Rajesh Menon

List of Publications by Year
in descending order

107 papers	3,541 citations	147801 31 h-index	144013 57 g-index
107 all docs	107 docs citations	107 times ranked	2669 citing authors

#	Article	IF	Citations
1	Bijective-constrained cycle-consistent deep learning for optics-free imaging and classification. Optica, 2022, 9, 26.	9.3	5
2	Broadband point-spread function engineering via a freeform diffractive microlens array. Optics Express, 2022, 30, 1967.	3.4	8
3	Scan-less machine-learning-enabled incoherent microscopy for minimally-invasive deep-brain imaging. Optics Express, 2022, 30, 1546.	3.4	8
4	Visible and near-infrared programmable multi-level diffractive lenses with phase change material Sb₂S₃. Optics Express, 2022, 30, 6808.	3.4	14
5	Learning Wavefront Coding for Extended Depth of Field Imaging. IEEE Transactions on Image Processing, 2021, 30, 3307-3320.	9.8	18
6	Achromatic Broadband Visible Imaging with a 10cm Flat Lens. , 2021, , .		0
7	Free-form Broadband Flat Lens for F-Number and Numerical Aperture Decoupling. , 2021, , .		0
8	Free-form broadband flat lenses for visible imaging. OSA Continuum, 2021, 4, 491.	1.8	7
9	Needle-based deep-neural-network camera. Applied Optics, 2021, 60, B135.	1.8	5
10	Ammonia optical gas sensing based on graphene-covered silicon microring resonators: A design space exploration. Microelectronics Journal, 2021, 111, 105041.	2.0	1
11	Imaging from the visible to the longwave infrared wavelengths via an inverse-designed flat lens. Optics Express, 2021, 29, 20715.	3.4	23
12	Large-area, high-numerical-aperture multi-level diffractive lens via inverse design: reply. Optica, 2021, 8, 1011.	9.3	2
13	Monolithic all-silicon flat lens for broadband LWIR imaging. Optics Letters, 2021, 46, 4069.	3.3	8
14	Unique prospects of phase change material Sb₂Se₃ for ultra-compact reconfigurable nanophotonic devices. Optical Materials Express, 2021, 11, 3007.	3.0	13
15	Parametric control of a diffractive axicon beam rider. Optics Letters, 2021, 46, 5141.	3.3	7
16	Inverse-designed achromatic flat lens enabling imaging across the visible and near-infrared with diameter > 3â€‰mm and NA = 0.3. Applied Physics Letters, 2020, 117, .	3.3	28
17	Machine learning enables design of on-chip integrated silicon T-junctions with footprint of 1.2Âμm×1.2μm. Nano Communication Networks, 2020, 25, 100312.	2.9	11
18	Multi-plane, multi-band image projection via broadband diffractive optics. Applied Optics, 2020, 59, 38.	1.8	15

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19	Imaging across an Unlimited Bandwidth: is it possible?. , 2020, , .		3
20	3D computational cannula fluorescence microscopy enabled by artificial neural networks. Optics Express, 2020, 28, 32342.	3.4	5
21	Computational cannula microscopy of neurons using neural networks. Optics Letters, 2020, 45, 2111.	3.3	7
22	Super-resolution imaging with an achromatic multi-level diffractive microlens array. Optics Letters, 2020, 45, 6158.	3.3	7
23	Extreme-depth-of-focus imaging with a flat lens. Optica, 2020, 7, 214.	9.3	83
24	Large-area, high-numerical-aperture multi-level diffractive lens via inverse design. Optica, 2020, 7, 252.	9.3	56
25	Machine-learning enables image reconstruction and classification in a â€œsee-throughâ€•camera. OSA Continuum, 2020, 3, 401.	1.8	5
26	Mid-infrared diffraction-free space-time wave packets. OSA Continuum, 2020, 3, 420.	1.8	6
27	Optics-free imaging of complex, non-sparse and color QR-codes with deep neural networks. OSA Continuum, 2020, 3, 2423.	1.8	3
28	Single Flat lens enables Extreme Depth of Focus Imaging. , 2020, , .		0
29	Inverse Designed Flat Optics with Diffractive Lenses. , 2020, , .		0
30	Versatile Diffractive Flat Optics. Optics and Photonics News, 2020, 31, 43.	0.5	0
31	Large-Area Ultra-Broadband Achromatic Flat Lens for Imaging in the SWIR. , 2020, , .		0
32	Ultra-thin Near-infrared Camera via Single Flat lens for Wide-angle Imaging. , 2020, , .		0
33	Broadband lightweight flat lenses for long-wave infrared imaging. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21375-21378.	7.1	68
34	A Proposed Method for Optimizing the Spectral Discernibility of Engineered Point-spread Functions for Localization Microscopy. Microscopy and Microanalysis, 2019, 25, 1232-1233.	0.4	2
35	Multi-Level Diffractive Lenses for Real-Time Long-Wave IR Imaging. , 2019, , .		0
36	Broadband space-time wave packets propagating 70â€‰â€‰m. Optics Letters, 2019, 44, 2073.	3.3	40

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37	Ultra-thin near infrared camera enabled by a flat multi-level diffractive lens. Optics Letters, 2019, 44, 5450.	3.3	33
38	Non-diffracting broadband incoherent spaceâ€“time fields. Optica, 2019, 6, 598.	9.3	43
39	Imaging with flat optics: metalenses or diffractive lenses?. Optica, 2019, 6, 805.	9.3	195
40	Single flat lens enabling imaging in the short-wave infra-red (SWIR) band. OSA Continuum, 2019, 2, 2968.	1.8	33
41	Full-color, multi-plane image projection with mobile-phone flashlight & a multi-level diffractive hologram. , 2019, , .		0
42	Achromatic Broadband Diffractive Lenses for Focusing and Imaging in LWIR. , 2019, , .		0
43	Flat Lenses for Ultra-lightweight Longwave-Infrared Broadband Imaging. , 2019, , .		1
44	Metalenses or diffractive lenses for imaging?. , 2019, , .		3
45	Broadband imaging with one planar diffractive lens. Scientific Reports, 2018, 8, 2799.	3.3	99
46	Precisely Localizing Wavelength Sensitive Point-Spread Functions Engineered With a Silicon Oxide Phase Plate. Microscopy and Microanalysis, 2018, 24, 1364-1365.	0.4	4
47	Computational multispectral video imaging [Invited]. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2018, 35, 189.	1.5	35
48	Synthesizing broadband propagation-invariant space-time wave packets using transmissive phase plates. Optics Express, 2018, 26, 13628.	3.4	46
49	Computational imaging enables a â€œsee-throughâ€• lens-less camera. Optics Express, 2018, 26, 22826.	3.4	19
50	Full-color video and still imaging using two flat lenses. Optics Express, 2018, 26, 26866.	3.4	28
51	Deep-brain imaging via epi-fluorescence Computational Cannula Microscopy. Scientific Reports, 2017, 7, 44791.	3.3	33
52	Full-color, large area, transmissive holograms enabled by multi-level diffractive optics. Scientific Reports, 2017, 7, 5789.	3.3	31
53	Ultra-compact polarization rotation in integrated silicon photonics using digital metamaterials. Optics Express, 2017, 25, 19721.	3.4	67
54	Lensless photography with only an image sensor. Applied Optics, 2017, 56, 6450.	1.8	32

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55	High-NA Chromatic-aberration-corrected Diffractive Lens for Broadband Focusing. , 2017, , .		4
56	Numerical analysis of computational-cannula microscopy. Applied Optics, 2017, 56, D1.	2.1	9
57	A comprehensive simulation model of the performance of photochromic films in absorbance-modulation-optical-lithography. AIP Advances, 2016, 6, .	1.3	9
58	Chromatic-aberration-corrected diffractive lenses for ultra-broadband focusing. Scientific Reports, 2016, 6, 21545.	3.3	148
59	Reverse-absorbance-modulation-optical lithography for optical nanopatterning at low light levels. AIP Advances, 2016, 6, 065312.	1.3	10
60	Increasing the density of passive photonic-integrated circuits via nanophotonic cloaking. Nature Communications, 2016, 7, 13126.	12.8	52
61	Reply to 'On nanostructured silicon success'. Nature Photonics, 2016, 10, 143-143.	31.4	1
62	Computational Single-shot Hyper-spectral Imaging based on a Microstructured Diffractive Optic. , 2016, , .		0
63	Snapshot High-resolution Hyper-spectral Imager based on an Ultra-thin Diffractive Filter. , 2016, , .		1
64	Cannula-based computational fluorescence microscopy. Applied Physics Letters, 2015, 106, .	3.3	18
65	P-27: Diffractive Color Splitter for High-Efficiency Liquid-Crystal Displays. Digest of Technical Papers SID International Symposium, 2015, 46, 1234-1236.	0.3	1
66	Ultra-high-sensitivity color imaging via a transparent diffractive-filter array and computational optics. Optica, 2015, 2, 933.	9.3	56
67	Fast imaging in cannula microscope using orthogonal matching pursuit. , 2015, , .		2
68	An integrated-nanophotonics polarization beamsplitter with 2.4â€‰Ã—â€‰2.4â€…Î¼m2 footprint. Nature Photonics, 2015, 9, 378-382.	31.4	593
69	Monolithic graded-refractive-index glass-based antireflective coatings: broadband/omnidirectional light harvesting and self-cleaning characteristics. Journal of Materials Chemistry C, 2015, 3, 5440-5449.	5.5	55
70	Integrated digital metamaterials enables ultra-compact optical diodes. Optics Express, 2015, 23, 10847.	3.4	53
71	Optical microlithography on oblique and multiplane surfaces using diffractive phase masks. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2015, 14, 023507.	0.9	13
72	A new class of multiâ€bandgap highâ€efficiency photovoltaics enabled by broadband diffractive optics. Progress in Photovoltaics: Research and Applications, 2015, 23, 1073-1079.	8.1	29

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73	Patterning via optical-saturable transformations: A review and simple simulation model. Applied Physics Letters, 2014, 105, 193105.	3.3	3
74	Collimated backlight for displays and micro-projectors. , 2014, , .		0
75	Enhancing photovoltaic output power by 3-band spectrum-splitting and concentration using a diffractive micro-optic. Optics Express, 2014, 22, A1519.	3.4	19
76	Improved localization accuracy in stochastic super-resolution fluorescence microscopy by K-factor image deshadowing. Biomedical Optics Express, 2014, 5, 244.	2.9	7
77	Computational spectrometer based on a broadband diffractive optic. Optics Express, 2014, 22, 14575.	3.4	56
78	Computational spectroscopy via singular-value decomposition and regularization. Optics Express, 2014, 22, 21541.	3.4	27
79	Ultra-high-efficiency metamaterial polarizer. Optica, 2014, 1, 356.	9.3	98
80	Diffractive lens design for optimized focusing. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2014, 31, B27.	1.5	21
81	An ultra-small three dimensional computational microscope. Applied Physics Letters, 2014, 105, .	3.3	34
82	Hyper-spectral imaging in scanning-confocal-fluorescence microscopy using a novel broadband diffractive optic. Optics Communications, 2014, 324, 73-80.	2.1	14
83	Exploiting photochromism for optical nanopatterning. , 2014, , .		0
84	Patterning via Optical Saturable Transitions - Fabrication and Characterization. Journal of Visualized Experiments, 2014, , .	0.3	0
85	Image processing for super-resolution localization in fluorescence microscopy. , 2013, , .		0
86	Optimization of periodic nanostructures for enhanced light-trapping in ultra-thin photovoltaics. Optics Express, 2013, 21, 6274.	3.4	56
87	Nanopatterning of diarylethene films via selective dissolution of one photoisomer. Applied Physics Letters, 2013, 103, .	3.3	6
88	Increased Photovoltaic Power Output via Diffractive Spectrum Separation. Physical Review Letters, 2013, 110, 123901.	7.8	51
89	Circumventing the far-field diffraction limit in optical nanopatterning. , 2013, , .		0
90	Design and analysis of multi-wavelength diffractive optics. Optics Express, 2012, 20, 2814.	3.4	125

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91	Subwavelength nanopatterning of photochromic diarylethene films. Applied Physics Letters, 2012, 100, 183103.	3.3	11
92	Breaking the Far-Field Diffraction Limit in Optical Nanopatterning via Repeated Photochemical and Electrochemical Transitions in Photochromic Molecules. Physical Review Letters, 2011, 107, 205501.	7.8	26
93	Parallel scanning-optical nanoscopy with optically confined probes. Optics Express, 2010, 18, 16014.	3.4	11
94	Design of diffractive lenses that generate optical nulls without phase singularities. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 297.	1.5	27
95	Confining Light to Deep Subwavelength Dimensions to Enable Optical Nanopatterning. Science, 2009, 324, 917-921.	12.6	220
96	Reduction of focal-spot size using dichromats in absorbance modulation. Optics Letters, 2008, 33, 2916.	3.3	13
97	Fabrication of spiral-phase diffractive elements using scanning-electron-beam lithography. Journal of Vacuum Science & Technology B, 2007, 25, 2068.	1.3	19
98	Spatial-frequency multiplication via absorbance modulation. Applied Physics Letters, 2007, 91, .	3.3	12
99	Far-Field Generation of Localized Light Fields using Absorbance Modulation. Physical Review Letters, 2007, 98, 043905.	7.8	37
100	Experimental characterization of focusing by high-numerical-aperture zone plates. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 567.	1.5	37
101	Absorbance-modulation optical lithography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 2290.	1.5	69
102	Zone-plate-array lithography: A low-cost complement or competitor to scanning-electron-beam lithography. Microelectronic Engineering, 2006, 83, 956-961.	2.4	46
103	Replication of diffractive-optical arrays via photocurable nanoimprint lithography. Journal of Vacuum Science & Technology B, 2006, 24, 2960.	1.3	9
104	Maskless lithography. Materials Today, 2005, 8, 26-33.	14.2	118
105	Immersion zone-plate-array lithography. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 2657.	1.6	28
106	Photon-sieve lithography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 342.	1.5	91
107	Lithographic patterning and confocal imaging with zone plates. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 2881.	1.6	36