

# 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  | Efficient and flexible approach to ptychography using an optimization framework based on automatic differentiation. OSA Continuum, 2021, 4, 121.                  | 1.8  | 9         |
| 2  | Maximum information states for coherent scattering measurements. Nature Physics, 2021, 17, 564-568.   | 16.7 | 30        |
| 3  | Optimizing illumination for precise multi-parameter estimations in coherent diffractive imaging. Optics Letters, 2021, 46, 254.                                   | 3.3  | 10        |
| 4  | Scattering invariant modes of light in complex media. Nature Photonics, 2021, 15, 431-434.  | 31.4 | 23        |
| 5  | Enhanced transparency in strongly scattering media. , 2021, , .   |      | 0         |
| 6  | Observation of mutual extinction and transparency in light scattering. Physical Review A, 2021, 104, .  | 2.5  | 7         |
| 7  | Resampling the transmission matrix in an aberration-corrected Bessel mode basis. Optics Express, 2021, 29, 24.  | 3.4  | 5         |
| 8  | Optimal Control of Coherent Light Scattering for Binary Decision Problems. Physical Review Letters, 2021, 127, 253902.  | 7.8  | 7         |
| 9  | Exploiting sound and noise. Nature Photonics, 2020, 14, 466-467.  | 31.4 | 0         |
| 10 | Influence of the Local Scattering Environment on the Localization Precision of Single Particles. Physical Review Letters, 2020, 124, 133903.                      | 7.8  | 18        |
| 11 | Optical method for micrometer-scale tracerless visualization of ultrafast laser induced gas flow at a water/air interface. Applied Optics, 2020, 59, 5205.        | 1.8  | 3         |
| 12 | Imaging trapped quantum gases by off-axis holography. Optics Letters, 2020, 45, 981.  | 3.3  | 5         |
| 13 | Optical transmission matrix measurement sampled on a dense hexagonal lattice. OSA Continuum, 2020, 3, 637.  | 1.8  | 10        |
| 14 | Mutual extinction and transparency of multiple incident light waves. Europhysics Letters, 2020, 130, 34002.   | 2.0  | 10        |
| 15 | Femtosecond laser-ablation of gel and water. Optics Letters, 2020, 45, 3079.  | 3.3  | 2         |
| 16 | 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         |
| 17 | Thermo-optical dynamics of a nonlinear GaInP photonic crystal nanocavity depend on the optical mode profile. OSA Continuum, 2020, 3, 1879.                        | 1.8  | 4         |
| 18 | Asymmetric cryptography with physical unclonable keys. Quantum Science and Technology, 2019, 4, 045011.   | 5.8  | 17        |

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|----|--|-----|-----------|
| 19 | Adaptive Control of Necklace States in a Photonic Crystal Waveguide. ACS Photonics, 2018, 5, 3984-3988.  | 6.6 | 7         |
| 20 | Imaging of objects through a thin scattering layer using a spectrally and spatially separated reference. Optics Express, 2018, 26, 15073.  | 3.4 | 40        |
| 21 | Three-dimensional spatially resolved optical energy density enhanced by wavefront shaping. Optica, 2018, 5, 844.   | 9.3 | 24        |
| 22 | Finite-size Scaling of the Density of States in Photonic Band Gap Crystals. Physical Review Letters, 2018, 120, 237402.  | 7.8 | 28        |
| 23 | 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         |
| 24 | Fano lines in the reflection spectrum of directly coupled systems of waveguides and cavities: Measurements, modeling, and manipulation of the Fano asymmetry. Physical Review A, 2017, 96, . | 2.5 | 6         |
| 25 | Authenticated communication from quantum readout of PUFs. Quantum Information Processing, 2017, 16, 200.   | 2.2 | 9         |
| 26 | Secure communication with coded wavefronts. , 2017, , .  |     | 0         |
| 27 | Finite size scaling of the density of states in photonic band gap crystals. , 2017, , .  |     | 0         |
| 28 | Interplay of bloch waves and scattered waves in real photonic crystals. , 2017, , .  |     | 0         |
| 29 | 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        |
| 30 | Transmitting more than 10 bit with a single photon. Optics Express, 2017, 25, 2826.  | 3.4 | 14        |
| 31 | Tuning out disorder-induced localization in nanophotonic cavity arrays. Optics Express, 2017, 25, 4598.  | 3.4 | 14        |
| 32 | Imaging objects through scattering layers and around corners by retrieval of the scattered point spread function. Optics Express, 2017, 25, 32829.   | 3.4 | 49        |
| 33 | Frequency width of open channels in multiple scattering media. Optics Express, 2016, 24, 26472.  | 3.4 | 10        |
| 34 | Measurement of the profiles of disorder-induced localized resonances in photonic crystal waveguides by local tuning. Optics Express, 2016, 24, 21939.  | 3.4 | 8         |
| 35 | Nanocapillary electrokinetic tracking for monitoring charge fluctuations on a single nanoparticle. Faraday Discussions, 2016, 193, 447-458.  | 3.2 | 11        |
| 36 | Controlling the intensity of light in large areas at the interfaces of a scattering medium. Physical Review A, 2016, 94, .   | 2.5 | 13        |

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|----|--|-----|-----------|
| 37 | How to distinguish elastically scattered light from Stokes shifted light for solid-state lighting?. Journal of Applied Physics, 2016, 119, 093102.       | 2.5 | 6         |
| 38 | Optical transmission matrix as a probe of the photonic strength. Physical Review A, 2016, 94, .  | 2.5 | 16        |
| 39 | Mapping the energy density of shaped waves in scattering media onto a complete set of diffusion modes. Optics Express, 2016, 24, 18525.                  | 3.4 | 6         |
| 40 | Roadmap on optical security. Journal of Optics (United Kingdom), 2016, 18, 083001.   | 2.2 | 338       |
| 41 | Coupling of energy into the fundamental diffusion mode of a complex nanophotonic medium. New Journal of Physics, 2016, 18, 043032.                       | 2.9 | 27        |
| 42 | High-resolution wavefront shaping with a photonic crystal fiber for multimode fiber imaging. Optics Letters, 2016, 41, 497.                              | 3.3 | 51        |
| 43 | Range of Imaging and Focusing through Scattering Media. , 2016, , .  |     | 0         |
| 44 | Non-invasive imaging through opaque scattering layers. Proceedings of SPIE, 2015, , .  | 0.8 | 6         |
| 45 | Nanophotonic hybridization of narrow atomic cesium resonances and photonic stop gaps of opaline nanostructures. Physical Review B, 2015, 91, .           | 3.2 | 3         |
| 46 | Local thermal resonance control of GaInP photonic crystal membrane cavities using ambient gas cooling. Applied Physics Letters, 2015, 106, .             | 3.3 | 15        |
| 47 | Programmable multiport optical circuits in opaque scattering materials. Optics Express, 2015, 23, 3102.  | 3.4 | 38        |
| 48 | Rotational memory effect of a multimode fiber. Optics Express, 2015, 23, 20569.  | 3.4 | 51        |
| 49 | Femtosecond-scale switching based on excited free-carriers. Optics Express, 2015, 23, 16416.   | 3.4 | 14        |
| 50 | Speckle correlation resolution enhancement of wide-field fluorescence imaging. Optica, 2015, 2, 424.   | 9.3 | 106       |
| 51 | 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         |
| 52 | Dispersion of coupled mode-gap cavities. Optics Letters, 2015, 40, 4488.   | 3.3 | 10        |
| 53 | Highly transmitting channels for light in absorbing scattering media. , 2014, , .  |     | 0         |
| 54 | Observation of intensity statistics of light transmitted through 3D random media. Optics Letters, 2014, 39, 6347.  | 3.3 | 6         |

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|----|--|-----|-----------|
| 55 | Interplay between multiple scattering, emission, and absorption of light in the phosphor of a white light-emitting diode. Optics Express, 2014, 22, 8190.  | 3.4 | 33        |
| 56 | Programming balanced optical beam splitters in white paint. Optics Express, 2014, 22, 8320.  | 3.4 | 27        |
| 57 | Superpixel-based spatial amplitude and phase modulation using a digital micromirror device. Optics Express, 2014, 22, 17999.                               | 3.4 | 242       |
| 58 | Transmission channels for light in absorbing random media: From diffusive to ballistic-like transport. Physical Review B, 2014, 89, .                      | 3.2 | 53        |
| 59 | Design of a three-dimensional photonic band gap cavity in a diamondlike inverse woodpile photonic crystal. Physical Review B, 2014, 90, .                  | 3.2 | 29        |
| 60 | Programming Single-Photon Wavefronts for Quantum Authentication. , 2014, , .   |     | 0         |
| 61 | Quantum-secure authentication of a physical unclonable key. Optica, 2014, 1, 421.  | 9.3 | 148       |
| 62 | Controlling single-photon Fock-state propagation through opaque scattering media. Applied Physics B: Lasers and Optics, 2014, 116, 603-607.                | 2.2 | 17        |
| 63 | Local density of optical states in the band gap of a finite one-dimensional photonic crystal. Physical Review B, 2014, 89, .                               | 3.2 | 32        |
| 64 | Transmission channels for light in absorbing random media. , 2014, , .   |     | 0         |
| 65 | High-resolution Imaging using Scattered Light. , 2013, , .   |     | 0         |
| 66 | Focusing and Scanning Microscopy with Propagating Surface Plasmons. Physical Review Letters, 2013, 110, 266804.  | 7.8 | 44        |
| 67 | SECURITY OF QUANTUM-READOUT PUFs AGAINST QUADRATURE-BASED CHALLENGE-ESTIMATION ATTACKS. International Journal of Quantum Information, 2013, 11, 1350041.   | 1.1 | 18        |
| 68 | Broadband mean free path of diffuse light in polydisperse ensembles of scatterers for white light-emitting diode lighting. Applied Optics, 2013, 52, 2602. | 1.8 | 33        |
| 69 | All-optical switching of a microcavity repeated at terahertz rates. Optics Letters, 2013, 38, 374.   | 3.3 | 33        |
| 70 | Optimal control of light propagation through multiple-scattering media in the presence of noise. Biomedical Optics Express, 2013, 4, 1759.                 | 2.9 | 53        |
| 71 | High-resolution phase and amplitude modulation using a digital micromirror device. , 2013, , .   |     | 1         |
| 72 | High-resolution imaging with scattered light. , 2013, , .  |     | 0         |

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|----|--|------|-----------|
| 73 | Maximum control of light propagation through turbid media in the presence of noise. , 2013, , .  |      | 0         |
| 74 | Noninvasive Fluorescence Imaging through Strongly Scattering Layers. , 2013, , .   |      | 0         |
| 75 | Imaging Through Scattering Media. , 2013, , .  |      | 3         |
| 76 | Imaging and Focusing through Turbid Media. , 2013, , .   |      | 0         |
| 77 | 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        |
| 78 | Nonimaging speckle interferometry for high-speed nanometer-scale position detection. Optics Letters, 2012, 37, 1070.   | 3.3  | 14        |
| 79 | Observation of Sub-Bragg Diffraction of Waves in Crystals. Physical Review Letters, 2012, 108, 083901.   | 7.8  | 14        |
| 80 | Measurement of a band-edge tail in the density of states of a photonic-crystal waveguide. Physical Review B, 2012, 86, .   | 3.2  | 28        |
| 81 | Nanophotonic Control of the Förster Resonance Energy Transfer Efficiency. Physical Review Letters, 2012, 109, 203601.  | 7.8  | 141       |
| 82 | Optical Control of Plasmonic Bloch Modes on Periodic Nanostructures. Nano Letters, 2012, 12, 546-550.  | 9.1  | 19        |
| 83 | Non-invasive imaging through opaque scattering layers. Nature, 2012, 491, 232-234.   | 27.8 | 882       |
| 84 | Controlling waves in space and time for imaging and focusing in complex media. Nature Photonics, 2012, 6, 283-292.   | 31.4 | 1,150     |
| 85 | Inhibited Spontaneous Emission of Quantum Dots Observed in a 3D Photonic Band Gap. Physical Review Letters, 2011, 107, 193903.   | 7.8  | 122       |
| 86 | Scattering Lens Resolves Sub-100Ånm Structures with Visible Light. Physical Review Letters, 2011, 106, 193905.   | 7.8  | 243       |
| 87 | Transmission eigenchannels in a disordered medium. Physical Review B, 2011, 83, .  | 3.2  | 105       |
| 88 | Optimal concentration of light in turbid materials. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1200.  | 2.1  | 19        |
| 89 | Focusing light through random photonic media by binary amplitude modulation. Optics Express, 2011, 19, 4017.   | 3.4  | 173       |
| 90 | Frequency bandwidth of light focused through turbid media. Optics Letters, 2011, 36, 373.  | 3.3  | 61        |

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|-----|---|------|-----------|
| 91  | Scattering optics resolve nanostructure. , 2011, , .  |      | 1         |
| 92  | Active spatial control of plasmonic fields. Nature Photonics, 2011, 5, 360-363.   | 31.4 | 141       |
| 93  | Control of Light Transmission through Opaque Scattering Media in Space and Time. Physical Review Letters, 2011, 106, 103901.              | 7.8  | 213       |
| 94  | Eigenmodes in a randomly disordered medium. , 2011, , .   |      | 0         |
| 95  | Signature of a three-dimensional photonic band gap observed on silicon inverse woodpile photonic crystals. Physical Review B, 2011, 83, . | 3.2  | 38        |
| 96  | Coherent optical imaging through opaque layers. , 2011, , .   |      | 0         |
| 97  | Nanobiophotonics: Using the nanophotonics toolbox to manipulate biological fluorophores. , 2011, , .                                      |      | 0         |
| 98  | Experimental observation of sub-Bragg frequency gaps in photonic crystals. , 2011, , .  |      | 0         |
| 99  | Experimental signature of a broad 3D photonic band gap in silicon nanostructures. , 2011, , .   |      | 0         |
| 100 | A nanophotonic probe for quantum electrodynamics in random cavities. , 2011, , .  |      | 0         |
| 101 | Focusing light through turbid media by binary amplitude modulation. , 2011, , .   |      | 0         |
| 102 | Coherent Optical Imaging through Opaque Layers. , 2011, , .   |      | 0         |
| 103 | The information age in optics: Measuring the transmission matrix. Physics Magazine, 2010, 3, .  | 0.1  | 29        |
| 104 | Exploiting disorder for perfect focusing. Nature Photonics, 2010, 4, 320-322.   | 31.4 | 645       |
| 105 | Experimental studies on the mode structure of random lasers. Physical Review A, 2010, 81, .   | 2.5  | 29        |
| 106 | Observation of Spatial Fluctuations of the Local Density of States in Random Photonic Media. Physical Review Letters, 2010, 105, 013904.  | 7.8  | 72        |
| 107 | Spatial threshold in amplifying random media. Optics Letters, 2010, 35, 3063.   | 3.3  | 7         |
| 108 | Photonic interactions of resonant cesium atoms and opal photonic crystals. , 2009, , .  |      | 0         |

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|-----|---|------|-----------|
| 109 | Observation of fluctuations of the local density of states in disordered photonic media. , 2009, , .  |      | 0         |
| 110 | The influence of fabrication deviations on the photonic band gap of three-dimensional inverse woodpile nanostructures. Journal of Applied Physics, 2009, 105, 093108.                 | 2.5  | 27        |
| 111 | Relaxation oscillations in long-pulsed random lasers. Physical Review A, 2009, 80, .  | 2.5  | 20        |
| 112 | Optimal Transmission of Light through Disordered Materials. , 2009, , .   |      | 0         |
| 113 | Optimal concentration of light in turbid materials. , 2009, , .   |      | 0         |
| 114 | What is the real quality factor of an ultrafast planar photonic microcavity?. , 2009, , .   |      | 0         |
| 115 | Controlling fluorescent proteins by manipulating the local density of photonic states. Proceedings of SPIE, 2009, , .   | 0.8  | 0         |
| 116 | Spectral emission imaging to map photonic properties below the crystal surface of 3D photonic crystals. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 2101. | 2.1  | 3         |
| 117 | Manipulation of the local density of photonic states to elucidate fluorescent protein emission rates. Physical Chemistry Chemical Physics, 2009, 11, 2525.                            | 2.8  | 24        |
| 118 | Controlling Fluorescent Proteins by Manipulating the Local Density of Photonic States. , 2009, , .  |      | 0         |
| 119 | Color Control of Natural Fluorescent Proteins by Photonic Crystals. Small, 2008, 4, 492-496.  | 10.0 | 49        |
| 120 | Phase control algorithms for focusing light through turbid media. Optics Communications, 2008, 281, 3071-3080.  | 2.1  | 386       |
| 121 | Universal Optimal Transmission of Light Through Disordered Materials. Physical Review Letters, 2008, 101, 120601.   | 7.8  | 306       |
| 122 | Spatial amplitude and phase modulation using commercial twisted nematic LCDs. Applied Optics, 2008, 47, 2076.   | 2.1  | 99        |
| 123 | Demixing light paths inside disordered metamaterials. Optics Express, 2008, 16, 67.   | 3.4  | 185       |
| 124 | Wavelength dependence of light diffusion in strongly scattering macroporous gallium phosphide. Physical Review A, 2008, 77, .   | 2.5  | 4         |
| 125 | Focusing of light by disordered metamaterials. , 2007, , .  |      | 0         |
| 126 | Trapping of Rb Atoms by ac Electric Fields. Physical Review Letters, 2007, 98, 223002.  | 7.8  | 28        |



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|-----|--|-----|-----------|
| 127 | Focusing coherent light through opaque strongly scattering media. <i>Optics Letters</i> , 2007, 32, 2309.  | 3.3 | 1,461     |
| 128 | Gain Narrowing in Few-Atom Systems. <i>Physical Review Letters</i> , 2007, 98, 103601.   | 7.8 | 13        |
| 129 | Spatial refractive index sensor using whispering gallery modes in an optically trapped microsphere. <i>Applied Physics Letters</i> , 2007, 90, 161101. | 3.3 | 46        |
| 130 | Quantitative analysis of several random lasers. <i>Optics Communications</i> , 2007, 278, 110-113.   | 2.1 | 44        |
| 131 | Spatial Extent of Random Laser Modes. <i>Physical Review Letters</i> , 2007, 98, 143901.   | 7.8 | 137       |
| 132 | Laser threshold of Mie resonances. <i>Optics Letters</i> , 2006, 31, 1432.   | 3.3 | 25        |
| 133 | Intrinsic intensity fluctuations in random lasers. <i>Physical Review A</i> , 2006, 74, .  | 2.5 | 61        |
| 134 | Rotationally induced Penning ionization of ultracold photoassociated helium dimers. <i>Europhysics Letters</i> , 2005, 70, 190-196.                    | 2.0 | 8         |
| 135 | Light scattering from three-level systems: The Tmatrix of a point dipole with gain. <i>Physical Review A</i> , 2005, 71, .                             | 2.5 | 5         |
| 136 | Spatial Quantum Correlations in Multiple Scattered Light. <i>Physical Review Letters</i> , 2005, 95, 173901.   | 7.8 | 56        |
| 137 | Atomic Gases at Negative Kinetic Temperature. <i>Physical Review Letters</i> , 2005, 95, 040403.   | 7.8 | 43        |
| 138 | Hyperfine-changing collisions in an optically trapped gas of ultracold cesium and lithium. <i>Physical Review A</i> , 2004, 70, .                      | 2.5 | 17        |
| 139 | Analysis of photoassociation spectra for giant helium dimers. <i>Physical Review A</i> , 2004, 69, .   | 2.5 | 24        |
| 140 | Giant Helium Dimers Produced by Photoassociation of Ultracold Metastable Atoms. <i>Physical Review Letters</i> , 2003, 91, 073203.                     | 7.8 | 61        |
| 141 | Optical pumping of metastable NH radicals into the paramagnetic ground state. <i>Physical Review A</i> , 2003, 68, .                                   | 2.5 | 17        |
| 142 | Low-cost mechanical shutter for light beams. <i>Review of Scientific Instruments</i> , 2002, 73, 4402-4404.  | 1.3 | 18        |
| 143 | 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        |
| 144 | Atomic deuterium adsorbed on the surface of liquid helium. <i>Physical Review A</i> , 2001, 64, .  | 2.5 | 1         |

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|-----|--|-----|-----------|
| 145 | Resonance enhanced two photon spectroscopy of magnetically trapped atomic hydrogen. , 2000, 127, 175-180.                  |     | 1         |
| 146 | Photoassociation of Spin-Polarized Hydrogen. Physical Review Letters, 1999, 82, 307-310.                                   | 7.8 | 46        |
| 147 | Optical Excitation of Atomic Hydrogen Bound to the Surface of Liquid Helium. Physical Review Letters, 1998, 81, 4440-4443. | 7.8 | 19        |
| 148 | Comment on "A New Type of Evaporative Cooling for Neutral Atoms": Physical Review Letters, 1998, 81, 3046-3046.            | 7.8 | 1         |
| 149 | van Putten and Mosk reply. Physics Magazine, 0, 3, .   | 0.1 | 2         |