Aaron Stein

List of Publications by Year
in descending order

85 papers	3,322 citations	185998 28 h-index	143772 57 g-index
87 all docs	87 docs citations	87 times ranked	4393 citing authors

#	Article	IF	Citations
1	Broadband Circular Polarizers via Coupling in 3D Plasmonic Meta-Atom Arrays. ACS Photonics, 2021, 8, 1286-1292.	3.2	9
2	Gaussian processes for autonomous data acquisition at large-scale synchrotron and neutron facilities. Nature Reviews Physics, 2021, 3, 685-697.	11.9	44
3	Multiple energy scales in mesospin systems: The vertex-frustrated Saint George lattice. Physical Review Materials, 2021, 5, .	0.9	6
4	Chemo- and Thermomechanically Configurable 3D Optical Metamaterials Constructed from Colloidal Nanocrystal Assemblies. ACS Nano, 2020, 14, 1427-1435.	7.3	20
5	Dual-Wavelength Y-Branch DBR Lasers With 100 mW of CW Power Near 2 Î¼m. IEEE Photonics Technology Letters, 2020, 32, 1017-1020.	1.3	3
6	Collective magnetic dynamics in artificial spin ice probed by ac susceptibility. Physical Review B, 2020, 101, .	1.1	12
7	Patterning Si at the 1 nm Length Scale with Aberrationâ€Corrected Electronâ€Beam Lithography: Tuning of Plasmonic Properties by Design. Advanced Functional Materials, 2019, 29, 1903429.	7.8	39
8	Advancing next generation nanolithography with infiltration synthesis of hybrid nanocomposite resists. Journal of Materials Chemistry C, 2019, 7, 8803-8812.	2.7	30
9	Dielectric metasurfaces for complete and independent control of the optical amplitude and phase. Light: Science and Applications, 2019, 8, 92.	7.7	278
10	Hybrid Metasurface-Based Mid-Infrared Biosensor for Simultaneous Quantification and Identification of Monolayer Protein. ACS Photonics, 2019, 6, 501-509.	3.2	47
11	Kinoform lenses for high photon energies. AIP Conference Proceedings, 2019, , .	0.3	0
12	1â€nm Si Patterning: Patterning Si at the 1 nm Length Scale with Aberrationâ€Corrected Electronâ€Beam Lithography: Tuning of Plasmonic Properties by Design (Adv. Funct. Mater. 52/2019). Advanced Functional Materials, 2019, 29, 1970353.	7.8	2
13	Guiding light in bent waveguide superlattices with low crosstalk. Optica, 2019, 6, 585.	4.8	25
14	Guiding Light in Waveguide Superlattice Bends. , 2019, , .		0
15	3D Nanofabrication via Chemoâ€Mechanical Transformation of Nanocrystal/Bulk Heterostructures. Advanced Materials, 2018, 30, e1800233.	11.1	15
16	Interaction modifiers in artificial spin ices. Nature Physics, 2018, 14, 375-379.	6.5	76
17	Frustration and thermalization in an artificial magnetic quasicrystal. Nature Physics, 2018, 14, 309-314.	6.5	62
18	Broadband achromatic dielectric metalenses. Light: Science and Applications, 2018, 7, 85.	7.7	449

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19	Observation of the nonlinear Wood's anomaly on periodic arrays of nickel nanodimers. Physical Review B, 2018, 98, .	1.1	14
20	Optical conductivity-based ultrasensitive mid-infrared biosensing on a hybrid metasurface. Light: Science and Applications, 2018, 7, 67.	7.7	98
21	Nanoimprinted Chiral Plasmonic Substrates with Three-Dimensional Nanostructures. Nano Letters, 2018, 18, 7389-7394.	4.5	36
22	Single-Digit Nanometer Electron-Beam Lithography with an Aberration-Corrected Scanning Transmission Electron Microscope. Journal of Visualized Experiments, 2018, , .	0.2	4
23	Magnetic order and energy-scale hierarchy in artificial spin-ice structures. Physical Review B, 2018, 98, .	1.1	16
24	Indium Tin Oxide Broadband Metasurface Absorber. ACS Photonics, 2018, 5, 3526-3533.	3.2	78
25	Two-Step Narrow Ridge Cascade Diode Lasers Emitting Near $2~mu$ m. IEEE Photonics Technology Letters, 2017, 29, 485-488.	1.3	4
26	Cascade Pumping of 1.9â€“3.3 Î¼m Type-I Quantum Well GaSb-Based Diode Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-8.	1.9	40
27	Controlling propagation and coupling of waveguide modes using phase-gradient metasurfaces. Nature Nanotechnology, 2017, 12, 675-683.	15.6	323
28	Aberration-Corrected Electron Beam Lithography at the One Nanometer Length Scale. Nano Letters, 2017, 17, 4562-4567.	4.5	80
29	Ultrahigh Elastic Strain Energy Storage in Metal-Oxide-Infiltrated Patterned Hybrid Polymer Nanocomposites. Nano Letters, 2017, 17, 7416-7423.	4.5	38
30	Extreme Carrier Depletion and Superlinear Photoconductivity in Ultrathin Parallelâ€Aligned ZnO Nanowire Array Photodetectors Fabricated by Infiltration Synthesis. Advanced Optical Materials, 2017, 5, 1700807.	3.6	17
31	Magnetotransport properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoP</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review B, 2017, 96, .	1.1	23
32	High-strength magnetically switchable plasmonic nanorods assembled from a binary nanocrystal mixture. Nature Nanotechnology, 2017, 12, 228-232.	15.6	75
33	Photodetectors: Extreme Carrier Depletion and Superlinear Photoconductivity in Ultrathin Parallelâ€Aligned ZnO Nanowire Array Photodetectors Fabricated by Infiltration Synthesis (Advanced) Tj ETQq1 1 0.784314 rgBT /Ove	3.6	8
34	Coherent amplification of X-ray scattering from meso-structures. IUCrJ, 2017, 4, 604-613.	1.0	3
35	External cavity cascade diode lasers tunable from 3.05 to 3.25â€‰â€‰Î¼m. Optical Engineering, 2017, 57, 1.	0.5	7
36	Ar+-Implanted Si-Waveguide Photodiodes for Mid-Infrared Detection. Photonics, 2016, 3, 46.	0.9	3

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37	High-Spectral-Contrast Symmetric Modes in Photonic Crystal Dual Nanobeam Resonators. IEEE Photonics Technology Letters, 2016, 28, 2137-2140.	1.3	3
38	Active metasurface devices based on correlated perovskites. , 2016, , .		0
39	Correlated Perovskites as a New Platform for Superâ€Broadbandâ€Tunable Photonics. Advanced Materials, 2016, 28, 9117-9125.	11.1	72
40	Bending Performance of a Dense Waveguide Superlattice. , 2016, , .		2
41	Direct fabrication of high aspect-ratio metal oxide nanopatterns via sequential infiltration synthesis in lithographically defined SU-8 templates. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 06F201.	0.6	37
42	Electrical and structural properties of ZnO synthesized via infiltration of lithographically defined polymer templates. Applied Physics Letters, 2015, 107, .	1.5	31
43	Local structure of human hair spatially resolved by sub-micron X-ray beam. Scientific Reports, 2015, 5, 17347.	1.6	23
44	Narrow Ridge $lambda approx 3$ - $mu ext{m}$ Cascade Diode Lasers With Output Power Above 100 mW at Room Temperature. IEEE Photonics Technology Letters, 2015, 27, 2425-2428.	1.3	10
45	Generation of Ensembles of Individually Resolvable Nitrogen Vacancies Using Nanometer-Scale Apertures in Ultrahigh-Aspect Ratio Planar Implantation Masks. Nano Letters, 2015, 15, 1751-1758.	4.5	44
46	Nanofabrication on unconventional substrates using transferred hard masks. Scientific Reports, 2015, 5, 7802.	1.6	50
47	High-density waveguide superlattices with low crosstalk. Nature Communications, 2015, 6, 7027.	5.8	116
48	High-Density Low-Crosstalk Waveguide Superlattice. , 2015, , .		1
49	Metal-semiconductor-metal ion-implanted Si waveguide photodetectors for C-band operation. Optics Express, 2014, 22, 9150.	1.7	13
50	A 60 Gb/s MDM-WDM Si photonic link with < 07 dB power penalty per channel. Optics Express, 2014, 22, 18543.	1.7	69
51	Si^+-implanted Si-wire waveguide photodetectors for the mid-infrared. Optics Express, 2014, 22, 27415.	1.7	21
52	Diffraction limited 3.15 μm cascade diode lasers. , 2014, , .		0
53	Diffraction limited 3.15Î¼m cascade diode lasers. Semiconductor Science and Technology, 2014, 29, 115016.	1.0	3
54	Thermal transitions in nano-patterned XY-magnets. Applied Physics Letters, 2014, 105, 042409.	1.5	23

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55	Triangular nanobeam fabrication strategy for quantum photonic network realization in bulk diamond. , 2014, , .		0
56	Implantation of proximal NV clusters in diamond by lithographically defined silicon masks with 5 nm resolution. , 2014, , .		0
57	Defect-free periodic structures using extreme ultraviolet Talbot lithography in a table-top system. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06F604.	0.6	7
58	Mitigation of X-ray damage in macromolecular crystallography by submicrometre line focusing. Acta Crystallographica Section D: Biological Crystallography, 2013, 69, 1463-1469.	2.5	14
59	Large-aperture refractive lenses for momentum-resolved spectroscopy with hard X-rays. Journal of Synchrotron Radiation, 2013, 20, 591-595.	1.0	4
60	Real and effective thermal equilibrium in artificial square spin ices. Physical Review B, 2013, 87, .	1.1	40
61	Linear field demagnetization of artificial magnetic square ice. Frontiers in Physics, 2013, 1, .	1.0	19
62	High-purity Odd Mode Transmission in a Photonic Crystal Waveguide and Slow-light Mode Beating. , 2013, , .		0
63	High-purity transmission of a slow light odd mode in a photonic crystal waveguide. Optics Letters, 2012, 37, 3189.	1.7	12
64	Parametric oscillations and phase noise of an optomechanical air-slot photonic crystal cavity. , 2012, , .		0
65	Nanofabrication of doped, complex oxides. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 011804.	0.6	8
66	Defect tolerant extreme ultraviolet lithography technique. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	0.6	10
67	Defect Tolerant Extreme Ultraviolet Lithography. , 2012, , .		0
68	Near-field observation of zero index bandgaps in negative refraction photonic superlattices. , 2011, , .		0
69	Thermal ground-state ordering and elementary excitations in artificial magnetic square ice. Nature Physics, 2011, 7, 75-79.	6.5	297
70	Measurement of hard x-ray lens wavefront aberrations using phase retrieval. Applied Physics Letters, 2011, 98, 111108.	1.5	50
71	Zero phase accumulation in negative-index photonic crystal superlattices. , 2011, , .		0
72	Spatial dependence and mitigation of radiation damage by a line-focus mini-beam. Acta Crystallographica Section D: Biological Crystallography, 2010, 66, 1287-1294.	2.5	14

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73	Demonstration of a hitless bypass switch using nanomechanical perturbation for high-bitrate transparent networks. Optics Express, 2010, 18, 3045.	1.7	9
74	One-dimensional hard x-ray field retrieval using a moveable structure. Optics Express, 2010, 18, 18374.	1.7	21
75	Fabrication of silicon kinoform lenses for hard x-ray focusing by electron beam lithography and deep reactive ion etching. Journal of Vacuum Science & Technology B, 2008, 26, 122.	1.3	25
76	Transmission electron microscopy: A linewidth measurement technique for lithography. Journal of Vacuum Science & Technology B, 2006, 24, 3077.	1.3	0
77	Kinoform lenses: toward nanometer resolution. , 2005, 6002, 202.		1
78	Hot Carrier Electroluminescence from a Single Carbon Nanotube. Nano Letters, 2004, 4, 1063-1066.	4.5	162
79	Imaging with single-dimension kinoform lenses. , 2004, , .		2
80	Hard x-ray Fresnel prisms: properties and applications. , 2004, , .		3
81	Energy-dependent focusing properties of a kinoform Fresnel lens. , 2004, 5539, 73.		3
82	Scanning Soft X-ray Microscopy and Diffraction Imaging. Microscopy and Microanalysis, 2004, 10, 120-121.	0.2	0
83	Single-element elliptical hard x-ray micro-optics. Optics Express, 2003, 11, 919.	1.7	106
84	Soft xâ€ray microscopy at the NSLS. Synchrotron Radiation News, 2003, 16, 11-15.	0.2	9
85	Electrically pumped epitaxially regrown GaSbâ€based typeâ€I quantum well surface emitting lasers with buried highâ€indexâ€contrast photonic crystal layer.. Physica Status Solidi - Rapid Research Letters, 0, , 2100425.	1.2	2