Alex Krasnok

List of Publications by Citations

114 papers	4,501 citations	38 h-index	65 g-index
153 ext. papers	5,975 ext. citations	9.2 avg, IF	6.19 L-index

#	Paper	IF	Citations
114	All-dielectric optical nanoantennas. *Optics Express*, **2012**, 20, 20599-604	3.3	387
113	Nonlinear metasurfaces: a paradigm shift in nonlinear optics. *Materials Today*, **2018**, 21, 8-21	21.8	241
112	All-dielectric nanophotonics: the quest for better materials and fabrication techniques. *Optica*, **2017**, 4, 814	8.6	223
111	Topological polaritons and photonic magic angles in twisted □MoO bilayers. *Nature*, **2020**, 582, 209-213	50.4	174
110	Coherent perfect absorbers: linear control of light with light. *Nature Reviews Materials*, **2017**, 2,	73.3	163
109	Optical nanoantennas. *Physics-Uspekhi*, **2013**, 56, 539-564	2.8	146
108	Superdirective dielectric nanoantennas. *Nanoscale*, **2014**, 6, 7354-61	7.7	134
107	Tunable nanophotonics enabled by chalcogenide phase-change materials. *Nanophotonics*, **2020**, 9, 1189-1241	6.5	134
106	Nanophotonic engineering of far-field thermal emitters. *Nature Materials*, **2019**, 18, 920-930	27	122
105	Tuning of Magnetic Optical Response in a Dielectric Nanoparticle by Ultrafast Photoexcitation of Dense Electron-Hole Plasma. *Nano Letters*, **2015**, 15, 6187-92	11.5	121
104	An antenna model for the Purcell effect. *Scientific Reports*, **2015**, 5, 12956	4.9	115
103	Experimental verification of the concept of all-dielectric nanoantennas. *Applied Physics Letters*, **2012**, 100, 201113	3.4	103
102	Resonant Raman scattering from silicon nanoparticles enhanced by magnetic response. *Nanoscale*, **2016**, 8, 9721-6	7.7	101
101	Spectroscopy and Biosensing with Optically Resonant Dielectric Nanostructures. *Advanced Optical Materials*, **2018**, 6, 1701094	8.1	97
100	Nanophotonics with 2D transition metal dichalcogenides [Invited]. *Optics Express*, **2018**, 26, 15972-15994	3.3	91
99	Separation of valley excitons in a MoS2 monolayer using a subwavelength asymmetric groove array. *Nature Photonics*, **2019**, 13, 180-184	33.9	86
98	Fabrication of Hybrid Nanostructures via Nanoscale Laser-Induced Reshaping for Advanced Light Manipulation. *Advanced Materials*, **2016**, 28, 3087-93	24	81

97	Huygens optical elements and Yagi□Uda nanoantennas based on dielectric nanoparticles. *JETP Letters*, **2011**, 94, 593-598	1.2	79
96	Laser fabrication of crystalline silicon nanoresonators from an amorphous film for low-loss all-dielectric nanophotonics. *Nanoscale*, **2016**, 8, 5043-8	7.7	78
95	Anomalies in light scattering. *Advances in Optics and Photonics*, **2019**, 11, 892	16.7	76
94	Moir□Hyperbolic Metasurfaces. *Nano Letters*, **2020**, 20, 3217-3224	11.5	75
93	Modifying magnetic dipole spontaneous emission with nanophotonic structures. *Laser and Photonics Reviews*, **2017**, 11, 1600268	8.3	73
92	Enhancement of terahertz photoconductive antenna operation by optical nanoantennas. *Laser and Photonics Reviews*, **2017**, 11, 1600199	8.3	73
91	Near-field mapping of Fano resonances in all-dielectric oligomers. *Applied Physics Letters*, **2014**, 104, 021104	3.4	59
90	Nonlinear metal□ielectric nanoantennas for light switching and routing. *New Journal of Physics*, **2012**, 14, 093005	2.9	58
89	Tunable Fano Resonance and Plasmon-Exciton Coupling in Single Au Nanotriangles on Monolayer WS at Room Temperature. *Advanced Materials*, **2018**, 30, e1705779	24	56
88	Nonlinear Transient Dynamics of Photoexcited Resonant Silicon Nanostructures. *ACS Photonics*, **2016**, 3, 1546-1551	6.3	55
87	Controllable femtosecond laser-induced dewetting for plasmonic applications. *Laser and Photonics Reviews*, **2016**, 10, 91-99	8.3	55
86	Tunable Resonance Coupling in Single Si Nanoparticle-Monolayer WS Structures. *ACS Applied Materials & Interfaces*, **2018**, 10, 16690-16697	9.5	54
85	Towards all-dielectric metamaterials and nanophotonics **2015**,		48
84	Demonstration of the enhanced Purcell factor in all-dielectric structures. *Applied Physics Letters*, **2016**, 108, 211105	3.4	47
83	Boosting Terahertz Photoconductive Antenna Performance with Optimised Plasmonic Nanostructures. *Scientific Reports*, **2018**, 8, 6624	4.9	46
82	Self-adjusted all-dielectric metasurfaces for deep ultraviolet femtosecond pulse generation. *Nanoscale*, **2016**, 8, 17809-17814	7.7	46
81	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	8.3	44
80	Coherent virtual absorption based on complex zero excitation for ideal light capturing. *Optica*, **2017**, 4, 1457	8.6	44

79	All-optical reconfigurable chiral meta-molecules. *Materials Today*, **2019**, 25, 10-20	21.8	40
78	Can a Nonradiating Mode Be Externally Excited? Nonscattering States versus Embedded Eigenstates. *ACS Photonics*, **2019**, 6, 3108-3114	6.3	39
77	Experimental demonstration of superdirective dielectric antenna. *Applied Physics Letters*, **2014**, 104, 133502	3.4	39
76	Bending of electromagnetic waves in all-dielectric particle array waveguides. *Applied Physics Letters* , **2014**, 105, 181116	3.4	33
75	Enhancement of artificial magnetism via resonant bianisotropy. *Scientific Reports*, **2016**, 6, 22546	4.9	33
74	All-dielectric nanoantennas for unidirectional excitation of electromagnetic guided modes. *Applied Physics Letters*, **2015**, 107, 171101	3.4	31
73	Enhancement of Raman scattering in dielectric nanostructures with electric and magnetic Mie resonances. *Physical Review B*, **2018**, 97,	3.3	28
72	Interface nano-optics with van der Waals polaritons. *Nature*, **2021**, 597, 187-195	50.4	28
71	Light Outcoupling from Quantum Dot-Based Microdisk Laser via Plasmonic Nanoantenna. *ACS Photonics*, **2017**, 4, 275-281	6.3	27
70	From optical magnetic resonance to dielectric nanophotonics (A review). *Optics and Spectroscopy (English Translation of Optika I Spektroskopiya)*, **2015**, 119, 551-568	0.7	26
69	Magnetic Purcell factor in wire metamaterials. *Applied Physics Letters*, **2014**, 104, 161105	3.4	26
68	Fine-Tuning of the Magnetic Fano Resonance in Hybrid Oligomers via fs-Laser-Induced Reshaping. *ACS Photonics*, **2017**, 4, 536-543	6.3	25
67	Embedded scattering eigenstates using resonant metasurfaces. *Journal of Optics (United Kingdom)*, **2018**, 20, 064002	1.7	25
66	All-Optical Switching and Unidirectional Plasmon Launching with Nonlinear Dielectric Nanoantennas. *Physical Review Applied*, **2018**, 9,	4.3	24
65	Hybrid nanophotonics. *Physics-Uspekhi*, **2018**, 61, 1035-1050	2.8	24
64	Virtual Parity-Time Symmetry. *Physical Review Letters*, **2020**, 124, 193901	7.4	23
63	Coherently Enhanced Wireless Power Transfer. *Physical Review Letters*, **2018**, 120, 143901	7.4	22
62	Electrically driven reprogrammable phase-change metasurface reaching 80% efficiency.. *Nature Communications*, **2022**, 13, 1696	17.4	21

61	Nonscattering-to-Superscattering Switch with Phase-Change Materials. *ACS Photonics*, **2019**, 6, 2126-2132	6.3	20
60	Berreman Embedded Eigenstates for Narrow-Band Absorption and Thermal Emission. *Physical Review Applied*, **2020**, 13,	4.3	19
59	. *Proceedings of the IEEE*, **2020**, 108, 628-654	14.3	18
58	Enhanced emission extraction and selective excitation of NV centers with all‐dielectric nanoantennas. *Laser and Photonics Reviews*, **2015**, 9, 385-391	8.3	18
57	Valley-Selective Response of Nanostructures Coupled to 2D Transition-Metal Dichalcogenides. *Applied Sciences (Switzerland)*, **2018**, 8, 1157	2.6	18
56	Wireless power transfer based on novel physical concepts. *Nature Electronics*, **2021**, 4, 707-716	28.4	17
55	Suppressing material loss in the visible and near-infrared range for functional nanophotonics using bandgap engineering. *Nature Communications*, **2020**, 11, 5055	17.4	17
54	Dark-Exciton-Mediated Fano Resonance from a Single Gold Nanostructure on Monolayer WS at Room Temperature. *Small*, **2019**, 15, e1900982	11	16
53	Dynamically reconfigurable metal-semiconductor Yagi-Uda nanoantenna. *Physical Review B*, **2017**, 95,	3.3	16
52	Resonant transmission of light in chains of high-index dielectric particles. *Physical Review B*, **2015**, 92,	3.3	16
51	Nonlinear refractive index of dielectric nanocomposites in weak optical fields. *Technical Physics Letters*, **2010**, 36, 973-977	0.7	16
50	Virtual Critical Coupling. *ACS Photonics*, **2020**, 7, 1468-1475	6.3	14
49	Solitary Waves in Chains of High-Index Dielectric Nanoparticles. *ACS Photonics*, **2016**, 3, 1869-1876	6.3	13
48	Enhanced light outcoupling in microdisk lasers via Si spherical nanoantennas. *Journal of Applied Physics*, **2018**, 124, 163102	2.5	13
47	Chiral all-dielectric trimer nanoantenna. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2018**, 208, 71-77	2.1	12
46	Coherent Perfect Diffraction in Metagratings. *Advanced Materials*, **2020**, 32, e2002341	24	12
45	High-quality laser cavity based on all-dielectric metasurfaces. *Photonics and Nanostructures - Fundamentals and Applications*, **2017**, 24, 18-23	2.6	11
44	Enhanced excitation and emission from 2D transition metal dichalcogenides with all-dielectric nanoantennas. *Nanotechnology*, **2019**, 30, 254004	3.4	11

43	A model of nonlinear optical transmittance for insulator nanocomposites. *Semiconductors*, **2011**, 45, 295-301	0.7	11
42	Observation of localized magnetic plasmon skyrmions.. *Nature Communications*, **2022**, 13, 8	17.4	11
41	Tunable phase-change metasurfaces. *Nature Nanotechnology*, **2021**, 16, 615-616	28.7	10
40	Virtual optical pulling force. *Optica*, **2020**, 7, 1024	8.6	9
39	Photonic Rashba effect. *Nature Nanotechnology*, **2020**, 15, 893-894	28.7	7
38	Up-And-Coming Advances in Optical and Microwave Nonreciprocity: From Classical to Quantum Realm. *Advanced Photonics Research*, **2021**, 2, 2000104	1.9	6
37	Approach for fine-tuning of hybrid dimer antennas via laser melting at the nanoscale. *Annalen Der Physik*, **2017**, 529, 1600272	2.6	5
36	Plasmonic nanostructures for local field enhancement in the UV region. *Photonics and Nanostructures - Fundamentals and Applications*, **2014**, 12, 2-8	2.6	5
35	All-dielectric optical nanoantennas **2012**,		5
34	Directional Modulation of Exciton Emission Using Single Dielectric Nanospheres. *Advanced Materials*, **2021**, 33, e2007236	24	5
33	Comment on "electromagnetic radiation under explicit symmetry breaking". *Physical Review Letters* , **2015**, 115, 119701	7.4	4
32	Single-stage fabrication of low-loss dielectric nanoresonators from high-loss material. *Journal of Physics: Conference Series*, **2016**, 690, 012020	0.3	3
31	Coherently Driven and Superdirective Antennas. *Electronics (Switzerland)*, **2019**, 8, 845	2.6	3
30	All-dielectric nanoantennas **2013**,		3
29	Superdirective all-dielectric nanoantennas: theory and experiment. *IOP Conference Series: Materials Science and Engineering*, **2014**, 67, 012008	0.4	3
28	Quantum Embedded Superstates. *Advanced Quantum Technologies*, **2021**, 4, 2000121	4.3	3
27	Resolving the multipolar scattering modes of a submicron particle using parametric indirect microscopic imaging. *Photonics and Nanostructures - Fundamentals and Applications*, **2018**, 30, 7-13	2.6	2
26	Improved emission outcoupling from microdisk laser by Si nanospheres. *Journal of Physics: Conference Series*, **2016**, 741, 012158	0.3	2

25	Obstruction tolerant metasurface-based wireless power transfer system for multiple receivers. *Photonics and Nanostructures - Fundamentals and Applications*, **2020**, 41, 100835	2.6	2
24	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
23	Femtosecond laser transfer of silicon nanoparticles with enhanced Raman response **2016**,		2
22	Novel Optimized Hybrid Terahertz Photoconductive Antennas. *Journal of Physics: Conference Series*, **2018**, 1092, 012076	0.3	2
21	Core-shell Yagi-Uda nanoantenna for highly efficient and directive emission. *Journal of Physics: Conference Series*, **2017**, 929, 012066	0.3	1
20	Direct Femtosecond Laser Writing of Optical Nanoresonators. *Journal of Physics: Conference Series*, **2016**, 690, 012021	0.3	1
19	Superdirective magnetic nanoantennas with effect of light steering: Theory and experiment **2013**,		1
18	Ultracompact all-dielectric superdirective antennas: Theory and experiment **2013**,		1
17	Optimization of Nanoantenna-Enhanced Terahertz Emission from Photoconductive Antennas. *Journal of Physics: Conference Series*, **2017**, 917, 062060	0.3	1
16	Parity-Time Symmetry and Exceptional Points [Electromagnetic Perspectives]. *IEEE Antennas and Propagation Magazine*, **2021**, 63, 110-121	1.7	1
15	Dark-State Induced Quantum Nonreciprocity. *Advanced Quantum Technologies*,2100112	4.3	1
14	Nonlinear core-shell Yagi-Uda nanoantenna for highly tunable directive emission **2017**,		1
13	The role of Purcell effect for third harmonic generation. *Journal of Physics: Conference Series*, **2016**, 690, 012034	0.3	1
12	Manipulating Fano resonance via fs-laser melting of hybrid oligomers at nanoscale. *Journal of Physics: Conference Series*, **2016**, 741, 012140	0.3	1
11	Low-Symmetry Nanophotonics. *ACS Photonics*, **2022**, 9, 2-24	6.3	0
10	Dielectric Nanospheres: Directional Modulation of Exciton Emission Using Single Dielectric Nanospheres (Adv. Mater. 20/2021). *Advanced Materials*, **2021**, 33, 2170153	24	0
9	Dark Excitons: Dark-Exciton-Mediated Fano Resonance from a Single Gold Nanostructure on Monolayer WS2 at Room Temperature (Small 31/2019). *Small*, **2019**, 15, 1970164	11	
8	Dielectric Yagi-Uda nanoantennas driven by electron-hole plasma photoexcitation. *Journal of Physics: Conference Series*, **2017**, 917, 062054	0.3	

7	Effect of quantum dot shape dispersion on their joint density of states. *Technical Physics Letters*, **2011**, 37, 431-434	0.7
6	Semiconductor-Loaded Nonlinear Metasurfaces **2020**, 41-76	
5	Laser-Induced Periodical Structures Fabrication for Third Harmonic Generation. *Journal of Physics: Conference Series*, **2016**, 741, 012112	0.3
4	Strong Coupling in Si Nanoparticle Core - 2D WS2 Shell Structure. *Journal of Physics: Conference Series*, **2018**, 1092, 012077	0.3
3	Coherently enhanced wireless power transfer: theory and experiment. *Journal of Physics: Conference Series*, **2018**, 1092, 012078	0.3
2	Localized All-Optical Control of Single Semiconductor Quantum Dots through Plasmon Polariton-Induced Screening. *Advanced Optical Materials*, **2018**, 6, 1800345	8.1
1	Fano Resonances: Tunable Fano Resonance and Plasmon Exciton Coupling in Single Au Nanotriangles on Monolayer WS2 at Room Temperature (Adv. Mater. 22/2018). *Advanced Materials*, **2018**, 30, 1870155	24