

Robert Prevedel

List of Publications by Year in descending order

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51
papers

4,329
citations

201674

27
h-index

254184

43
g-index

63
all docs

63
docs citations

63
times ranked

4633
citing authors

#	ARTICLE	IF	CITATIONS
1	Simultaneous whole-animal 3D imaging of neuronal activity using light-field microscopy. <i>Nature Methods</i> , 2014, 11, 727-730.	19.0	672
2	High-speed linear optics quantum computing using active feed-forward. <i>Nature</i> , 2007, 445, 65-69.	27.8	300
3	Brain-wide 3D imaging of neuronal activity in <i>Caenorhabditis elegans</i> with sculpted light. <i>Nature Methods</i> , 2013, 10, 1013-1020.	19.0	293
4	Brillouin microscopy: an emerging tool for mechanobiology. <i>Nature Methods</i> , 2019, 16, 969-977.	19.0	244
5	Demonstration of a Simple Entangling Optical Gate and Its Use in Bell-State Analysis. <i>Physical Review Letters</i> , 2005, 95, 210504.	7.8	222
6	Time-Reversal and Super-Resolving Phase Measurements. <i>Physical Review Letters</i> , 2007, 98, 223601.	7.8	220
7	Experimental Realization of Dicke States of up to Six Qubits for Multiparty Quantum Networking. <i>Physical Review Letters</i> , 2009, 103, 020503.	7.8	211
8	Experimental investigation of the uncertainty principle in the presence of quantum memory and its application to witnessing entanglement. <i>Nature Physics</i> , 2011, 7, 757-761.	16.7	205
9	Aggregation-Induced Emission Luminogen with Near-Infrared-II Excitation and Near-Infrared-I Emission for Ultradeep Intravital Two-Photon Microscopy. <i>ACS Nano</i> , 2018, 12, 7936-7945.	14.6	193
10	High-fidelity transmission of entanglement over a high-loss free-space channel. <i>Nature Physics</i> , 2009, 5, 389-392.	16.7	165
11	Fast volumetric calcium imaging across multiple cortical layers using sculpted light. <i>Nature Methods</i> , 2016, 13, 1021-1028.	19.0	158
12	Efficient quantum computing using coherent photon conversion. <i>Nature</i> , 2011, 478, 360-363.	27.8	122
13	Experimental Realization of Deutsch's Algorithm in a One-Way Quantum Computer. <i>Physical Review Letters</i> , 2007, 98, 140501.	7.8	112
14	Direct detection of a single photon by humans. <i>Nature Communications</i> , 2016, 7, 12172.	12.8	112
15	Experimental three-photon quantum nonlocality under strict locality conditions. <i>Nature Photonics</i> , 2014, 8, 292-296.	31.4	104
16	Quantum computing on encrypted data. <i>Nature Communications</i> , 2014, 5, 3074.	12.8	96
17	Instantaneous isotropic volumetric imaging of fast biological processes. <i>Nature Methods</i> , 2019, 16, 497-500.	19.0	89
18	Recent progress and current opinions in Brillouin microscopy for life science applications. <i>Biophysical Reviews</i> , 2020, 12, 615-624.	3.2	84

#	ARTICLE	IF	CITATIONS
19	High-fidelity entanglement swapping with fully independent sources. <i>Physical Review A</i> , 2009, 79, .	2.5	77
20	Deep learning-enhanced light-field imaging with continuous validation. <i>Nature Methods</i> , 2021, 18, 557-563.	19.0	75
21	Feasibility of 300km quantum key distribution with entangled states. <i>New Journal of Physics</i> , 2009, 11, 085002.	2.9	72
22	High-resolution structural and functional deep brain imaging using adaptive optics three-photon microscopy. <i>Nature Methods</i> , 2021, 18, 1253-1258.	19.0	69
23	Imaging mechanical properties of sub-micron ECM in live zebrafish using Brillouin microscopy. <i>Biomedical Optics Express</i> , 2019, 10, 1420.	2.9	57
24	Experimental realization of a quantum game on a one-way quantum computer. <i>New Journal of Physics</i> , 2007, 9, 205-205.	2.9	54
25	Experimental Demonstration of Decoherence-Free One-Way Information Transfer. <i>Physical Review Letters</i> , 2007, 99, 250503.	7.8	35
26	Dispersion-cancelled biological imaging with quantum-inspired interferometry. <i>Scientific Reports</i> , 2013, 3, 1582.	3.3	32
27	Entanglement-Enhanced Classical Communication Over a Noisy Classical Channel. <i>Physical Review Letters</i> , 2011, 106, 110505.	7.8	28
28	Optimal linear optical implementation of a single-qubit damping channel. <i>New Journal of Physics</i> , 2012, 14, 033016.	2.9	26
29	Intestinal intermediate filament polypeptides in <i>C. elegans</i> : Common and isotype-specific contributions to intestinal ultrastructure and function. <i>Scientific Reports</i> , 2020, 10, 3142.	3.3	23
30	Mechanical mapping of mammalian follicle development using Brillouin microscopy. <i>Communications Biology</i> , 2021, 4, 1133.	4.4	21
31	Photonic entanglement as a resource in quantum computation and quantum communication. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2007, 24, 241.	2.1	20
32	Optimizing and extending light-sculpting microscopy for fast functional imaging in neuroscience. <i>Biomedical Optics Express</i> , 2015, 6, 353.	2.9	18
33	AI-nanoparticle assisted ultra-deep three-photon microscopy in the <i>in vivo</i> mouse brain under 1300 nm excitation. <i>Materials Chemistry Frontiers</i> , 2021, 5, 3201-3208.	5.9	18
34	Classical analog for dispersion cancellation of entangled photons with local detection. <i>Physical Review A</i> , 2011, 84, .	2.5	12
35	Adaptive optics enhanced sensitivity in Fabry-Pérot based photoacoustic tomography. <i>Photoacoustics</i> , 2021, 23, 100276.	7.8	10
36	A 3D Brillouin microscopy dataset of the in-vivo zebrafish eye. <i>Data in Brief</i> , 2020, 30, 105427.	1.0	9

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37	Crossed-crystal scheme for femtosecond-pulsed entangled photon generation in periodically poled potassium titanyl phosphate. <i>Physical Review A</i> , 2014, 89, .	2.5	8
38	Logical independence and quantum randomness. <i>New Journal of Physics</i> , 2010, 12, 013019.	2.9	7
39	Improving the Sensitivity of Planar Fabry-Pérot Cavities via Adaptive Optics and Mode Filtering. <i>Advanced Optical Materials</i> , 2021, 9, 2001337.	7.3	7
40	Intravital mesoscopic fluorescence molecular tomography allows non-invasive in vivo monitoring and quantification of breast cancer growth dynamics. <i>Communications Biology</i> , 2021, 4, 556.	4.4	7
41	Implementation and characterization of active feed-forward for deterministic linear optics quantum computing. <i>Applied Physics B: Lasers and Optics</i> , 2007, 89, 499-505.	2.2	6
42	Using migrating cells as probes to illuminate features in live embryonic tissues. <i>Science Advances</i> , 2020, 6, .	10.3	6
43	Comparing free-space and fiber-coupled detectors for Fabry-Pérot-based all-optical photoacoustic tomography. <i>Journal of Biomedical Optics</i> , 2022, 27, .	2.6	2
44	Entanglement-enhanced classical communication over a noisy classical channel. , 2011, , .		1
45	Cross-compensation of Zernike aberrations in Gaussian beam optics. <i>Optics Letters</i> , 2021, 46, 3480.	3.3	1
46	Comparing Two-Photon Excitation Modalities for Fast, Large-Scale Recording of Neuronal Activity in Rodents. , 2017, , .		1
47	Chirped-pulse interferometry for dispersion-cancelled OCT. , 2011, , .		0
48	Whole-brain dynamics of neuronal circuits enabled by sculpted light and light field microscopy. , 2015, , .		0
49	Sculpted Light Microscopy for High-Speed Imaging of Neuronal Activity. , 2015, , .		0
50	Instantaneous isotropic volumetric imaging of fast biological processes. , 2019, , .		0
51	Longitudinal monitoring of in-vivo mice mammary tumor progression using intravital fluorescence tomography and optical coherence tomography. , 2019, , .		0