

Alina Karabchevsky

List of Publications by Year in descending order

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82
papers

1,853
citations

257101

24
h-index

264894

42
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85
all docs

85
docs citations

85
times ranked

1439
citing authors

#	ARTICLE	IF	CITATIONS
1	Transverse Scattering and Generalized Kerker Effects in All-Dielectric Mie-Resonant Metaoptics. <i>Physical Review Letters</i> , 2019, 122, 193905.	2.9	152
2	Multipolar response of nonspherical silicon nanoparticles in the visible and near-infrared spectral ranges. <i>Physical Review B</i> , 2017, 96, .	1.1	134
3	Multipole analysis of dielectric metasurfaces composed of nonspherical nanoparticles and lattice invisibility effect. <i>Physical Review B</i> , 2019, 99, .	1.1	126
4	On-chip nanophotonics and future challenges. <i>Nanophotonics</i> , 2020, 9, 3733-3753.	2.9	85
5	Resonant forward scattering of light by high-refractive-index dielectric nanoparticles with toroidal dipole contribution. <i>Optics Letters</i> , 2017, 42, 835.	1.7	77
6	“Photonic Hook” based optomechanical nanoparticle manipulator. <i>Scientific Reports</i> , 2018, 8, 2029.	1.6	77
7	Tuning the chemiluminescence of a luminol flow using plasmonic nanoparticles. <i>Light: Science and Applications</i> , 2016, 5, e16164-e16164.	7.7	76
8	Surface-enhanced fluorescence from metal sculptured thin films with application to biosensing in water. <i>Applied Physics Letters</i> , 2009, 94, 063106.	1.5	65
9	Optomechanical Manipulation with Hyperbolic Metasurfaces. <i>ACS Photonics</i> , 2018, 5, 4371-4377.	3.2	62
10	Theoretical and Experimental Investigation of Enhanced Transmission Through Periodic Metal Nanoslits for Sensing in Water Environment. <i>Plasmonics</i> , 2009, 4, 281-292.	1.8	54
11	Broadband forward scattering from dielectric cubic nanoantenna in lossless media. <i>Optics Express</i> , 2019, 27, 10924.	1.7	54
12	Enhanced absorption in all-dielectric metasurfaces due to magnetic dipole excitation. <i>Scientific Reports</i> , 2019, 9, 3438.	1.6	51
13	Magnetic Octupole Response of Dielectric Quadrumers. <i>Laser and Photonics Reviews</i> , 2020, 14, 1900331.	4.4	51
14	Experimental demonstration of a tunable photonic hook by a partially illuminated dielectric microcylinder. <i>Optics Letters</i> , 2020, 45, 4899.	1.7	46
15	High-Q surface electromagnetic wave resonance excitation in magnetophotonic crystals for supersensitive detection of weak light absorption in the near-infrared. <i>Photonics Research</i> , 2020, 8, 57.	3.4	43
16	$\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi mathvariant="script"} \rangle \text{PT} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ symmetry breaking in multilayers with resonant loss and gain locks light propagation direction. <i>Physical Review B</i> , 2018, 98, .	1.1	42
17	Surface plasmon resonance from metallic columnar thin films. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2009, 7, 176-185.	1.0	38
18	Metal grating on a substrate nanostructure for sensor applications. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2009, 7, 170-175.	1.0	35

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19	Figure of Merit of All-Dielectric Waveguide Structures for Absorption Overtone Spectroscopy. <i>Journal of Lightwave Technology</i> , 2017, 35, 2902-2908.	2.7	32
20	Fast surface plasmon resonance imaging sensor using Radon transform. <i>Sensors and Actuators B: Chemical</i> , 2011, 155, 361-365.	4.0	30
21	Si Nanostrip Optical Waveguide for On-Chip Broadband Molecular Overtone Spectroscopy in Near-Infrared. <i>ACS Sensors</i> , 2018, 3, 618-623.	4.0	30
22	Polarization-dependent asymmetric light scattering by silicon nanopyramids and their multipoles resonances. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	28
23	Nanoprecision algorithm for surface plasmon resonance determination from images with low contrast for improved sensor resolution. <i>Journal of Nanophotonics</i> , 2011, 5, 051813.	0.4	25
24	Optical vacuum cleaner by optomechanical manipulation of nanoparticles using nanostructured mesoscale dielectric cuboid. <i>Scientific Reports</i> , 2019, 9, 12748.	1.6	25
25	Photonic hook formation in near-infrared with MXene Ti_3C_2 nanoparticles. <i>Nanoscale Advances</i> , 2020, 2, 5312-5318.	2.2	25
26	Temperature mediated "photonic hook" nanoparticle manipulator with pulsed illumination. <i>Nanoscale Advances</i> , 2020, 2, 2595-2601.	2.2	25
27	Sensor with increased sensitivity based on enhanced optical transmission in the infrared. <i>Optics Communications</i> , 2011, 284, 1435-1438.	1.0	24
28	Transmittance and surface intensity in 3D composite plasmonic waveguides. <i>Optics Express</i> , 2015, 23, 14407.	1.7	24
29	Study of Immobilization Procedure on Silver Nanolayers and Detection of Estrone with Diverged Beam Surface Plasmon Resonance (SPR) Imaging. <i>Biosensors</i> , 2013, 3, 157-170.	2.3	23
30	Invisibility Cloaking Scheme by Evanescent Fields Distortion on Composite Plasmonic Waveguides with Si Nano-Spacer. <i>Scientific Reports</i> , 2017, 7, 12076.	1.6	22
31	Giant absorption of light by molecular vibrations on a chip. <i>Scientific Reports</i> , 2016, 6, 21201.	1.6	21
32	On-chip beam rotators, adiabatic mode converters, and waveplates through low-loss waveguides with variable cross-sections. <i>Light: Science and Applications</i> , 2022, 11, .	7.7	21
33	Dual-surface plasmon excitation with thin metallic nanoslits. <i>Journal of Nanophotonics</i> , 2011, 5, 051821.	0.4	20
34	Microspot sensing based on surface-enhanced fluorescence from nanosculptured thin films. <i>Journal of Nanophotonics</i> , 2012, 6, 061508.	0.4	20
35	Tuning the Near-Infrared Absorption of Aromatic Amines on Tapered Fibers Sculptured with Gold Nanoparticles. <i>ACS Photonics</i> , 2018, 5, 2200-2207.	3.2	18
36	A Photonic Nanojet as Tunable and Polarization-Sensitive Optical Tweezers. <i>Annalen Der Physik</i> , 2018, 530, 1800129.	0.9	15

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37	Metamaterial engineered transparency due to the nullifying of multipole moments. Optics Letters, 2018, 43, 503.	1.7	14
38	Differential extinction of vibrational molecular overtone transitions with gold nanorods and its role in surface enhanced near-IR absorption (SENIRA). Optics Express, 2019, 27, 29471.	1.7	13
39	Spatial eigenmodes conversion with metasurfaces engraved in silicon ridge waveguides. Applied Optics, 2019, 58, F21.	0.9	12
40	All-Optical Polarization-Controlled Nanosensor Switch Based on Guided-Wave Surface Plasmon Resonance via Molecular Overtone Excitations in the Near-Infrared. Advanced Optical Materials, 2020, 8, 2000769.	3.6	11
41	On-chip optical vortex-based nanophotonic detectors. Light: Science and Applications, 2020, 9, 115.	7.7	10
42	Self-organized plasmonic metasurfaces: The role of the Purcell effect in metal-enhanced chemiluminescence (MEC). Sensors and Actuators B: Chemical, 2021, 333, 129453.	4.0	9
43	Surface roughness-induced absorption acts as an ovarian cancer cells growth sensor-monitor. Biosensors and Bioelectronics, 2020, 161, 112240.	5.3	8
44	Lattice Rayleigh Anomaly Associated Enhancement of NH and CH Stretching Modes on Gold Metasurfaces for Overtone Detection. Nanomaterials, 2020, 10, 1265.	1.9	7
45	Broadband transparency with all-dielectric metasurfaces engraved on silicon waveguide facets: effect of inverted and extruded features based on Babinet's principle. Nanoscale Advances, 2020, 2, 2977-2985.	2.2	7
46	Modal Purcell factor in π -symmetric waveguides. Physical Review B, 2020, 102, .	1.1	6
47	Optical Manipulation of Micro- and Nanoobjects Based on Structured Mesoscale Particles: a Brief Review. Atmospheric and Oceanic Optics, 2020, 33, 464-469.	0.6	6
48	Deflected Talbot-Mediated Overtone Spectroscopy in Near-Infrared as a Label-Free Sensor on a Chip. ACS Sensors, 2020, 5, 1683-1688.	4.0	6
49	Comparative study of enhanced fluorescence from nano sculptured thin films. , 2008, , .		5
50	Experimental demonstration of spatial rogue waves in the passively Q-switched Nd:YAG laser. Optics Letters, 2021, 46, 3773.	1.7	5
51	Tailored optical potentials for Cs atoms above waveguides with focusing dielectric nano-antenna. Optics Letters, 2020, 45, 3512.	1.7	5
52	Super-Resolution Imaging and Optomechanical Manipulation Using Optical Nanojet for Nondestructive Single-Cell Research. Advanced Photonics Research, 2022, 3, .	1.7	5
53	Optical immunosensor for endocrine disruptor nanolayer detection by surface plasmon resonance imaging. Proceedings of SPIE, 2011, , .	0.8	4
54	Strong interaction of molecular vibrational overtones with near-guided surface plasmon polariton. , 2016, , .		4

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55	Microspot surface enhanced fluorescence from sculptured thin films for control of antibody immobilization. Proceedings of SPIE, 2011, , .	0.8	3
56	Development of mesoscale photonics and plasmonics: a tribute to the jubilee of Professors Igor V. Minin and Oleg V. Minin. , 2020, , .		3
57	Publisher's Note: Microspot sensing based on surface-enhanced fluorescence from nanosculptured thin films. Journal of Nanophotonics, 2012, 6, 060105.	0.4	2
58	Toroidal dipole associated resonant forward scattering of light by silicon nanoparticles. , 2017, , .		2
59	Microspot sensing based on surface-enhanced fluorescence from nanosculptured thin films. Journal of Nanophotonics, 2012, 6, 011508.	0.4	1
60	Plasmonic rack-and-pinion gear with chiral metasurface. , 2016, , .		1
61	Light dynamics in <i>PT</i> -symmetric multilayers: Phase transition, nonreciprocity, and propagation direction locking. Journal of Physics: Conference Series, 2018, 1092, 012100.	0.3	1
62	Non-Huygens Invisible Metasurfaces. , 2019, , .		1
63	On-Chip Metasurface Facets for Ultra-High Transmission through Waveguides in Near-Infrared. Advanced Optical Materials, 2021, 9, 2100130.	3.6	1
64	Optical multipole resonances of non-spherical silicon nanoparticles and the influence of illumination direction. , 2018, , .		1
65	Low SWaP video core for MWIR imaging. , 2019, , .		1
66	Single-shot circular dichroism spectroscopy. Light: Science and Applications, 2022, 11, 133.	7.7	1
67	Invisibility cloak scheme with composite plasmonic waveguides and metasurface overlayers. , 2017, , .		0
68	Multipole optical response of silicon nanoparticles of a conical shape. , 2017, , .		0
69	Extraordinary transparent metasurfaces composed of transverse scatterers. , 2019, , .		0
70	Photomolecular Sensor: All-Optical Polarization-Controlled Nanosensor Switch Based on Guided-Wave Surface Plasmon Resonance via Molecular Overtone Excitations in the Near-Infrared (Advanced Optical Materials 19/2020). Advanced Optical Materials, 2020, 8, 2070076.	3.6	0
71	Non-Huygens invisible metasurfaces. Journal of Physics: Conference Series, 2020, 1461, 012156.	0.3	0
72	Evolution of multipole moments in silicon nanocylinder while varying the refractive index of surrounding medium. Journal of Physics: Conference Series, 2020, 1461, 012176.	0.3	0

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73	Simultaneous suppression of forward and backward light scattering by high-index nanoparticles based on Kerker-like effects. Journal of Physics: Conference Series, 2020, 1461, 012158.	0.3	0
74	Multipole analysis of periodic array of rotated silicon cubes. Journal of Physics: Conference Series, 2020, 1461, 012177.	0.3	0
75	Purcell Effect in PT-Symmetric Waveguides. Topics in Applied Physics, 2021, , 493-522.	0.4	0
76	Non-isolated sources of electromagnetic radiation by multipole decomposition for photonic quantum technologies on a chip with nanoscale apertures. Nanoscale Advances, 2021, 3, 190-197.	2.2	0
77	Vibrational overtones spectroscopy enabled by plasmonic nanoantennas. , 2018, , .		0
78	Transmission and reflection features of all-dielectrics metasurfaces with electric and magnetic resonances. , 2019, , .		0
79	Exciting magnetic octupole in near-infrared range by nanostructuring. AIP Conference Proceedings, 2020, , .	0.3	0
80	Surface-enhanced near-infrared absorption (SENIRA) of C-H and N-H groups with gold nanoarray. , 2020, , .		0
81	Tuning the nanojet based on the Babinet principle. , 2020, , .		0
82	Passive and Active Materials for Advanced Photonic Integrated Circuitry in Visible and Near-Infrared. , 2021, , .		0