

Arthur R Davoyan

List of Publications by Year in descending order

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papers

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136740

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63
all docs

63
docs citations

63
times ranked

4080
citing authors

#	ARTICLE	IF	CITATIONS
1	Low-Power Laser Sailing for Fast-Transit Space Flight. Nano Letters, 2022, 22, 1108-1114.	4.5	12
2	Framework for Expediting Discovery of Optimal Solutions with Blackbox Algorithms in Non-Topology Photonic Inverse Design. ACS Photonics, 2022, 9, 432-442.	3.2	5
3	A fast response mission to rendezvous with an interstellar object. Experimental Astronomy, 2022, 53, 945-960.	1.6	8
4	Light-matter coupling in large-area van der Waals superlattices. Nature Nanotechnology, 2022, 17, 182-189.	15.6	49
5	Light control with atomically thin magnets. Nature Photonics, 2022, 16, 259-260.	15.6	1
6	All van der Waals Integrated Nanophotonics with Bulk Transition Metal Dichalcogenides. ACS Photonics, 2021, 8, 721-730.	3.2	47
7	Photonic materials for interstellar solar sailing. Optica, 2021, 8, 722.	4.8	37
8	Spatiotemporal Imaging of Thickness-Induced Band-Bending Junctions. Nano Letters, 2021, 21, 5745-5753.	4.5	6
9	Hybrid exciton-plasmon-polaritons in van der Waals semiconductor gratings. Nature Communications, 2020, 11, 3552.	5.8	90
10	Perimeter-Control Architecture for Optical Phased Arrays and Metasurfaces. Physical Review Applied, 2020, 14, .	1.5	9
11	Nonreciprocal Emission in Magnetized Epsilon-Near-Zero Metamaterials. ACS Photonics, 2019, 6, 581-586.	3.2	21
12	Nanoporous Gold as a Highly Selective and Active Carbon Dioxide Reduction Catalyst. ACS Applied Energy Materials, 2019, 2, 164-170.	2.5	55
13	Mimicking surface polaritons for unpolarized light with high-permittivity materials. Physical Review Materials, 2019, 3, .	0.9	12
14	Optical magnetism in planar metamaterial heterostructures. Nature Communications, 2018, 9, 296.	5.8	63
15	Quantum nonlinear light emission in metamaterials: broadband Purcell enhancement of parametric downconversion. Optica, 2018, 5, 608.	4.8	21
16	Materials challenges for the Starshot lightsail. Nature Materials, 2018, 17, 861-867.	13.3	107
17	Quantifying the role of surface plasmon excitation and hot carrier transport in plasmonic devices. Nature Communications, 2018, 9, 3394.	5.8	147
18	High Photovoltaic Quantum Efficiency in Ultrathin van der Waals Heterostructures. ACS Nano, 2017, 11, 7230-7240.	7.3	193

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19	Gate-Variable Mid-Infrared Optical Transitions in a $(\text{Bi}_{1-x}\text{Sb}_x)_2\text{Te}_{3-x}$ Topological Insulator. Nano Letters, 2017, 17, 255-260.	4.5	27
20	Van der Waals Materials for Atomically-Thin Photovoltaics: Promise and Outlook. ACS Photonics, 2017, 4, 2962-2970.	3.2	241
21	Dynamically controlled Purcell enhancement of visible spontaneous emission in a gated plasmonic heterostructure. Nature Communications, 2017, 8, 1631.	5.8	56
22	Near-Unity Absorption in van der Waals Semiconductors for Ultrathin Optoelectronics. Nano Letters, 2016, 16, 5482-5487.	4.5	156
23	NEMS With Broken T Symmetry: Graphene Based Unidirectional Acoustic Transmission Lines. Scientific Reports, 2015, 5, 9926.	1.6	17
24	One-way surface states due to nonreciprocal light-line crossing. New Journal of Physics, 2015, 17, 063014.	1.2	12
25	All-passive nonreciprocal metastructure. Nature Communications, 2015, 6, 8359.	5.8	146
26	Nanometer near-field localization and enhancement in a split two-dimensional plasmonic system at terahertz frequencies. Optics Communications, 2014, 315, 352-355.	1.0	3
27	Hotspots from nonreciprocal surface waves. Optics Letters, 2014, 39, 1760.	1.7	38
28	Electrically controlled one-way photon flow in plasmonic nanostructures. Nature Communications, 2014, 5, 5250.	5.8	50
29	A long-range polarization-controlled optical tractor beam. Nature Photonics, 2014, 8, 846-850.	15.6	190
30	One-way phonon isolation in acoustic waveguides. Applied Physics Letters, 2014, 104, .	1.5	86
31	Extreme and Quantized Magneto-optics with Graphene Meta-atoms and Metasurfaces. ACS Photonics, 2014, 1, 1068-1073.	3.2	39
32	Nonreciprocal Rotating Power Flow within Plasmonic Nanostructures. Physical Review Letters, 2013, 111, 047401.	2.9	49
33	Nonreciprocal subwavelength optical nanoantennas. , 2013, , .		0
34	Nonreciprocal passive metastructure without magnetic bias. , 2013, , .		1
35	Theory of Wave Propagation in Magnetized Near-Zero-Epsilon Metamaterials: Evidence for One-Way Photonic States and Magnetically Switched Transparency and Opacity. Physical Review Letters, 2013, 111, 257401.	2.9	96
36	Optical isolation with epsilon-near-zero metamaterials. Optics Express, 2013, 21, 3279.	1.7	96

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37	Graphene surface emitting terahertz laser: Diffusion pumping concept. Applied Physics Letters, 2013, 103, 251102.	1.5	40
38	Self-similar parabolic plasmonic beams. Optics Letters, 2013, 38, 428.	1.7	1
39	Nanoscale plasmonic circulator. New Journal of Physics, 2013, 15, 083054.	1.2	44
40	Plasmonic terahertz lasing in an array of graphene nanocavities. Physical Review B, 2012, 86, .	1.1	101
41	Tailoring Terahertz Near-Field Enhancement via Two-Dimensional Plasmons. Physical Review Letters, 2012, 108, 127401.	2.9	58
42	Multifrequency tapered plasmonic nanoantennas. Optics Communications, 2012, 285, 821-824.	1.0	21
43	Symmetry breaking in plasmonic waveguides with metal nonlinearities. Optics Letters, 2011, 36, 930.	1.7	20
44	Enhanced emission and light control with tapered plasmonic nanoantennas. Applied Physics Letters, 2011, 99, .	1.5	29
45	An arrayed nanoantenna for broadband light emission and detection. Physica Status Solidi - Rapid Research Letters, 2011, 5, 347-349.	1.2	39
46	Mode transformation in waveguiding plasmonic structures. Photonics and Nanostructures - Fundamentals and Applications, 2011, 9, 207-212.	1.0	14
47	Plasmonic couplers with metal nonlinearities. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 1615-1618.	0.9	15
48	Tapered plasmonic Yagi-Uda nanoantennas for emission enhancement and broadband communication. , 2011, , .		3
49	Symmetry breaking in plasmonic waveguides with metal nonlinearities. , 2011, , .		0
50	Nonlinear Plasmonics: From Second-Harmonic Generation to Spatial Solitons. , 2010, , .		1
51	Propagation of compound signals via a nonlinear magnetostatic-wave transmission line. Journal of Communications Technology and Electronics, 2010, 55, 88-97.	0.2	1
52	Optimal tapers for compensating losses in plasmonic waveguides. Physica Status Solidi - Rapid Research Letters, 2010, 4, 277-279.	1.2	21
53	Nonlinear Nanofocusing in Tapered Plasmonic Waveguides. Physical Review Letters, 2010, 105, 116804.	2.9	108
54	Backward and forward modes guided by metal-dielectric-metal plasmonic waveguides. Journal of Nanophotonics, 2010, 4, 043509.	0.4	38

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55	Beam oscillations and curling in chirped periodic structures with metamaterials. Physical Review A, 2009, 79, .	1.0	13
56	Plasmonic Bloch oscillations in chirped metal-dielectric structures. Applied Physics Letters, 2009, 94, 161105.	1.5	35
57	Nonlinear plasmonic slot waveguides: erratum. Optics Express, 2009, 17, 4833.	1.7	7
58	Quadratic phase matching in nonlinear plasmonic nanoscale waveguides. Optics Express, 2009, 17, 20063.	1.7	51
59	Self-focusing and spatial plasmon-polariton solitons. Optics Express, 2009, 17, 21732.	1.7	103
60	Bloch oscillations in chirped layered structures with metamaterials. Optics Express, 2008, 16, 3299.	1.7	16
61	Nonlinear plasmonic slot waveguides. Optics Express, 2008, 16, 21209.	1.7	103