Dirk Englund

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

114 papers	11,131 citations	53 h-index	105 g-index
163 ext. papers	14,465 ext. citations	11.5 avg, IF	6.52 L-index

#	Paper	IF	Citations
114	High-speed programmable photonic circuits in a cryogenically compatible, visible–near-infrared 200 mm CMOS architecture. *Nature Photonics*, **2022**, 16, 59-65	33.9	13
113	The potential and global outlook of integrated photonics for quantum technologies. *Nature Reviews Physics*, **2022**, 4, 194-208	23.6	20
112	2D materials-enabled optical modulators: From visible to terahertz spectral range. *Applied Physics Reviews*, **2022**, 9, 021302	17.3	2
111	Piezo-optomechanical cantilever modulators for VLSI visible photonics. *APL Photonics*, **2022**, 7, 051304	5.2	1
110	Universal linear optics by programmable multimode interference. *Optics Express*, **2021**, 29, 38257-38267	3.3	1
109	Field-based design of a resonant dielectric antenna for coherent spin-photon interfaces. *Optics Express*, **2021**, 29, 16469-16476	3.3	3
108	Development of Quantum Interconnects (QuICs) for Next-Generation Information Technologies. *PRX Quantum*, **2021**, 2,	6.1	46
107	Freely scalable and reconfigurable optical hardware for deep learning. *Scientific Reports*, **2021**, 11, 3144	4.9	11
106	Quantum networks based on color centers in diamond. *Journal of Applied Physics*, **2021**, 130, 070901	2.5	13
105	Hardware error correction for programmable photonics. *Optica*, **2021**, 8, 1247	8.6	13
104	Large-scale integration of artificial atoms in hybrid photonic circuits. *Nature*, **2020**, 583, 226-231	50.4	90
103	Transform-Limited Photons From a Coherent Tin-Vacancy Spin in Diamond. *Physical Review Letters*, **2020**, 124, 023602	7.4	56
102	Heuristic recurrent algorithms for photonic Ising machines. *Nature Communications*, **2020**, 11, 249	17.4	31
101	Strain-Correlated Localized Exciton Energy in Atomically Thin Semiconductors. *ACS Photonics*, **2020**, 7, 1135-1140	6.3	14
100	Hybrid integration methods for on-chip quantum photonics. *Optica*, **2020**, 7, 291	8.6	77
99	Variational quantum unsampling on a quantum photonic processor. *Nature Physics*, **2020**, 16, 322-327	16.2	29
98	Programmable photonic circuits. *Nature*, **2020**, 586, 207-216	50.4	151

97	Inference in artificial intelligence with deep optics and photonics. *Nature*, **2020**, 588, 39-47	50.4	114
96	Bright High-Purity Quantum Emitters in Aluminum Nitride Integrated Photonics. *ACS Photonics*, **2020**, 7, 2650-2657	6.3	15
95	Advances in quantum light emission from 2D materials. *Nanophotonics*, **2019**, 8, 2017-2032	6.3	36
94	Experimental investigation of performance differences between coherent Ising machines and a quantum annealer. *Science Advances*, **2019**, 5, eaau0823	14.3	94
93	Cascaded Cavities Boost the Indistinguishability of Imperfect Quantum Emitters. *Physical Review Letters*, **2019**, 122, 183602	7.4	18
92	Top-down fabrication of high-uniformity nanodiamonds by self-assembled block copolymer masks. *Scientific Reports*, **2019**, 9, 6914	4.9	7
91	Large-Scale Optical Neural Networks Based on Photoelectric Multiplication. *Physical Review X*, **2019**, 9,	9.1	72
90	Percolation thresholds for photonic quantum computing. *Nature Communications*, **2019**, 10, 1070	17.4	14
89	Lead-related quantum emitters in diamond. *Physical Review B*, **2019**, 99,	3.3	57
88	Heterogeneous Integration of 2D Materials and Devices on a Si Platform **2019**, 43-84		2
87	Quantum optical neural networks. *Npj Quantum Information*, **2019**, 5,	8.6	57
86	Integration of single photon emitters in 2D layered materials with a silicon nitride photonic chip. *Nature Communications*, **2019**, 10, 4435	17.4	92
85	Quantum Materials with Atomic Precision: Artificial Atoms in Solids: Ab Initio Design, Control, and Integration of Single Photon Emitters in Artificial Quantum Materials. *Advanced Functional Materials*, **2019**, 29, 1904557	15.6	9
84	Scalable feedback control of single photon sources for photonic quantum technologies. *Optica*, **2019**, 6, 335	8.6	10
83	Variational Quantum Unsampling on a Programmable Nanophotonic Processor **2019**,		1
82	Thermal radiation control from hot graphene electrons coupled to a photonic crystal nanocavity. *Nature Communications*, **2019**, 10, 109	17.4	51
81	Photophysics of GaN single-photon emitters in the visible spectral range. *Physical Review B*, **2018**, 97,	3.3	22
80	Ultrafast Graphene Light Emitters. *Nano Letters*, **2018**, 18, 934-940	11.5	75

79	Material platforms for spin-based photonic quantum technologies. *Nature Reviews Materials*, **2018**, 3, 38-51	73.3	272
78	Efficient Extraction of Light from a Nitrogen-Vacancy Center in a Diamond Parabolic Reflector. *Nano Letters*, **2018**, 18, 2787-2793	11.5	41
77	Quantum photonics model for nonclassical light generation using integrated nanoplasmonic cavity-emitter systems. *Physical Review A*, **2018**, 97,	2.6	7
76	Fast thermal relaxation in cavity-coupled graphene bolometers with a Johnson noise read-out. *Nature Nanotechnology*, **2018**, 13, 797-801	28.7	42
75	Percolation Based Cluster State Generation by Photon-Mediated Entanglement **2018**,		3
74	Linear programmable nanophotonic processors. *Optica*, **2018**, 5, 1623	8.6	113
73	Active 2D materials for on-chip nanophotonics and quantum optics. *Nanophotonics*, **2017**, 6, 1329-1342	6.3	28
72	Quantum transport simulations in a programmable nanophotonic processor. *Nature Photonics*, **2017**, 11, 447-452	33.9	211
71	Scalable focused ion beam creation of nearly lifetime-limited single quantum emitters in diamond nanostructures. *Nature Communications*, **2017**, 8, 15376	17.4	102
70	Deep learning with coherent nanophotonic circuits. *Nature Photonics*, **2017**, 11, 441-446	33.9	860
69	A tunable waveguide-coupled cavity design for scalable interfaces to solid-state quantum emitters. *APL Photonics*, **2017**, 2, 046103	5.2	10
68	Rate-distance tradeoff and resource costs for all-optical quantum repeaters. *Physical Review A*, **2017**, 95,	2.6	60
67	Fiber-Coupled Diamond Micro-Waveguides toward an Efficient Quantum Interface for Spin Defect Centers. *ACS Omega*, **2017**, 2, 7194-7202	3.9	6
66	Chalcogenide glass-on-graphene photonics. *Nature Photonics*, **2017**, 11, 798-805	33.9	125
65	Tunable and high-purity room temperature single-photon emission from atomic defects in hexagonal boron nitride. *Nature Communications*, **2017**, 8, 705	17.4	226
64	A MoTe-based light-emitting diode and photodetector for silicon photonic integrated circuits. *Nature Nanotechnology*, **2017**, 12, 1124-1129	28.7	229
63	Graphene-Based Josephson-Junction Single-Photon Detector. *Physical Review Applied*, **2017**, 8,	4.3	47
62	Hybrid Integration of Solid-State Quantum Emitters on a Silicon Photonic Chip. *Nano Letters*, **2017**, 17, 7394-7400	11.5	95

61	Rectangular photonic crystal nanobeam cavities in bulk diamond. *Applied Physics Letters*, **2017**, 111, 021103	3.4	39
60	Self-Similar Nanocavity Design with Ultrasmall Mode Volume for Single-Photon Nonlinearities. *Physical Review Letters*, **2017**, 118, 223605	7.4	93
59	Integrated nanoplasmonic quantum interfaces for room-temperature single-photon sources. *Physical Review B*, **2017**, 96,	3.3	7
58	Programmable dispersion on a photonic integrated circuit for classical and quantum applications. *Optics Express*, **2017**, 25, 21275-21285	3.3	14
57	Programmable Nanophotonics for Quantum Simulation and Machine Learning **2017**,		1
56	Large-scale quantum photonic circuits in silicon. *Nanophotonics*, **2016**, 5, 456-468	6.3	75
55	Solid-state single-photon emitters. *Nature Photonics*, **2016**, 10, 631-641	33.9	804
54	Bright and photostable single-photon emitter in silicon carbide. *Optica*, **2016**, 3, 768	8.6	53
53	On-chip detection of non-classical light by scalable integration of single-photon detectors. *Nature Communications*, **2015**, 6, 5873	17.4	176
52	Efficient photon collection from a nitrogen vacancy center in a circular bullseye grating. *Nano Letters*, **2015**, 15, 1493-7	11.5	112
51	One-dimensional photonic crystal cavities in single-crystal diamond. *Photonics and Nanostructures - Fundamentals and Applications*, **2015**, 15, 130-136	2.6	17
50	Photonic crystal cavity-assisted upconversion infrared photodetector. *Optics Express*, **2015**, 23, 12998-13004	3.3	9
49	High-Responsivity Graphene-Boron Nitride Photodetector and Autocorrelator in a Silicon Photonic Integrated Circuit. *Nano Letters*, **2015**, 15, 7288-93	11.5	140
48	High-fidelity quantum state evolution in imperfect photonic integrated circuits. *Physical Review A*, **2015**, 92,	2.6	45
47	High-speed electro-optic modulator integrated with graphene-boron nitride heterostructure and photonic crystal nanocavity. *Nano Letters*, **2015**, 15, 2001-5	11.5	111
46	Coherent spin control of a nanocavity-enhanced qubit in diamond. *Nature Communications*, **2015**, 6, 6173	17.4	119
45	Scalable fabrication of high purity diamond nanocrystals with long-spin-coherence nitrogen vacancy centers. *Nano Letters*, **2014**, 14, 32-6	11.5	56
44	Broadband Coherent Absorption in Chirped-Planar-Dielectric Cavities for 2D-Material-Based Photovoltaics and Photodetectors. *ACS Photonics*, **2014**, 1, 768-774	6.3	80

43	Controlled Light–Matter Interaction in Graphene Electrooptic Devices Using Nanophotonic Cavities and Waveguides. *IEEE Journal of Selected Topics in Quantum Electronics*, **2014**, 20, 95-105	3.8	16
42	Targeted creation and Purcell enhancement of NV centers within photonic crystal cavities in single-crystal diamond **2014**,		2
41	Integrated Source of Spectrally Filtered Correlated Photons for Large-Scale Quantum Photonic Systems. *Physical Review X*, **2014**, 4,	9.1	85
40	Fabrication of triangular nanobeam waveguide networks in bulk diamond using single-crystal silicon hard masks. *Applied Physics Letters*, **2014**, 105, 211101	3.4	31
39	Efficient, compact and low loss thermo-optic phase shifter in silicon. *Optics Express*, **2014**, 22, 10487-93	3.3	174
38	Waveguide-integrated photonic crystal spectrometer with camera readout. *Applied Physics Letters*, **2014**, 105, 051103	3.4	11
37	On-chip graphene optoelectronic devices for high-speed modulation and photodetection **2014**,		1
36	Enhanced photodetection in graphene-integrated photonic crystal cavity. *Applied Physics Letters*, **2013**, 103, 241109	3.4	61
35	Chip-integrated ultrafast graphene photodetector with high responsivity. *Nature Photonics*, **2013**, 7, 883-887	33.9	768
34	High-contrast electrooptic modulation of a photonic crystal nanocavity by electrical gating of graphene. *Nano Letters*, **2013**, 13, 691-6	11.5	151
33	Controlling the spontaneous emission rate of monolayer MoS in a photonic crystal nanocavity. *Applied Physics Letters*, **2013**, 103, 181119	3.4	155
32	Nanophotonic filters and integrated networks in flexible 2D polymer photonic crystals. *Scientific Reports*, **2013**, 3, 2145	4.9	20
31	Ultrafast photon-photon interaction in a strongly coupled quantum dot-cavity system. *Physical Review Letters*, **2012**, 108, 093604	7.4	131
30	All Optical Switching With a Single Quantum Dot Strongly Coupled to a Photonic Crystal Cavity. *IEEE Journal of Selected Topics in Quantum Electronics*, **2012**, 18, 1812-1817	3.8	28
29	Strong enhancement of light-matter interaction in graphene coupled to a photonic crystal nanocavity. *Nano Letters*, **2012**, 12, 5626-31	11.5	204
28	A high-resolution spectrometer based on a compact planar two dimensional photonic crystal cavity array. *Applied Physics Letters*, **2012**, 100, 231104	3.4	48
27	Nonlinear temporal dynamics of a strongly coupled quantum-dot–cavity system. *Physical Review A*, **2012**, 85,	2.6	38
26	Integrated quantum optical networks based on quantum dots and photonic crystals. *New Journal of Physics*, **2011**, 13, 055025	2.9	75

25	Linewidth broadening of a quantum dot coupled to an off-resonant cavity. *Physical Review B*, **2010**, 82,	3.3	37
24	Resonant excitation of a quantum dot strongly coupled to a photonic crystal nanocavity. *Physical Review Letters*, **2010**, 104, 073904	7.4	143
23	Spontaneous Emission Control in a Plasmonic Structure **2010**, 1-26		
22	Deterministic coupling of a single nitrogen vacancy center to a photonic crystal cavity. *Nano Letters*, **2010**, 10, 3922-6	11.5	267
21	Time-resolved lasing action from single and coupled photonic crystal nanocavity array lasers emitting in the telecom band. *Journal of Applied Physics*, **2009**, 105, 093110	2.5	5
20	Quantum dots in photonic crystals: From quantum information processing to single photon nonlinear optics. *Photonics and Nanostructures - Fundamentals and Applications*, **2009**, 7, 56-62	2.6	16
19	High-brightness single photon source from a quantum dot in a directional-emission nanocavity. *Optics Express*, **2009**, 17, 14618-26	3.3	89
18	Electrically controlled modulation in a photonic crystal nanocavity. *Optics Express*, **2009**, 17, 15409-19	3.3	18
17	An optical modulator based on a single strongly coupled quantum dot--cavity system in a p-i-n junction. *Optics Express*, **2009**, 17, 18651-8	3.3	15
16	Physics and Applications of Quantum Dots in Photonic Crystals. *Nanoscience and Technology*, **2009**, 299-320		1
15	Coherent generation of non-classical light on a chip via photon-induced tunnelling and blockade. *Nature Physics*, **2008**, 4, 859-863	16.2	403
14	Dipole induced transparency in waveguide coupled photonic crystal cavities. *Optics Express*, **2008**, 16, 12154-62	3.3	92
13	Controlled phase shifts with a single quantum dot. *Science*, **2008**, 320, 769-72	33.3	325
12	Ultrafast photonic crystal nanocavity lasers and optical switches **2008**,		1
11	Probing the interaction between a single quantum dot and a photonic crystal cavity. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2008**, 5, 2808-2815		2
10	Controlling cavity reflectivity with a single quantum dot. *Nature*, **2007**, 450, 857-61	50.4	459
9	Local quantum dot tuning on photonic crystal chips. *Applied Physics Letters*, **2007**, 90, 213110	3.4	83
8	Efficient terahertz room-temperature photonic crystal nanocavity laser. *Applied Physics Letters*, **2007**, 91, 071126	3.4	13

7	Generation and transfer of single photons on a photonic crystal chip. *Optics Express*, **2007**, 15, 5550-8	3.3	117
6	Efficient photonic crystal cavity-waveguide couplers. *Applied Physics Letters*, **2007**, 90, 073102	3.4	122
5	Low-threshold surface-passivated photonic crystal nanocavity laser. *Applied Physics Letters*, **2007**, 91, 071124	3.4	42
4	Dynamics of quantum dot photonic crystal lasers. *Applied Physics Letters*, **2007**, 90, 151102	3.4	24
3	Ultrafast photonic crystal nanocavity laser. *Nature Physics*, **2006**, 2, 484-488	16.2	402
2	Generation and manipulation of nonclassical light using photonic crystals. *Physica E: Low-Dimensional Systems and Nanostructures*, **2006**, 32, 466-470	3	20
1	Controlling the spontaneous emission rate of single quantum dots in a two-dimensional photonic crystal. *Physical Review Letters*, **2005**, 95, 013904	7.4	684