Alexander Grigorenko

List of Publications by Year in Descending Order

67 papers	17,952 citations	33 h-index	74 g-index
74 ext. papers	20,478 ext. citations	12.1 avg, IF	6.58 L-index

#	Paper	IF	Citations
67	Topological phase singularities in atomically thin high-refractive-index materials.. *Nature Communications*, **2022**, 13, 2049	17.4	5
66	Effect of Dielectric Fabrication Techniques on Graphene Gating. *Journal of Physical Chemistry C*, **2021**, 125, 865-872	3.8	1
65	Giant optical anisotropy in transition metal dichalcogenides for next-generation photonics. *Nature Communications*, **2021**, 12, 854	17.4	41
64	Ultrasensitive and rapid detection of malaria using graphene-enhanced surface plasmon resonance. *2D Materials*, **2020**, 7, 045019	5.9	6
63	Measurements of electrically tunable refractive index of MoS2 monolayer and its usage in optical modulators. *Npj 2D Materials and Applications*, **2019**, 3,	8.8	29
62	Strained Bubbles in van der Waals Heterostructures as Local Emitters of Photoluminescence with Adjustable Wavelength. *ACS Photonics*, **2019**, 6, 516-524	6.3	59
61	Phase-Responsive Fourier Nanotransducers for Probing 2D Materials and Functional Interfaces. *Advanced Functional Materials*, **2019**, 29, 1902692	15.6	10
60	Two-Dimensional Covalent Crystals by Chemical Conversion of Thin van der Waals Materials. *Nano Letters*, **2019**, 19, 6475-6481	11.5	26
59	Layered material platform for surface plasmon resonance biosensing. *Scientific Reports*, **2019**, 9, 20286	4.9	33
58	Giant photoeffect in proton transport through graphene membranes. *Nature Nanotechnology*, **2018** , 13, 300-303	28.7	41
57	Electrically controlled water permeation through graphene oxide membranes. *Nature*, **2018**, 559, 236-240	50.4	177
56	Plasmonic Surface Lattice Resonances: A Review of Properties and Applications. *Chemical Reviews*, **2018**, 118, 5912-5951	68.1	517
55	Ultra-narrow surface lattice resonances in plasmonic metamaterial arrays for biosensing applications. *Biosensors and Bioelectronics*, **2018**, 104, 102-112	11.8	57
54	Nonlinear Light Mixing by Graphene Plasmons. *Nano Letters*, **2018**, 18, 282-287	11.5	22
53	Metallic binary alloyed superconductors for photogenerating current from dissociated water molecules using broad light spectra. *Journal of Renewable and Sustainable Energy*, **2017**, 9, 021201	2.5	2
52	Strong coupling of diffraction coupled plasmons and optical waveguide modes in gold stripe-dielectric nanostructures at telecom wavelengths. *Scientific Reports*, **2017**, 7, 45196	4.9	16
51	Solid-State Electrolyte-Gated Graphene in Optical Modulators. *Advanced Materials*, **2017**, 29, 1606372	24	15

50	Plasmon-induced nanoscale quantised conductance filaments. *Scientific Reports*, **2017**, 7, 2878	4.9	3
49	Ultrathin graphene-based membrane with precise molecular sieving and ultrafast solvent permeation. *Nature Materials*, **2017**, 16, 1198-1202	27	383
48	Graphene light modulators working at near-infrared wavelengths. *Optics Express*, **2017**, 25, 10255-10260	3.3	12
47	Nanomechanical electro-optical modulator based on atomic heterostructures. *Nature Communications*, **2016**, 7, 13590	17.4	8
46	Hierarchical self-assembly of a bulk metamaterial enables isotropic magnetic permeability at optical frequencies. *Materials Horizons*, **2016**, 3, 596-601	14.4	50
45	Superconductivity in Ca-doped graphene laminates. *Scientific Reports*, **2016**, 6, 23254	4.9	87
44	Applied optics. Gain modulation by graphene plasmons in aperiodic lattice lasers. *Science*, **2016**, 351, 246-8	33.3	78
43	Current-induced birefringent absorption and non-reciprocal plasmons in graphene. *2D Materials*, **2016**, 3, 015011	5.9	29
42	Sieving hydrogen isotopes through two-dimensional crystals. *Science*, **2016**, 351, 68-70	33.3	173
41	Particles, Fields and a Canonical Distance Form. *Foundations of Physics*, **2016**, 46, 382-392	1.2	2
40	Ultrafast Spectroscopy of Graphene-Protected Thin Copper Films. *ACS Photonics*, **2016**, 3, 1508-1516	6.3	7
39	Maximum modulation of plasmon-guided modes by graphene gating. *Optics Express*, **2016**, 24, 8266-79	3.3	12
38	Super-narrow, extremely high quality collective plasmon resonances at telecom wavelengths and their application in a hybrid graphene-plasmonic modulator. *Nano Letters*, **2015**, 15, 3519-23	11.5	64
37	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. *Nanoscale*, **2015**, 7, 4598-810	7.7	2015
36	New class of photocatalytic materials and a novel principle for efficient water splitting under infrared and visible light: MgB2 as unexpected example. *Optics Express*, **2015**, 23, A1651-63	3.3	5
35	Hybrid graphene plasmonic waveguide modulators. *Nature Communications*, **2015**, 6, 8846	17.4	183
34	Graphene-protected copper and silver plasmonics. *Scientific Reports*, **2014**, 4, 5517	4.9	143
33	Topological darkness in self-assembled plasmonic metamaterials. *Advanced Materials*, **2014**, 26, 324-30	24	50

32	Narrow Collective Plasmon Resonances in Nanostructure Arrays Observed at Normal Light Incidence for Simplified Sensing in Asymmetric Air and Water Environments. *ACS Photonics*, **2014**, 1, 1116-1126	6.3	74
31	Nanoparticle arrays: From magnetic response to coupled plasmon resonances. *Physical Review B*, **2014**, 90,	3.3	15
30	Two-Dimensional Plasmonic Superlattice Based on Au Nanoparticles Self-Assembling onto a Functionalized Substrate. *Journal of Physical Chemistry C*, **2014**, 118, 7579-7590	3.8	15
29	Bottom-up fabrication and optical characterization of dense films of meta-atoms made of core-shell plasmonic nanoparticles. *Langmuir*, **2013**, 29, 1551-61	4	27
28	Singular phase nano-optics in plasmonic metamaterials for label-free single-molecule detection. *Nature Materials*, **2013**, 12, 304-9	27	311
27	Resistive coupling of localized plasmon resonances in metallic nanostripes through a graphene layer. *Journal of Optics (United Kingdom)*, **2013**, 15, 114002	1.7	6
26	Graphene plasmonics. *Nature Photonics*, **2012**, 6, 749-758	33.9	2152
25	Surface Hydrogenation and Optics of a Graphene Sheet Transferred onto a Plasmonic Nanoarray. *Journal of Physical Chemistry C*, **2012**, 116, 3882-3887	3.8	48
24	Fine structure constant and quantized optical transparency of plasmonic nanoarrays. *Nature Communications*, **2012**, 3, 640	17.4	12
23	Strong plasmonic enhancement of photovoltage in graphene. *Nature Communications*, **2011**, 2, 458	17.4	679
22	Retinal light trapping in textured photovoltaic cells. *Applied Physics Letters*, **2010**, 97, 143701	3.4	7
21	Spectroscopic ellipsometry of graphene and an exciton-shifted van Hove peak in absorption. *Physical Review B*, **2010**, 81,	3.3	410
20	Plasmonic resonances in optomagnetic metamaterials based on double dot arrays. *Optics Express*, **2010**, 18, 9780-90	3.3	21
19	Sensitivity of collective plasmon modes of gold nanoresonators to local environment. *Optics Letters* , **2010**, 35, 956-8	3	118
18	Cascaded optical field enhancement in composite plasmonic nanostructures. *Physical Review Letters*, **2010**, 105, 246806	7.4	33
17	Plasmonic blackbody: Strong absorption of light by metal nanoparticles embedded in a dielectric matrix. *Physical Review B*, **2010**, 81,	3.3	84
16	Composite au nanostructures for fluorescence studies in visible light. *Nano Letters*, **2010**, 10, 874-9	11.5	30
15	Fluorographene: a two-dimensional counterpart of Teflon. *Small*, **2010**, 6, 2877-84	11	979

14	Phase and amplitude sensitivities in surface plasmon resonance bio and chemical sensing. *Optics Express*, **2009**, 17, 21191-204	3.3	198
13	Nanometric optical tweezers based on nanostructured substrates. *Nature Photonics*, **2008**, 2, 365-370	33.9	488
12	Laser nanotrapping and manipulation of nanoscale objects using subwavelength apertured plasmonic media. *Journal of Applied Physics*, **2008**, 103, 084316	2.5	7
11	Fine structure constant defines visual transparency of graphene. *Science*, **2008**, 320, 1308	33.3	6461
10	Plasmonic blackbody: Almost complete absorption of light in nanostructured metallic coatings. *Physical Review B*, **2008**, 78,	3.3	117
9	Extremely narrow plasmon resonances based on diffraction coupling of localized plasmons in arrays of metallic nanoparticles. *Physical Review Letters*, **2008**, 101, 087403	7.4	541
8	Reply to comment on "Negative refractive index in artificial metamaterials". *Optics Letters*, **2007**, 32, 1512-4	3	2
7	Negative refractive index in artificial metamaterials. *Optics Letters*, **2006**, 31, 2483-5	3	28
6	Nanofabricated media with negative permeability at visible frequencies. *Nature*, **2005**, 438, 335-8	50.4	487
5	Anisotropic pancake vortex transport in the crossing lattices regime of Bi2Sr2CaCu2O8+□single crystals. *Physical Review B*, **2005**, 72,	3.3	4
4	Tilt of pancake vortex stacks in layered superconductors in the crossing lattice regime. *Physical Review Letters*, **2005**, 94, 067001	7.4	13
3	Optomagnetic composite medium with conducting nanoelements. *Physical Review B*, **2002**, 66,	3.3	79
2	Phase jumps and interferometric surface plasmon resonance imaging. *Applied Physics Letters*, **1999**, 75, 3917-3919	3.4	120
1	Metal-Dielectric-Graphene Hybrid Heterostructures with Enhanced Surface Plasmon Resonance Sensitivity Based on Amplitude and Phase Measurements. *Plasmonics*,1	2.4	2