magnetic Optical Response in a Dielectric Nanoparticle by Ultrafast Photoexcitation of Dense Electron-Hole Plasma. <i>Nano Letters</i> , 2015, 15, 6187-6192.	4.5	162
12	Anomalies in light scattering. <i>Advances in Optics and Photonics</i> , 2019, 11, 892.	12.1	161
13	An antenna model for the Purcell effect. <i>Scientific Reports</i> , 2015, 5, 12956.	1.6	160
14	Separation of valley excitons in a MoS ₂ monolayer using a subwavelength asymmetric groove array. <i>Nature Photonics</i> , 2019, 13, 180-184.	15.6	147
15	Interface nano-optics with van der Waals polaritons. <i>Nature</i> , 2021, 597, 187-195.	13.7	143
16	Nanophotonics with 2D transition metal dichalcogenides [Invited]. <i>Optics Express</i> , 2018, 26, 15972.	1.7	134
17	Resonant Raman scattering from silicon nanoparticles enhanced by magnetic response. <i>Nanoscale</i> , 2016, 8, 9721-9726.	2.8	128
18	Electrically driven reprogrammable phase-change metasurface reaching 80% efficiency. <i>Nature Communications</i> , 2022, 13, 1696.	5.8	125

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19	Spectroscopy and Biosensing with Optically Resonant Dielectric Nanostructures. <i>Advanced Optical Materials</i> , 2018, 6, 1701094.	3.6	120
20	Experimental verification of the concept of all-dielectric nanoantennas. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	119
21	Enhancement of terahertz photoconductive antenna operation by optical nanoantennas. <i>Laser and Photonics Reviews</i> , 2017, 11, 1600199.	4.4	116
22	Modifying magnetic dipole spontaneous emission with nanophotonic structures. <i>Laser and Photonics Reviews</i> , 2017, 11, 1600268.	4.4	110
23	Fabrication of Hybrid Nanostructures via Nanoscale Laser-Induced Reshaping for Advanced Light Manipulation. <i>Advanced Materials</i> , 2016, 28, 3087-3093.	11.1	107
24	Laser fabrication of crystalline silicon nanoresonators from an amorphous film for low-loss all-dielectric nanophotonics. <i>Nanoscale</i> , 2016, 8, 5043-5048.	2.8	103
25	Huygens optical elements and Yagi-Uda nanoantennas based on dielectric nanoparticles. <i>JETP Letters</i> , 2011, 94, 593-598.	0.4	92
26	Tunable Fano Resonance and Plasmon-Exciton Coupling in Single Au Nanotriangles on Monolayer WS ₂ at Room Temperature. <i>Advanced Materials</i> , 2018, 30, e1705779.	11.1	88
27	Tunable Resonance Coupling in Single Si Nanoparticle-Monolayer WS ₂ Structures. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 16690-16697.	4.0	82
28	Wireless power transfer based on novel physical concepts. <i>Nature Electronics</i> , 2021, 4, 707-716.	13.1	79
29	Coherent virtual absorption based on complex zero excitation for ideal light capturing. <i>Optica</i> , 2017, 4, 1457.	4.8	77
30	Enhanced light-matter interaction in two-dimensional transition metal dichalcogenides. <i>Reports on Progress in Physics</i> , 2022, 85, 046401.	8.1	74
31	Boosting Terahertz Photoconductive Antenna Performance with Optimised Plasmonic Nanostructures. <i>Scientific Reports</i> , 2018, 8, 6624.	1.6	69
32	Nonlinear Transient Dynamics of Photoexcited Resonant Silicon Nanostructures. <i>ACS Photonics</i> , 2016, 3, 1546-1551.	3.2	67
33	Towards all-dielectric metamaterials and nanophotonics. <i>Proceedings of SPIE</i> , 2015, , .	0.8	66
34	Controllable femtosecond laser-induced dewetting for plasmonic applications. <i>Laser and Photonics Reviews</i> , 2016, 10, 91-99.	4.4	66
35	Nonlinear metal-dielectric nanoantennas for light switching and routing. <i>New Journal of Physics</i> , 2012, 14, 093005.	1.2	65
36	Near-field mapping of Fano resonances in all-dielectric oligomers. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	64

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37	Demonstration of the enhanced Purcell factor in all-dielectric structures. Applied Physics Letters, 2016, 108, .	1.5	62
38	Observation of localized magnetic plasmon skyrmions. Nature Communications, 2022, 13, 8.	5.8	61
39	Can a Nonradiating Mode Be Externally Excited? Nonscattering States versus Embedded Eigenstates. ACS Photonics, 2019, 6, 3108-3114.	3.2	56
40	Tuning of near- and far-field properties of all-dielectric dimer nanoantennas via ultrafast electron-hole plasma photoexcitation. Laser and Photonics Reviews, 2016, 10, 1009-1015.	4.4	55
41	Self-adjusted all-dielectric metasurfaces for deep ultraviolet femtosecond pulse generation. Nanoscale, 2016, 8, 17809-17814.	2.8	54
42	Virtual Parity-Time Symmetry. Physical Review Letters, 2020, 124, 193901.	2.9	53
43	All-optical reconfigurable chiral meta-molecules. Materials Today, 2019, 25, 10-20.	8.3	52
44	Experimental demonstration of superdirective dielectric antenna. Applied Physics Letters, 2014, 104, .	1.5	47
45	Hybrid nanophotonics. Physics-Uspekhi, 2018, 61, 1035-1050.	0.8	46
46	Nonscattering-to-Superscattering Switch with Phase-Change Materials. ACS Photonics, 2019, 6, 2126-2132.	3.2	45
47	Tunable phase-change metasurfaces. Nature Nanotechnology, 2021, 16, 615-616.	15.6	45
48	Enhancement of artificial magnetism via resonant bianisotropy. Scientific Reports, 2016, 6, 22546.	1.6	42
49	Bending of electromagnetic waves in all-dielectric particle array waveguides. Applied Physics Letters, 2014, 105, .	1.5	41
50	Active Nanophotonics. Proceedings of the IEEE, 2020, 108, 628-654.	16.4	40
51	Light Outcoupling from Quantum Dot-Based Microdisk Laser via Plasmonic Nanoantenna. ACS Photonics, 2017, 4, 275-281.	3.2	39
52	Berremian Embedded Eigenstates for Narrow-Band Absorption and Thermal Emission. Physical Review Applied, 2020, 13, .	1.5	39
53	All-dielectric nanoantennas for unidirectional excitation of electromagnetic guided modes. Applied Physics Letters, 2015, 107, .	1.5	37
54	Enhancement of Raman scattering in dielectric nanostructures with electric and magnetic Mie resonances. Physical Review B, 2018, 97, .	1.1	37

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55	Embedded scattering eigenstates using resonant metasurfaces. Journal of Optics (United Kingdom), 2018, 20, 064002.	1.0	37
56	Virtual Critical Coupling. ACS Photonics, 2020, 7, 1468-1475.	3.2	36
57	Coherently Enhanced Wireless Power Transfer. Physical Review Letters, 2018, 120, 143901.	2.9	35
58	Magnetic Purcell factor in wire metamaterials. Applied Physics Letters, 2014, 104, .	1.5	33
59	Valley-Selective Response of Nanostructures Coupled to 2D Transition-Metal Dichalcogenides. Applied Sciences (Switzerland), 2018, 8, 1157.	1.3	30
60	All-Optical Switching and Unidirectional Plasmon Launching with Nonlinear Dielectric Nanoantennas. Physical Review Applied, 2018, 9, .	1.5	29
61	Suppressing material loss in the visible and near-infrared range for functional nanophotonics using bandgap engineering. Nature Communications, 2020, 11, 5055.	5.8	29
62	Coherent Perfect Diffraction in Metagratings. Advanced Materials, 2020, 32, e2002341.	11.1	29
63	From optical magnetic resonance to dielectric nanophotonics (A review). Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2015, 119, 551-568.	0.2	28
64	Fine-Tuning of the Magnetic Fano Resonance in Hybrid Oligomers via fs-Laser-Induced Reshaping. ACS Photonics, 2017, 4, 536-543.	3.2	28
65	Virtual optical pulling force. Optica, 2020, 7, 1024.	4.8	26
66	Dark-Exciton-Mediated Fano Resonance from a Single Gold Nanostructure on Monolayer WS ₂ at Room Temperature. Small, 2019, 15, e1900982.	5.2	25
67	Enhanced emission extraction and selective excitation of NV centers with all-dielectric nanoantennas. Laser and Photonics Reviews, 2015, 9, 385-391.	4.4	24
68	Resonant transmission of light in chains of high-index dielectric particles. Physical Review B, 2015, 92, .	1.1	22
69	Nonlinear refractive index of dielectric nanocomposites in weak optical fields. Technical Physics Letters, 2010, 36, 973-977.	0.2	21
70	Parity-Time Symmetry and Exceptional Points [Electromagnetic Perspectives]. IEEE Antennas and Propagation Magazine, 2021, 63, 110-121.	1.2	21
71	Solitary Waves in Chains of High-Index Dielectric Nanoparticles. ACS Photonics, 2016, 3, 1869-1876.	3.2	18
72	High-quality laser cavity based on all-dielectric metasurfaces. Photonics and Nanostructures - Fundamentals and Applications, 2017, 24, 18-23.	1.0	18

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73	Dynamically reconfigurable metal-semiconductor Yagi-Uda nanoantenna. <i>Physical Review B</i> , 2017, 95, .	1.1	18
74	Enhanced light outcoupling in microdisk lasers via Si spherical nanoantennas. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	17
75	Enhanced excitation and emission from 2D transition metal dichalcogenides with all-dielectric nanoantennas. <i>Nanotechnology</i> , 2019, 30, 254004.	1.3	17
76	Chiral all-dielectric trimer nanoantenna. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 208, 71-77.	1.1	16
77	Upcoming Advances in Optical and Microwave Nonreciprocity: From Classical to Quantum Realm. <i>Advanced Photonics Research</i> , 2021, 2, 2000104.	1.7	15
78	Directional Modulation of Exciton Emission Using Single Dielectric Nanospheres. <i>Advanced Materials</i> , 2021, 33, e2007236.	11.1	15
79	Controlling the harmonic generation in transition metal dichalcogenides and their heterostructures. <i>Nanophotonics</i> , 2022, 11, 3007-3034.	2.9	15
80	A model of nonlinear optical transmittance for insulator nanocomposites. <i>Semiconductors</i> , 2011, 45, 295-301.	0.2	14
81	Low-Symmetry Nanophotonics. <i>ACS Photonics</i> , 2022, 9, 2-24.	3.2	13
82	Boundary-Induced Embedded Eigenstate in a Single Resonator for Advanced Sensing. <i>ACS Photonics</i> , 2022, 9, 1936-1943.	3.2	13
83	Photonic Rashba effect. <i>Nature Nanotechnology</i> , 2020, 15, 893-894.	15.6	11
84	Metalenses go atomically thick and tunable. <i>Nature Photonics</i> , 2020, 14, 409-410.	15.6	10
85	Approach for fine-tuning of hybrid dimer antennas via laser melting at the nanoscale. <i>Annalen Der Physik</i> , 2017, 529, 1600272.	0.9	9
86	Dark-State Induced Quantum Nonreciprocity. <i>Advanced Quantum Technologies</i> , 2022, 5, .	1.8	8
87	Quantum Embedded Superstates. <i>Advanced Quantum Technologies</i> , 2021, 4, 2000121.	1.8	7
88	All-dielectric optical nanoantennas. , 2012, , .		5
89	Superdirective all-dielectric nanoantennas: theory and experiment. <i>IOP Conference Series: Materials Science and Engineering</i> , 2014, 67, 012008.	0.3	5
90	Plasmonic nanostructures for local field enhancement in the UV region. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2014, 12, 2-8.	1.0	5

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91	Improved emission outcoupling from microdisk laser by Si nanospheres. Journal of Physics: Conference Series, 2016, 741, 012158.	0.3	5
92	Coherently Driven and Superdirective Antennas. Electronics (Switzerland), 2019, 8, 845.	1.8	5
93	All-dielectric nanoantennas. Proceedings of SPIE, 2013, , .	0.8	4
94	Comment on "Electromagnetic Radiation under Explicit Symmetry Breaking". Physical Review Letters, 2015, 115, 119701.	2.9	4
95	Single-stage fabrication of low-loss dielectric nanoresonators from high-loss material. Journal of Physics: Conference Series, 2016, 690, 012020.	0.3	4
96	Collectively driven optical nanoantennas. Physical Review A, 2021, 103, .	1.0	4
97	Femtosecond laser transfer of silicon nanoparticles with enhanced Raman response. AIP Conference Proceedings, 2016, , .	0.3	3
98	Obstruction tolerant metasurface-based wireless power transfer system for multiple receivers. Photonics and Nanostructures - Fundamentals and Applications, 2020, 41, 100835.	1.0	3
99	Optical tuning of near and far fields form hybrid dimer nanoantennas via laser-induced melting. Journal of Physics: Conference Series, 2016, 741, 012152.	0.3	2
100	Direct Femtosecond Laser Writing of Optical Nanoresonators. Journal of Physics: Conference Series, 2016, 690, 012021.	0.3	2
101	Resolving the multipolar scattering modes of a submicron particle using parametric indirect microscopic imaging. Photonics and Nanostructures - Fundamentals and Applications, 2018, 30, 7-13.	1.0	2
102	Novel Optimized Hybrid Terahertz Photoconductive Antennas. Journal of Physics: Conference Series, 2018, 1092, 012076.	0.3	2
103	Superdirective magnetic nanoantennas with effect of light steering: Theory and experiment. , 2013, , .		1
104	Ultracompact all-dielectric superdirective antennas: Theory and experiment. , 2013, , .		1
105	The role of Purcell effect for third harmonic generation. Journal of Physics: Conference Series, 2016, 690, 012034.	0.3	1
106	Manipulating Fano resonance via fs-laser melting of hybrid oligomers at nanoscale. Journal of Physics: Conference Series, 2016, 741, 012140.	0.3	1
107	Core-shell Yagi-Uda nanoantenna for highly efficient and directive emission. Journal of Physics: Conference Series, 2017, 929, 012066.	0.3	1
108	Strong Coupling in Si Nanoparticle Core - 2D WS ₂ Shell Structure. Journal of Physics: Conference Series, 2018, 1092, 012077.	0.3	1

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109	Fano Resonances: Tunable Fano Resonance and Plasmon-Exciton Coupling in Single Au Nanotriangles on Monolayer WS ₂ at Room Temperature (Adv. Mater. 22/2018). Advanced Materials, 2018, 30, 1870155.	11.1	1
110	Dielectric Nanospheres: Directional Modulation of Exciton Emission Using Single Dielectric Nanospheres (Adv. Mater. 20/2021). Advanced Materials, 2021, 33, 2170153.	11.1	1
111	Nonlinear core-shell Yagi-Uda nanoantenna for highly tunable directive emission. , 2017, , .		1
112	Semiconductor-Loaded Nonlinear Metasurfaces. , 2020, , 41-76.		1
113	Effect of quantum dot shape dispersion on their joint density of states. Technical Physics Letters, 2011, 37, 431-434.	0.2	0
114	Superdirective nanoantennas: Theory and experiment. , 2013, , .		0
115	All-dielectric nanoantenna for single NV center radiation collection enhancement. , 2014, , .		0
116	Experimental investigation of magnetic Purcell factor in wire metamaterials. , 2014, , .		0
117	Laser writing of nanoparticle-based plasmonic structures. , 2015, , .		0
118	Input impedance of small antenna provides Purcell factor. , 2015, , .		0
119	Fano resonance in chains of dielectric nanoparticles with side-coupled resonator. , 2015, , .		0
120	Solitary waves in chains of silicon nanoparticles. , 2016, , .		0
121	Chiral near-field formation with all-dielectric nanoantennas. , 2016, , .		0
122	Polarization and angle dependent enhancement of Raman scattering from silicon nanodisks. , 2016, , .		0
123	Raman scattering governed by dark resonant modes in silicon nanoparticles. , 2016, , .		0
124	Tuning of hybrid oligomers via femtosecond laser reshaping at nanoscale. , 2016, , .		0
125	Reversible and non-reversible tuning of hybrid optical nanoresonators. , 2016, , .		0
126	Laser-Induced Periodical Structures Fabrication for Third Harmonic Generation. Journal of Physics: Conference Series, 2016, 741, 012112.	0.3	0

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127	Tuning of hybrid nanostructures via fs-laser reshaping at nanoscale. , 2016, , .		0
128	Reconfigurable metal-dielectric nanodimers as component of hybrid nanophotonics. , 2016, , .		0
129	Nonlinear all-dielectric nanoantenna reconfigured by electron-hole plasma. , 2016, , .		0
130	Ultrafast magnetic light. , 2016, , .		0
131	Dielectric Yagi-Uda nanoantennas driven by electron-hole plasma photoexcitation. Journal of Physics: Conference Series, 2017, 917, 062054.	0.3	0
132	Optimization of Nanoantenna-Enhanced Terahertz Emission from Photoconductive Antennas. Journal of Physics: Conference Series, 2017, 917, 062060.	0.3	0
133	Plasmonic nanoantenna for enhancement of vertical emission from whispering gallery mode laser. , 2017, , .		0
134	Dielectric chain driven by electron-hole plasma photoexcitation. , 2017, , .		0
135	Experimental demonstration of a reconfigurable magnetic Fano resonance in hybrid oligomers. , 2017, , .		0
136	Approach for fine-tuning of hybrid dimer nanoantennas via laser melting. , 2017, , .		0
137	Ultrafast tunable hybrid Yagi-Uda nanoantenna. , 2017, , .		0
138	Coherently enhanced wireless power transfer: theory and experiment. Journal of Physics: Conference Series, 2018, 1092, 012078.	0.3	0
139	Localized All-Optical Control of Single Semiconductor Quantum Dots through Plasmon Polariton-Induced Screening. Advanced Optical Materials, 2018, 6, 1800345.	3.6	0
140	All-dielectric metasurface for enhanced optical-to-terahertz conversion efficiency in photoconductive antenna. , 2018, , .		0
141	Strong Coupling in Core-Shell Nanostructure Based on Silicon Nanoparticle and TMDC Monolayer. , 2018, , .		0
142	Dark Excitons: Dark-Exciton-Mediated Fano Resonance from a Single Gold Nanostructure on Monolayer WS ₂ at Room Temperature (Small 31/2019). Small, 2019, 15, 1970164.	5.2	0
143	WPT smart table driven by coherent excitation. AIP Conference Proceedings, 2020, , .	0.3	0
144	Embedded eigenstate in a single resonator for sensing. , 2021, , .		0

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145	Russia: scientists petition to end political persecution. Nature, 2021, 591, 202-202.	13.7	0
146	Anomalies in light scattering: recent breakthroughs and nascent applications. , 2021, , .		0
147	Virtual electromagnetic absorption and energy storage by a Hermitian system via complex frequency excitation. , 2017, , .		0
148	Unusual scattering features of bound states in the continuum in open structures (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62		0
149	Coherent Virtual Absorption and Embedded Eigenstates in non-Hermitian P T -Symmetrical Systems. , 2019, , .		0
150	Coherently Driven Embedded Eigenstates. , 2019, , .		0
151	Optical nanoantennas for enhanced THz emission. , 2020, , 301-342.		0