Mikhail A Kats

List of Publications by Year in Descending Order

93 papers	14,285 citations	37 h-index	119 g-index
132 ext. papers	17,603 ext. citations	9.5 avg, IF	6.52 L-index

#	Paper	IF	Citations
93	Using Bottom-Up Lithography and Optical Nonlocality to Create Short-Wave Infrared Plasmonic Resonances in Graphene. *ACS Photonics*, **2021**, 8, 1277-1285	6.3	1
92	Passive frequency conversion of ultraviolet images into the visible using perovskite nanocrystals. *Journal of Optics (United Kingdom)*, **2021**, 23, 054001	1.7	0
91	Hyperspectral interference tomography of nacre. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	2
90	Ultrathin Broadband Reflective Optical Limiter. *Laser and Photonics Reviews*, **2021**, 15, 2100001	8.3	7
89	Efficient generation of optical bottle beams. *Nanophotonics*, **2021**, 10, 2893-2901	6.3	1
88	Vapor condensation with daytime radiative cooling. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	19
87	High-Density Covalent Grafting of Spin-Active Molecular Moieties to Diamond Surfaces. *Langmuir*, **2021**, 37, 9222-9231	4	2
86	Inverse Design of Metasurfaces Based on Coupled-Mode Theory and Adjoint Optimization. *ACS Photonics*, **2021**, 8, 2265-2273	6.3	12
85	Switchable Induced-Transmission Filters Enabled by Vanadium Dioxide.. *Nano Letters*, **2021**,	11.5	3
84	Adjoint-optimized nanoscale light extractor for enhanced luminescence from color centers in diamond **2020**,		1
83	Precision Measurements of Temperature-Dependent and Nonequilibrium Thermal Emitters. *Laser and Photonics Reviews*, **2020**, 14, 1900443	8.3	13
82	How to organize an online conference. *Nature Reviews Materials*, **2020**, 1-4	73.3	25
81	Adjoint-optimized nanoscale light extractor for nitrogen-vacancy centers in diamond. *Nanophotonics*, **2020**, 10, 393-401	6.3	3
80	Optical components based on multi-refractive-index metamaterials. *Journal Physics D: Applied Physics*, **2020**, 53, 015108	3	
79	Infrared Polarizer Based on Direct Coupling to Surface Plasmon Polaritons. *Nano Letters*, **2020**, 20, 8483-8486	11.5	1
78	Thinking Systematically About the Online Academic Experience [Highlights]. *IEEE Nanotechnology Magazine*, **2020**, 14, 3-5	1.7	
77	Depth Thermography: Noninvasive 3D Temperature Profiling Using Infrared Thermal Emission. *ACS Photonics*, **2020**, 7, 853-860	6.3	4

76	Nanophotonic engineering of far-field thermal emitters. *Nature Materials*, **2019**, 18, 920-930	27	122
75	Nanosecond mid-infrared pulse generation via modulated thermal emissivity. *Light: Science and Applications*, **2019**, 8, 51	16.7	15
74	Single-shot on-chip spectral sensors based on photonic crystal slabs. *Nature Communications*, **2019**, 10, 1020	17.4	82
73	On the Optical Properties of Thin-Film Vanadium Dioxide from the Visible to the Far Infrared. *Annalen Der Physik*, **2019**, 531, 1900188	2.6	52
72	Self-Stabilizing Laser Sails Based on Optical Metasurfaces. *ACS Photonics*, **2019**, 6, 2032-2040	6.3	15
71	Wide-Angle Spectrally Selective Absorbers and Thermal Emitters Based on Inverse Opals. *ACS Photonics*, **2019**, 6, 2607-2611	6.3	10
70	Accelerating vapor condensation with daytime radiative cooling **2019**,		8
69	Temperature-independent thermal radiation. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**,	11.5	27
68	Measuring Thermal Emission Near Room Temperature Using Fourier-Transform Infrared Spectroscopy. *Physical Review Applied*, **2019**, 11,	4.3	17
67	Flat Optical and Plasmonic Devices Using Area-Selective Ion-Beam Doping of Silicon. *Advanced Optical Materials*, **2018**, 6, 1701027	8.1	6
66	Thermally tunable VO2-SiO2 nanocomposite thin-film capacitors. *Journal of Applied Physics*, **2018**, 123, 114103	2.5	3
65	Radiative Thermal Runaway Due to Negative-Differential Thermal Emission Across a Solid-Solid Phase Transition. *Physical Review Applied*, **2018**, 10,	4.3	16
64	Design considerations for the enhancement of human color vision by breaking binocular redundancy. *Scientific Reports*, **2018**, 8, 11971	4.9	6
63	Peculiarities of near-room-temperature thermal-emission measurements using FTIR spectroscopy **2018**,		1
62	Optical Paleothermometry Using Nacre **2018**,		1
61	Giant optical anisotropy in a quasi-one-dimensional crystal. *Nature Photonics*, **2018**, 12, 392-396	33.9	148
60	Limiting Optical Diodes Enabled by the Phase Transition of Vanadium Dioxide. *ACS Photonics*, **2018**, 5, 2688-2692	6.3	30
59	Embedded Optics: Flat Optical and Plasmonic Devices Using Area-Selective Ion-Beam Doping of Silicon (Advanced Optical Materials 5/2018). *Advanced Optical Materials*, **2018**, 6, 1870019	8.1	0

58	Nanosecond Mid-Infrared Pulse Generation via Modulated Thermal Emission **2018**,		1
57	Mid-infrared Optics Using Dielectrics with Refractive Indices Below Unity. *Physical Review Applied*, **2018**, 10,	4.3	10
56	Impact of corrosion on the emissivity of advanced reactor structural alloys. *Journal of Nuclear Materials*, **2018**, 508, 465-471	3.3	7
55	Optical Metasurface Based on the Resonant Scattering in Electronic Transitions. *ACS Photonics*, **2017**, 4, 1279-1285	6.3	6
54	Evolution of Metallicity in Vanadium Dioxide by Creation of Oxygen Vacancies. *Physical Review Applied*, **2017**, 7,	4.3	65
53	Zero-Differential Thermal Emission Using Thermochromic Samarium Nickelate **2017**,		2
52	Epsilon-Near-Zero Substrate Engineering for Ultrathin-Film Perfect Absorbers. *Physical Review Applied*, **2017**, 8,	4.3	65
51	Optical absorbers based on strong interference in ultra-thin films (Laser Photonics Rev. 10(5)/2016). *Laser and Photonics Reviews*, **2016**, 10, 699-699	8.3	25
50	Giant Hall Photoconductivity in Narrow-Gapped Dirac Materials. *Nano Letters*, **2016**, 16, 7346-7351	11.5	7
49	Active Optical Metasurfaces Based on Defect-Engineered Phase-Transition Materials. *Nano Letters*, **2016**, 16, 1050-5	11.5	147
48	Optical absorbers based on strong interference in ultra-thin films. *Laser and Photonics Reviews*, **2016**, 10, 735-749	8.3	132
47	Achromatic Metasurface Lens at Telecommunication Wavelengths. *Nano Letters*, **2015**, 15, 5358-62	11.5	290
46	Near-Field Imaging of Phased Array Metasurfaces. *Nano Letters*, **2015**, 15, 3851-8	11.5	48
45	Achromatic metasurfaces by dispersive phase compensation **2015**,		2
44	Applied optics. Multiwavelength achromatic metasurfaces by dispersive phase compensation. *Science*, **2015**, 347, 1342-5	33.3	667
43	Wide wavelength tuning of optical antennas on graphene with nanosecond response time. *Nano Letters*, **2014**, 14, 214-9	11.5	129
42	Electrically tunable metasurface perfect absorbers for ultrathin mid-infrared optical modulators. *Nano Letters*, **2014**, 14, 6526-32	11.5	491
41	Accounting for inhomogeneous broadening in nano-optics by electromagnetic modeling based on Monte Carlo methods. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, E639-44	11.5	16

40	Spoof surface plasmon waveguide forces. *Optics Letters*, **2014**, 39, 517-20	3	31
39	Thin-Film Interference in Lossy, Ultra-Thin Layers. *Optics and Photonics News*, **2014**, 25, 40	1.9	39
38	Ultra-thin optical interference coatings on rough and flexible substrates. *Applied Physics Letters*, **2014**, 105, 131108	3.4	31
37	Current-modulated optical properties of vanadium dioxide thin films in the phase transition region. *Applied Physics Letters*, **2014**, 105, 211104	3.4	33
36	Nanostructured holograms for broadband manipulation of vector beams. *Nano Letters*, **2013**, 13, 4269-74	11.5	195
35	Vanadium Dioxide as a Natural Disordered Metamaterial: Perfect Thermal Emission and Large Broadband Negative Differential Thermal Emittance. *Physical Review X*, **2013**, 3,	9.1	103
34	Nanometre optical coatings based on strong interference effects in highly absorbing media. *Nature Materials*, **2013**, 12, 20-4	27	638
33	. *IEEE Journal of Selected Topics in Quantum Electronics*, **2013**, 19, 4700423-4700423	3.8	201
32	Broad electrical tuning of graphene-loaded plasmonic antennas. *Nano Letters*, **2013**, 13, 1257-64	11.5	458
31	High-power low-divergence tapered quantum cascade lasers with plasmonic collimators. *Applied Physics Letters*, **2013**, 102, 191114	3.4	13
30	Controlling Light Propagation with Interfacial Phase Discontinuities **2013**, 171-217		
29	Thermal tuning of mid-infrared plasmonic antenna arrays using a phase change material. *Optics Letters*, **2013**, 38, 368-70	3	158
28	Aberrations of flat lenses and aplanatic metasurfaces. *Optics Express*, **2013**, 21, 31530-9	3.3	101
27	Generation of two-dimensional plasmonic bottle beams. *Optics Express*, **2013**, 21, 10295-300	3.3	28
26	Enhancement of absorption and color contrast in ultra-thin highly absorbing optical coatings. *Applied Physics Letters*, **2013**, 103, 101104	3.4	69
25	Broad electrical tuning of graphene-loaded optical antennas **2013**,		2
24	Holographic detection of the orbital angular momentum of light with plasmonic photodiodes. *Nature Communications*, **2012**, 3, 1278	17.4	200
23	Modeling nanoscale V-shaped antennas for the design of optical phased arrays. *Physical Review B*, **2012**, 85,	3.3	81

22	Aberration-free ultrathin flat lenses and axicons at telecom wavelengths based on plasmonic metasurfaces. *Nano Letters*, **2012**, 12, 4932-6	11.5	1177
21	Ultra-thin plasmonic optical vortex plate based on phase discontinuities. *Applied Physics Letters*, **2012**, 100, 013101	3.4	384
20	Ultra-thin perfect absorber employing a tunable phase change material. *Applied Physics Letters*, **2012**, 101, 221101	3.4	418
19	Out-of-plane reflection and refraction of light by anisotropic optical antenna metasurfaces with phase discontinuities. *Nano Letters*, **2012**, 12, 1702-6	11.5	388
18	A broadband, background-free quarter-wave plate based on plasmonic metasurfaces. *Nano Letters*, **2012**, 12, 6328-33	11.5	839
17	Reflection and refraction of light from metasurfaces with phase discontinuities. *Journal of Nanophotonics*, **2012**, 6, 063532	1.1	33
16	Giant birefringence in optical antenna arrays with widely tailorable optical anisotropy. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 12364-12368	11.5	139
15	Enhancement of optical processes in coupled plasmonic nanocavities [Invited]. *Applied Optics*, **2011**, 50, G56-62	0.2	8
14	Spoof plasmon analogue of metal-insulator-metal waveguides. *Optics Express*, **2011**, 19, 14860-70	3.3	96
13	Effect of radiation damping on the spectral response of plasmonic components. *Optics Express*, **2011**, 19, 21748-53	3.3	102
12	Multi-wavelength mid-infrared plasmonic antennas with single nanoscale focal point. *Optics Express* , **2011**, 19, 22113-24	3.3	27
11	Light propagation with phase discontinuities: generalized laws of reflection and refraction. *Science*, **2011**, 334, 333-7	33.3	4912
10	Patterning the tips of optical fibers with metallic nanostructures using nanoskiving. *Nano Letters*, **2011**, 11, 632-6	11.5	102
9	Dipolar modeling and experimental demonstration of multi-beam plasmonic collimators. *New Journal of Physics*, **2011**, 13, 053057	2.9	26
8	Designer spoof surface plasmon structures collimate terahertz laser beams. *Nature Materials*, **2010**, 9, 730-5	27	212
7	Terahertz plasmonics. *Electronics Letters*, **2010**, 46, S52	1.1	21
6	Large enhancement of nonlinear optical phenomena by plasmonic nanocavity gratings. *Nano Letters*, **2010**, 10, 4880-3	11.5	172
5	Fabrication and replication of arrays of single- or multicomponent nanostructures by replica molding and mechanical sectioning. *ACS Nano*, **2010**, 4, 4017-26	16.7	48

4	Multi-beam multi-wavelength semiconductor lasers. *Applied Physics Letters*, **2009**, 95, 161108	3.4	19
3	Energy limits imposed by two-photon absorption for pulse amplification in high-power semiconductor optical amplifiers. *Optics Letters*, **2008**, 33, 1041-3	3	12
2	Planck Spectroscopy. *Laser and Photonics Reviews*,2100121	8.3	0
1	Super-Planckian emission cannot really be thermal *Nature Photonics*,	33.9	1