

# Allard P Mosk

## List of Publications by Year in descending order

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Version: 2024-02-01

149  
papers

9,336  
citations

87888

38  
h-index

38395

95  
g-index

152  
all docs

152  
docs citations

152  
times ranked

5011  
citing authors

#	ARTICLE	IF	CITATIONS
1	Focusing coherent light through opaque strongly scattering media. <i>Optics Letters</i> , 2007, 32, 2309.	3.3	1,461
2	Controlling waves in space and time for imaging and focusing in complex media. <i>Nature Photonics</i> , 2012, 6, 283-292.	31.4	1,150
3	Non-invasive imaging through opaque scattering layers. <i>Nature</i> , 2012, 491, 232-234.	27.8	882
4	Exploiting disorder for perfect focusing. <i>Nature Photonics</i> , 2010, 4, 320-322.	31.4	645
5	Phase control algorithms for focusing light through turbid media. <i>Optics Communications</i> , 2008, 281, 3071-3080.	2.1	386
6	Roadmap on optical security. <i>Journal of Optics (United Kingdom)</i> , 2016, 18, 083001.	2.2	338
7	Universal Optimal Transmission of Light Through Disordered Materials. <i>Physical Review Letters</i> , 2008, 101, 120601.	7.8	306
8	Scattering Lens Resolves Sub-100Ånm Structures with Visible Light. <i>Physical Review Letters</i> , 2011, 106, 193905.	7.8	243
9	Superpixel-based spatial amplitude and phase modulation using a digital micromirror device. <i>Optics Express</i> , 2014, 22, 17999.	3.4	242
10	Control of Light Transmission through Opaque Scattering Media in Space and Time. <i>Physical Review Letters</i> , 2011, 106, 103901.	7.8	213
11	Demixing light paths inside disordered metamaterials. <i>Optics Express</i> , 2008, 16, 67.	3.4	185
12	Focusing light through random photonic media by binary amplitude modulation. <i>Optics Express</i> , 2011, 19, 4017.	3.4	173
13	Quantum-secure authentication of a physical unclonable key. <i>Optica</i> , 2014, 1, 421.	9.3	148
14	Active spatial control of plasmonic fields. <i>Nature Photonics</i> , 2011, 5, 360-363.	31.4	141
15	Nanophotonic Control of the First Resonance Energy Transfer Efficiency. <i>Physical Review Letters</i> , 2012, 109, 203601.	7.8	141
16	Spatial Extent of Random Laser Modes. <i>Physical Review Letters</i> , 2007, 98, 143901.	7.8	137
17	Inhibited Spontaneous Emission of Quantum Dots Observed in a 3D Photonic Band Gap. <i>Physical Review Letters</i> , 2011, 107, 193903.	7.8	122
18	Speckle correlation resolution enhancement of wide-field fluorescence imaging. <i>Optica</i> , 2015, 2, 424.	9.3	106

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19	Transmission eigenchannels in a disordered medium. <i>Physical Review B</i> , 2011, 83, .	3.2	105
20	Spatial amplitude and phase modulation using commercial twisted nematic LCDs. <i>Applied Optics</i> , 2008, 47, 2076.	2.1	99
21	Mixture of ultracold lithium and cesium atoms in an optical dipole trap. <i>Applied Physics B: Lasers and Optics</i> , 2001, 73, 791-799.	2.2	75
22	Observation of Spatial Fluctuations of the Local Density of States in Random Photonic Media. <i>Physical Review Letters</i> , 2010, 105, 013904.	7.8	72
23	Giant Helium Dimers Produced by Photoassociation of Ultracold Metastable Atoms. <i>Physical Review Letters</i> , 2003, 91, 073203.	7.8	61
24	Intrinsic intensity fluctuations in random lasers. <i>Physical Review A</i> , 2006, 74, .	2.5	61
25	Frequency bandwidth of light focused through turbid media. <i>Optics Letters</i> , 2011, 36, 373.	3.3	61
26	Spatial Quantum Correlations in Multiple Scattered Light. <i>Physical Review Letters</i> , 2005, 95, 173901.	7.8	56
27	Optimal control of light propagation through multiple-scattering media in the presence of noise. <i>Biomedical Optics Express</i> , 2013, 4, 1759.	2.9	53
28	Transmission channels for light in absorbing random media: From diffusive to ballistic-like transport. <i>Physical Review B</i> , 2014, 89, .	3.2	53
29	Rotational memory effect of a multimode fiber. <i>Optics Express</i> , 2015, 23, 20569.	3.4	51
30	High-resolution wavefront shaping with a photonic crystal fiber for multimode fiber imaging. <i>Optics Letters</i> , 2016, 41, 497.	3.3	51
31	Color Control of Natural Fluorescent Proteins by Photonic Crystals. <i>Small</i> , 2008, 4, 492-496.	10.0	49
32	Imaging objects through scattering layers and around corners by retrieval of the scattered point spread function. <i>Optics Express</i> , 2017, 25, 32829.	3.4	49
33	Photoassociation of Spin-Polarized Hydrogen. <i>Physical Review Letters</i> , 1999, 82, 307-310.	7.8	46
34	Spatial refractive index sensor using whispering gallery modes in an optically trapped microsphere. <i>Applied Physics Letters</i> , 2007, 90, 161101.	3.3	46
35	Quantitative analysis of several random lasers. <i>Optics Communications</i> , 2007, 278, 110-113.	2.1	44
36	Focusing and Scanning Microscopy with Propagating Surface Plasmons. <i>Physical Review Letters</i> , 2013, 110, 266804.	7.8	44

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37	Atomic Gases at Negative Kinetic Temperature. <i>Physical Review Letters</i> , 2005, 95, 040403.	7.8	43
38	Imaging of objects through a thin scattering layer using a spectrally and spatially separated reference. <i>Optics Express</i> , 2018, 26, 15073.	3.4	40
39	Signature of a three-dimensional photonic band gap observed on silicon inverse woodpile photonic crystals. <i>Physical Review B</i> , 2011, 83, .	3.2	38
40	Programmable multiport optical circuits in opaque scattering materials. <i>Optics Express</i> , 2015, 23, 3102.	3.4	38
41	Broadband mean free path of diffuse light in polydisperse ensembles of scatterers for white light-emitting diode lighting. <i>Applied Optics</i> , 2013, 52, 2602.	1.8	33
42	All-optical switching of a microcavity repeated at terahertz rates. <i>Optics Letters</i> , 2013, 38, 374.	3.3	33
43	Interplay between multiple scattering, emission, and absorption of light in the phosphor of a white light-emitting diode. <i>Optics Express</i> , 2014, 22, 8190.	3.4	33
44	Local density of optical states in the band gap of a finite one-dimensional photonic crystal. <i>Physical Review B</i> , 2014, 89, .	3.2	32
45	Maximum information states for coherent scattering measurements. <i>Nature Physics</i> , 2021, 17, 564-568.	16.7	30
46	The information age in optics: Measuring the transmission matrix. <i>Physics Magazine</i> , 2010, 3, .	0.1	29
47	Experimental studies on the mode structure of random lasers. <i>Physical Review A</i> , 2010, 81, .	2.5	29
48	Design of a three-dimensional photonic band gap cavity in a diamondlike inverse woodpile photonic crystal. <i>Physical Review B</i> , 2014, 90, .	3.2	29
49	Trapping of Rb Atoms by ac Electric Fields. <i>Physical Review Letters</i> , 2007, 98, 223002.	7.8	28
50	Measurement of a band-edge tail in the density of states of a photonic-crystal waveguide. <i>Physical Review B</i> , 2012, 86, .	3.2	28
51	Finite-size Scaling of the Density of States in Photonic Band Gap Crystals. <i>Physical Review Letters</i> , 2018, 120, 237402.	7.8	28
52	The influence of fabrication deviations on the photonic band gap of three-dimensional inverse woodpile nanostructures. <i>Journal of Applied Physics</i> , 2009, 105, 093108.	2.5	27
53	Programming balanced optical beam splitters in white paint. <i>Optics Express</i> , 2014, 22, 8320.	3.4	27
54	Coupling of energy into the fundamental diffusion mode of a complex nanophotonic medium. <i>New Journal of Physics</i> , 2016, 18, 043032.	2.9	27

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55	Laser threshold of Mie resonances. <i>Optics Letters</i> , 2006, 31, 1432.	3.3	25
56	Analysis of photoassociation spectra for giant helium dimers. <i>Physical Review A</i> , 2004, 69, .	2.5	24
57	Manipulation of the local density of photonic states to elucidate fluorescent protein emission rates. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 2525.	2.8	24
58	Three-dimensional spatially resolved optical energy density enhanced by wavefront shaping. <i>Optica</i> , 2018, 5, 844.	9.3	24
59	Scattering invariant modes of light in complex media. <i>Nature Photonics</i> , 2021, 15, 431-434.	31.4	23
60	Relaxation oscillations in long-pulsed random lasers. <i>Physical Review A</i> , 2009, 80, .	2.5	20
61	Optical Excitation of Atomic Hydrogen Bound to the Surface of Liquid Helium. <i>Physical Review Letters</i> , 1998, 81, 4440-4443.	7.8	19
62	Optimal concentration of light in turbid materials. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2011, 28, 1200.	2.1	19
63	Optical Control of Plasmonic Bloch Modes on Periodic Nanostructures. <i>Nano Letters</i> , 2012, 12, 546-550.	9.1	19
64	Low-cost mechanical shutter for light beams. <i>Review of Scientific Instruments</i> , 2002, 73, 4402-4404.	1.3	18
65	SECURITY OF QUANTUM-READOUT PUFs AGAINST QUADRATURE-BASED CHALLENGE-ESTIMATION ATTACKS. <i>International Journal of Quantum Information</i> , 2013, 11, 1350041.	1.1	18
66	Influence of the Local Scattering Environment on the Localization Precision of Single Particles. <i>Physical Review Letters</i> , 2020, 124, 133903.	7.8	18
67	Optical pumping of metastable NH radicals into the paramagnetic ground state. <i>Physical Review A</i> , 2003, 68, .	2.5	17
68	Hyperfine-changing collisions in an optically trapped gas of ultracold cesium and lithium. <i>Physical Review A</i> , 2004, 70, .	2.5	17
69	Controlling single-photon Fock-state propagation through opaque scattering media. <i>Applied Physics B: Lasers and Optics</i> , 2014, 116, 603-607.	2.2	17
70	Asymmetric cryptography with physical unclonable keys. <i>Quantum Science and Technology</i> , 2019, 4, 045011.	5.8	17
71	Optical transmission matrix as a probe of the photonic strength. <i>Physical Review A</i> , 2016, 94, .	2.5	16
72	Local thermal resonance control of GaInP photonic crystal membrane cavities using ambient gas cooling. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	15

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73	Nonimaging speckle interferometry for high-speed nanometer-scale position detection. Optics Letters, 2012, 37, 1070.	3.3	14
74	Observation of Sub-Bragg Diffraction of Waves in Crystals. Physical Review Letters, 2012, 108, 083901.	7.8	14
75	Femtosecond-scale switching based on excited free-carriers. Optics Express, 2015, 23, 16416.	3.4	14
76	Transmitting more than 10 bit with a single photon. Optics Express, 2017, 25, 2826.	3.4	14
77	Tuning out disorder-induced localization in nanophotonic cavity arrays. Optics Express, 2017, 25, 4598.	3.4	14
78	Gain Narrowing in Few-Atom Systems. Physical Review Letters, 2007, 98, 103601.	7.8	13
79	Controlling the intensity of light in large areas at the interfaces of a scattering medium. Physical Review A, 2016, 94, .	2.5	13
80	Observation of a stronger-than-adiabatic change of light trapped in an ultrafast switched GaAs-AlAs microcavity. Journal of the Optical Society of America B: Optical Physics, 2012, 29, A1.	2.1	12
81	Nanocapillary electrokinetic tracking for monitoring charge fluctuations on a single nanoparticle. Faraday Discussions, 2016, 193, 447-458.	3.2	11
82	Dispersion of coupled mode-gap cavities. Optics Letters, 2015, 40, 4488.	3.3	10
83	Frequency width of open channels in multiple scattering media. Optics Express, 2016, 24, 26472.	3.4	10
84	Measurement of the linear thermo-optical coefficient of Ga <sub>0.51</sub> In <sub>0.49</sub> P using photonic crystal nanocavities. Applied Optics, 2017, 56, 3219.	2.1	10
85	Optimizing illumination for precise multi-parameter estimations in coherent diffractive imaging. Optics Letters, 2021, 46, 254.	3.3	10
86	Optical transmission matrix measurement sampled on a dense hexagonal lattice. OSA Continuum, 2020, 3, 637.	1.8	10
87	Mutual extinction and transparency of multiple incident light waves. Europhysics Letters, 2020, 130, 34002.	2.0	10
88	Authenticated communication from quantum readout of PUFs. Quantum Information Processing, 2017, 16, 200.	2.2	9
89	Efficient and flexible approach to ptychography using an optimization framework based on automatic differentiation. OSA Continuum, 2021, 4, 121.	1.8	9
90	Rotationally induced Penning ionization of ultracold photoassociated helium dimers. Europhysics Letters, 2005, 70, 190-196.	2.0	8

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91	Measurement of the profiles of disorder-induced localized resonances in photonic crystal waveguides by local tuning. <i>Optics Express</i> , 2016, 24, 21939.	3.4	8
92	Spatial threshold in amplifying random media. <i>Optics Letters</i> , 2010, 35, 3063.	3.3	7
93	Adaptive Control of Necklace States in a Photonic Crystal Waveguide. <i>ACS Photonics</i> , 2018, 5, 3984-3988.	6.6	7
94	Observation of mutual extinction and transparency in light scattering. <i>Physical Review A</i> , 2021, 104, .	2.5	7
95	Optimal Control of Coherent Light Scattering for Binary Decision Problems. <i>Physical Review Letters</i> , 2021, 127, 253902.	7.8	7
96	Observation of intensity statistics of light transmitted through 3D random media. <i>Optics Letters</i> , 2014, 39, 6347.	3.3	6
97	Non-invasive imaging through opaque scattering layers. <i>Proceedings of SPIE</i> , 2015, , .	0.8	6
98	How to distinguish elastically scattered light from Stokes shifted light for solid-state lighting?. <i>Journal of Applied Physics</i> , 2016, 119, 093102.	2.5	6
99	Mapping the energy density of shaped waves in scattering media onto a complete set of diffusion modes. <i>Optics Express</i> , 2016, 24, 18525.	3.4	6
100	Fano lines in the reflection spectrum of directly coupled systems of waveguides and cavities: Measurements, modeling, and manipulation of the Fano asymmetry. <i>Physical Review A</i> , 2017, 96, .	2.5	6
101	Light scattering from three-level systems: The Tmatrix of a point dipole with gain. <i>Physical Review A</i> , 2005, 71, .	2.5	5
102	Imaging trapped quantum gases by off-axis holography. <i>Optics Letters</i> , 2020, 45, 981.	3.3	5
103	Resampling the transmission matrix in an aberration-corrected Bessel mode basis. <i>Optics Express</i> , 2021, 29, 24.	3.4	5
104	Wavelength dependence of light diffusion in strongly scattering macroporous gallium phosphide. <i>Physical Review A</i> , 2008, 77, .	2.5	4
105	Thermo-optical dynamics of a nonlinear GaInP photonic crystal nanocavity depend on the optical mode profile. <i>OSA Continuum</i> , 2020, 3, 1879.	1.8	4
106	Spectral emission imaging to map photonic properties below the crystal surface of 3D photonic crystals. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2009, 26, 2101.	2.1	3
107	Nanophotonic hybridization of narrow atomic cesium resonances and photonic stop gaps of opaline nanostructures. <i>Physical Review B</i> , 2015, 91, .	3.2	3
108	Optical method for micrometer-scale tracerless visualization of ultrafast laser induced gas flow at a water/air interface. <i>Applied Optics</i> , 2020, 59, 5205.	1.8	3

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109	Imaging Through Scattering Media. , 2013, , .		3
110	Observation of nonlinear bands in near-field scanning optical microscopy of a photonic-crystal waveguide. Journal of Applied Physics, 2015, 117, 033104.	2.5	2
111	van Putten and Mosk reply. Physics Magazine, 0, 3, .	0.1	2
112	Femtosecond laser-ablation of gel and water. Optics Letters, 2020, 45, 3079.	3.3	2
113	Imaging through highly scattering environments using ballistic and quasi-ballistic light in a common-path Sagnac interferometer. Optics Express, 2020, 28, 10386.	3.4	2
114	Comment on "A New Type of Evaporative Cooling for Neutral Atoms" Physical Review Letters, 1998, 81, 3046-3046.	7.8	1
115	Resonance enhanced two photon spectroscopy of magnetically trapped atomic hydrogen. , 2000, 127, 175-180.		1
116	Atomic deuterium adsorbed on the surface of liquid helium. Physical Review A, 2001, 64, .	2.5	1
117	Scattering optics resolve nanostructure. , 2011, , .		1
118	High-resolution phase and amplitude modulation using a digital micromirror device. , 2013, , .		1
119	Focusing of light by disordered metamaterials. , 2007, , .		0
120	Photonic interactions of resonant cesium atoms and opal photonic crystals. , 2009, , .		0
121	Observation of fluctuations of the local density of states in disordered photonic media. , 2009, , .		0
122	Optimal Transmission of Light through Disordered Materials. , 2009, , .		0
123	Optimal concentration of light in turbid materials. , 2009, , .		0
124	What is the real quality factor of an ultrafast planar photonic microcavity?. , 2009, , .		0
125	Controlling fluorescent proteins by manipulating the local density of photonic states. Proceedings of SPIE, 2009, , .	0.8	0
126	Eigenmodes in a randomly disordered medium. , 2011, , .		0



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127	Coherent optical imaging through opaque layers. , 2011, , .		0
128	Nanobiophotonics: Using the nanophotonics toolbox to manipulate biological fluorophores. , 2011, , .		0
129	Experimental observation of sub-Bragg frequency gaps in photonic crystals. , 2011, , .		0
130	Experimental signature of a broad 3D photonic band gap in silicon nanostructures. , 2011, , .		0
131	A nanophotonic probe for quantum electrodynamics in random cavities. , 2011, , .		0
132	Focusing light through turbid media by binary amplitude modulation. , 2011, , .		0
133	High-resolution Imaging using Scattered Light. , 2013, , .		0
134	High-resolution imaging with scattered light. , 2013, , .		0
135	Maximum control of light propagation through turbid media in the presence of noise. , 2013, , .		0
136	Highly transmitting channels for light in absorbing scattering media. , 2014, , .		0
137	Programming Single-Photon Wavefronts for Quantum Authentication. , 2014, , .		0
138	Transport of Light Through White-LED Phosphor Plates. NATO Science for Peace and Security Series B: Physics and Biophysics, 2017, , 467-468.	0.3	0
139	Secure communication with coded wavefronts. , 2017, , .		0
140	Finite size scaling of the density of states in photonic band gap crystals. , 2017, , .		0
141	Interplay of bloch waves and scattered waves in real photonic crystals. , 2017, , .		0
142	Exploiting sound and noise. Nature Photonics, 2020, 14, 466-467.	31.4	0
143	Enhanced transparency in strongly scattering media. , 2021, , .		0
144	Controlling Fluorescent Proteins by Manipulating the Local Density of Photonic States. , 2009, , .		0

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145	Coherent Optical Imaging through Opaque Layers. , 2011, , .		0
146	Noninvasive Fluorescence Imaging through Strongly Scattering Layers. , 2013, , .		0
147	Imaging and Focusing through Turbid Media. , 2013, , .		0
148	Transmission channels for light in absorbing random media. , 2014, , .		0
149	Range of Imaging and Focusing through Scattering Media. , 2016, , .		0