Amir Arbabi

List of Publications by Year
in descending order

104 papers	9,012 citations	101384 36 h-index	118652 62 g-index
105 all docs	105 docs citations	105 times ranked	5971 citing authors

#	Article	IF	Citations
1	General Lossless Polarization and Phase Transformation Using Bilayer Metasurfaces. Advanced Optical Materials, 2022, 10, .	3.6	13
2	Free-space-coupled wavelength-scale disk resonators. Nanophotonics, 2022, .	2.9	0
3	Large-Scale Parametrized Metasurface Design Using Adjoint Optimization. ACS Photonics, 2021, 8, 455-463.	3.2	70
4	Scalable Nanoimprint Lithography Process for Manufacturing Visible Metasurfaces Composed of High Aspect Ratio TiO₂ Meta-Atoms. ACS Photonics, 2021, 8, 2400-2409.	3.2	51
5	Applications of wavefront control using nano-post based dielectric metasurfaces. , 2020, , 175-194.		1
6	Exceptional electromagnetic shielding efficiency of silver coated carbon fiber fabrics via a roll-to-roll spray coating process. Journal of Materials Chemistry C, 2020, 8, 11070-11078.	2.7	25
7	Up- and Down-Conversion between Intra- and Intervalley Excitons in Waveguide Coupled Monolayer WSe₂. ACS Nano, 2020, 14, 10503-10509.	7.3	14
8	Snapshot spectral imaging with parallel metasystems. Science Advances, 2020, 6, .	4.7	57
9	At-will chromatic dispersion by prescribing light trajectories with cascaded metasurfaces. Light: Science and Applications, 2020, 9, 93.	7.7	32
10	Modeling Metasurfaces Using Discrete-Space Impulse Response Technique. ACS Photonics, 2020, 7, 941-950.	3.2	8
11	Increasing efficiency of high numerical aperture metasurfaces using the grating averaging technique. Scientific Reports, 2020, 10, 7124.	1.6	39
12	Properties of Ideal Flat Metalenses. , 2020, , .		2
13	Multifunctional 2.5D metastructures enabled by adjoint optimization. Optica, 2020, 7, 77.	4.8	111
14	Hyperspectral Imager with Folded Metasurface Optics. ACS Photonics, 2019, 6, 2161-2167.	3.2	58
15	Vectorial Holograms with a Dielectric Metasurface: Ultimate Polarization Pattern Generation. ACS Photonics, 2019, 6, 2712-2718.	3.2	89
16	Folded Dielectric Metasurface Platform for Compact Optical Systems. , 2019, , .		1
17	Miniaturized folded metasurface hyperspectral imager. , 2019, , .		0
18	MEMS-tunable dielectric metasurface lens. Nature Communications, 2018, 9, 812.	5.8	527

#	Article	IF	Citations
19	Wavefront shaping with disorder-engineered metasurfaces. Nature Photonics, 2018, 12, 84-90.	15.6	205
20	High-Speed, Phase-Dominant Spatial Light Modulation with Silicon-Based Active Resonant Antennas. ACS Photonics, 2018, 5, 1711-1717.	3.2	62
21	Compact folded metasurface spectrometer. Nature Communications, 2018, 9, 4196.	5.8	214
22	A review of dielectric optical metasurfaces for wavefront control. Nanophotonics, 2018, 7, 1041-1068.	2.9	473
23	Folded planar metasurface spectrometer. , 2018, , .		0
24	Full-Stokes Imaging Polarimetry Using Dielectric Metasurfaces. ACS Photonics, 2018, 5, 3132-3140.	3.2	247
25	Two-Photon Microscopy with a Double-Wavelength Metasurface Objective Lens. Nano Letters, 2018, 18, 4943-4948.	4.5	77
26	MEMS-tunable dielectric metasurface lens. , 2018, , .		1
27	Large-scale Metasurface Design using the Adjoint Sensitivity Technique. , 2018, , .		5
28	Angle-multiplexed metasurfaces. , 2018, , .		0
29	Increasing efficiency of high-NA metasurface lenses (Conference Presentation). , 2017, , .		5
30	Planar metasurface retroreflector. Nature Photonics, 2017, 11, 415-420.	15.6	339
31	Visible Wavelength Color Filters Using Dielectric Subwavelength Gratings for Backside-Illuminated CMOS Image Sensor Technologies. Nano Letters, 2017, 17, 3159-3164.	4.5	101
32	Fundamental limits of ultrathin metasurfaces. Scientific Reports, 2017, 7, 43722.	1.6	125
33	Controlling the sign of chromatic dispersion in diffractive optics with dielectric metasurfaces. Optica, 2017, 4, 625.	4.8	259
34	Angle-Multiplexed Metasurfaces: Encoding Independent Wavefronts in a Single Metasurface under Different Illumination Angles. Physical Review X, 2017, 7, .	2.8	135
35	Fabrication of Single Crystal Gallium Phosphide Thin Films on Glass. Scientific Reports, 2017, 7, 4643.	1.6	20
36	Flat and conformal optics with dielectric metasurfaces. , 2017, , .		1

#	Article	IF	Citations
37	Orbital angular momentum beams generated by passive dielectric phase masks and their performance in a communication link. Optics Letters, 2017, 42, 2746.	1.7	13
38	Coupling erbium dopants in yttrium orthosilicate to silicon photonic resonators and waveguides. Optics Express, 2017, 25, 2863.	1.7	21
39	Dielectric metasurfaces with independent angular control. , 2017, , .		0
40	Dispersion-controlled diffractive devices with dielectric metasurfaces. , 2017, , .		0
41	Orbital Angular Momentum-based Space Division Multiplexing for High-capacity Underwater Optical Communications. Scientific Reports, 2016, 6, 33306.	1.6	156
42	Miniature optical planar camera based on a wide-angle metasurface doublet corrected for monochromatic aberrations. Nature Communications, 2016, 7, 13682.	5.8	460
43	Removing orientation-induced localization biases in single-molecule microscopy using a broadband metasurface mask. Nature Photonics, 2016, 10, 459-462.	15.6	98
44	High efficiency double-wavelength dielectric metasurface lenses with dichroic birefringent meta-atoms. Optics Express, 2016, 24, 18468.	1.7	88
45	Decoupling optical function and geometrical form using conformal flexible dielectric metasurfaces. Nature Communications, 2016, 7, 11618.	5.8	215
46	Highly tunable elastic dielectric metasurface lenses (Laser Photonics Rev. 10(6)/2016). Laser and Photonics Reviews, 2016, 10, 1062-1062.	4.4	12
47	Multiwavelength metasurfaces through spatial multiplexing. Scientific Reports, 2016, 6, 32803.	1.6	157
48	Highly tunable elastic dielectric metasurface lenses. Laser and Photonics Reviews, 2016, 10, 1002-1008.	4.4	283
49	Wide bandwidth and high resolution planar filter array based on DBR-metasurface-DBR structures. Optics Express, 2016, 24, 11677.	1.7	62
50	Multiwavelength polarization-insensitive lenses based on dielectric metasurfaces with meta-molecules. Optica, 2016, 3, 628.	4.8	371
51	Dispersionless metasurfaces using dispersive meta-atoms. , 2016, , .		2
52	Tunable dielectric metasurfaces using elastic substrates. , 2016, , .		1
53	Aberration Corrected Metasurface Doublet Lens. , 2016, , .		1
54	Dielectric metasurface narrowband filter array. , 2016, , .		1

#	Article	IF	Citations
55	Demonstration of using Passive Integrated Phase Masks to Generate Orbital-Angular-Momentum Beams in a Communications Link. , 2016, , .		0
56	Active dielectric antenna for phase only spatial light modulation. , 2016, , .		0
57	Optical Clock Pulse Generation Using Thermal Nonlinearity in Microring Resonators. , 2016, , .		0
58	Conformai and tunable optical dielectric metasurfaces based on flexible stretchable substrates. , 2016, , .		0
59	Guided resonance reflective phase shifters. Proceedings of SPIE, 2015, , .	0.8	1
60	Measuring the Nonuniform Evaporation Dynamics of Sprayed Sessile Microdroplets with Quantitative Phase Imaging. Langmuir, 2015, 31, 11020-11032.	1.6	20
61	Efficient dielectric metasurface collimating lenses for mid-infrared quantum cascade lasers. Optics Express, 2015, 23, 33310.	1.7	107
62	High resolution on-chip optical filter array based on double subwavelength grating reflectors. Optics Express, 2015, 23, 29848.	1.7	23
63	On-chip broadband spectral filtering using planar double high-contrast grating reflectors. Proceedings of SPIE, 2015, , .	0.8	1
64	Highly efficient polarization control using subwavelength high contrast transmitarrays. , 2015, , .		2
65	Efficient high NA flat micro-lenses realized using high contrast transmitarrays. , 2015, , .		3
66	Subwavelength-thick lenses with high numerical apertures and large efficiency based on high-contrast transmitarrays. Nature Communications, 2015, 6, 7069.	5.8	848
67	Grating integrated single mode microring laser. Optics Express, 2015, 23, 5335.	1.7	39
68	Simultaneous and Complete Control of Light Polarization and Phase using High Contrast Transmitarrays. , 2015, , .		0
69	Dielectric metasurfaces for complete control of phase and polarization with subwavelength spatial resolution and high transmission. Nature Nanotechnology, 2015, 10, 937-943.	15.6	2,009
70	Modal expansion approach for accurately computing resonant modes in a highâ€Q optical resonator. Microwave and Optical Technology Letters, 2014, 56, 278-284.	0.9	2
71	Fast and accurate finite element analysis of large-scale three-dimensional photonic devices with a robust domain decomposition method. Optics Express, 2014, 22, 4437.	1.7	2
72	Characterizing microdroplet evaporation using diffraction phase microscopy. , 2014, , .		0

#	Article	IF	Citations
73	Planar Retroreflector. , 2014, , .		5
74	Reflective Optical Phase Modulator Based on High-Contrast Grating Mirrors. , 2014, , .		3
75	Controlling the Phase Front of Optical Fiber Beams using High Contrast Metastructures. , 2014, , .		6
76	Functionalized distributed feedback lasers for hydrogen sensing applications. , 2013, , .		0
77	Engineering the Sensitivity and Response Time of Edge-Emitting Laser Hydrogen Sensors. IEEE Sensors Journal, 2013, 13, 3098-3105.	2.4	5
78	Grating assisted mode coupling in microring resonators. , 2013, , .		0
79	Detecting 20 nm Wide Defects in Large Area Nanopatterns Using Optical Interferometric Microscopy. Nano Letters, 2013, 13, 3716-3721.	4.5	85
80	Demonstration of enhanced side-mode suppression in metal-filled photonic crystal vertical cavity lasers. Optics Letters, 2013, 38, 1936.	1.7	4
81	Measurements of the refractive indices and thermo-optic coefficients of Si_3N_4 and SiO_x using microring resonances. Optics Letters, 2013, 38, 3878.	1.7	201
82	An active-passive monolithic integration platform with low loss passive section. , 2013, , .		0
83	Single Wavelength Microring Laser. , 2013, , .		2
84	Resolving split resonant modes in microrings. , 2012, , .		1
85	Optically monitoring and controlling nanoscale topography during semiconductor etching. Light: Science and Applications, 2012, 1, e30-e30.	7.7	108
86	Dynamics of Self-Heating in Microring Resonators. IEEE Photonics Journal, 2012, 4, 1702-1711.	1.0	16
87	Integrated Optical Resonators: Progress in 2011. IEEE Photonics Journal, 2012, 4, 574-577.	1.0	4
88	Determination of waveguide core and cladding refractive indices using single wavelength microring reflectors. , 2012, , .		0
89	Maximum Gain of a Lossy Antenna. IEEE Transactions on Antennas and Propagation, 2012, 60, 2-7.	3.1	24
90	Mode suppression in metal filled photonic crystal vertical cavity lasers. Proceedings of SPIE, 2012, , .	0.8	1

#	Article	IF	Citations
91	Hydrogen Detection Using a Functionalized Photonic Crystal Vertical Cavity Laser. IEEE Journal of Quantum Electronics, 2012, 48, 160-168.	1.0	23
92	Coupled Mode Analysis of a Distributed Bragg Reflector Laser for Hydrogen Detection. , 2012, , .		2
93	Palladium Based Fabry-PÃ©rot Etalons for Hydrogen Sensing. , 2012, , .		2
94	Thermally-induced nonlinearity and optical bistability in Si3N4 microring resonators. , 2012, , .		0
95	A FUNDAMENTAL LIMIT ON SUBWAVELENGTH GUIDED WAVES. Progress in Electromagnetics Research M, 2011, 17, 253-265.	0.5	0
96	Realization of small footprint microring reflectors. , 2011, , .		0
97	Realization of a narrowband single wavelength microring mirror. Applied Physics Letters, 2011, 99, .	1.5	62
98	Pd coated edge-emitting lasers for hydrogen sensing applications. , 2010, , .		1
99	Engineering the spectral reflectance of microring resonators with integrated reflective elements. Optics Express, 2010, 18, 16813.	1.7	35
100	Cylindrical Coordinates Coupled Mode Theory. IEEE Journal of Quantum Electronics, 2010, 46, 1769-1774.	1.0	16
101	Analysis and Design of a Microring Inline Single Wavelength Reflector. , 2010, , .		0
102	A microring resonator with an integrated Bragg grating: a compact replacement for a sampled grating distributed Bragg reflector. Optical and Quantum Electronics, 2009, 41, 689-697.	1.5	28
103	A terahertz plasmonic metamaterial structure for near-field sensing applications. , 2008, , .		4
104	Flat free-space optical elements based on dielectric metasurfaces. SPIE Newsroom, 0, , .	0.1	3