Harish Subbaraman

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1002413/publications.pdf

Version: 2024-02-01

147 papers	2,865 citations	147726 31 h-index	182361 51 g-index
147 all docs	147 docs citations	147 times ranked	2998 citing authors

#	Article	IF	Citations
1	Recent advances in silicon-based passive and active optical interconnects. Optics Express, 2015, 23, 2487.	1.7	234
2	Spiral Photonic Crystal Fiber-Based Dual-Polarized Surface Plasmon Resonance Biosensor. IEEE Sensors Journal, 2018, 18, 133-140.	2.4	216
3	On-chip silicon optical phased array for two-dimensional beam steering. Optics Letters, 2014, 39, 941.	1.7	149
4	All ink-jet-printed carbon nanotube thin-film transistor on a polyimide substrate with an ultrahigh operating frequency of over 5 GHz. Applied Physics Letters, 2008, 93, .	1.5	139
5	Complementary metalâ€“oxideâ€“semiconductor compatible high efficiency subwavelength grating couplers for silicon integrated photonics. Applied Physics Letters, 2012, 101, .	1.5	113
6	Integrated Photonic Electromagnetic Field Sensor Based on Broadband Bowtie Antenna Coupled Silicon Organic Hybrid Modulator. Journal of Lightwave Technology, 2014, 32, 3774-3784.	2.7	113
7	Polymer-Based Hybrid-Integrated Photonic Devices for Silicon On-Chip Modulation and Board-Level Optical Interconnects. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 196-210.	1.9	86
8	Novel Printed Filtenna With Dual Notches and Good Out-of-Band Characteristics for UWB-MIMO Applications. IEEE Microwave and Wireless Components Letters, 2016, 26, 765-767.	2.0	83
9	High Performance Optical Modulator Based on Electro-Optic Polymer Filled Silicon Slot Photonic Crystal Waveguide. Journal of Lightwave Technology, 2016, 34, 2941-2951.	2.7	81
10	Printed photonic elements: nanoimprinting and beyond. Journal of Materials Chemistry C, 2016, 4, 5133-5153.	2.7	71
11	Low-cost board-to-board optical interconnects using molded polymer waveguide with 45 degree mirrors and inkjet-printed micro-lenses as proximity vertical coupler. Optics Express, 2013, 21, 60.	1.7	63
12	Inkjet-Printed Two-Dimensional Phased-Array Antenna on a Flexible Substrate. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 170-173.	2.4	63
13	Inkjet Printing of High Performance Transistors with Micron Order Chemically Set Gaps. Scientific Reports, 2017, 7, 1202.	1.6	58
14	Grating-coupled silicon-on-sapphire integrated slot waveguides operating at mid-infrared wavelengths. Optics Letters, 2014, 39, 3070.	1.7	55
15	A Review of Inkjet Printed Graphene and Carbon Nanotubes Based Gas Sensors. Sensors, 2020, 20, 5642.	2.1	53
16	On the role of evanescent modes and group index tapering in slow light photonic crystal waveguide coupling efficiency. Applied Physics Letters, 2011, 98, .	1.5	49
17	Photonic Crystal Fiber-Based True-Time-Delay Beamformer for Multiple RF Beam Transmission and Reception of an X-Band Phased-Array Antenna. Journal of Lightwave Technology, 2008, 26, 2803-2809.	2.7	46
18	Ultraviolet imprinting and aligned ink-jet printing for multilayer patterning of electro-optic polymer modulators. Optics Letters, 2013, 38, 1597.	1.7	44

#	Article	IF	Citations
19	Stamp printing of silicon-nanomembrane-based photonic devices onto flexible substrates with a suspended configuration. Optics Letters, 2012, 37, 1020.	1.7	43
20	Colorless grating couplers realized by interleaving dispersion engineered subwavelength structures. Optics Letters, 2013, 38, 3588.	1.7	42
21	Low loss and flat dispersion Kagome photonic crystal fiber in the terahertz regime. Optics Communications, 2018, 410, 452-456.	1.0	42
22	Highly efficient mode converter for coupling light into wide slot photonic crystal waveguide. Optics Express, 2014, 22, 20678.	1.7	41
23	1Ã— N Multimode Interference Beam Splitter Design Techniques for On-Chip Optical Interconnections. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 510-515.	1.9	40
24	Large optical spectral range dispersion engineered silicon-based photonic crystal waveguide modulator. Optics Express, 2012, 20, 12318.	1.7	39
25	Conformal Ink-Jet Printed C-Band Phased-Array Antenna Incorporating Carbon Nanotube Field-Effect Transistor Based Reconfigurable True-Time Delay Lines. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 179-184.	2.9	38
26	Observation of Third-order Nonlinearities in Graphene Oxide Film at Telecommunication Wavelengths. Scientific Reports, 2017, 7, 9646.	1.6	38
27	Silicon nanomembrane based photonic crystal waveguide array for wavelength-tunable true-time-delay lines. Applied Physics Letters, 2012, 101, 051101.	1.5	36
28	Printable thermo-optic polymer switches utilizing imprinting and ink-jet printing. Optics Express, 2013, 21, 2110.	1.7	36
29	Flexible Single-Crystal Silicon Nanomembrane Photonic Crystal Cavity. ACS Nano, 2014, 8, 12265-12271.	7.3	35
30	One-dimensional photonic crystal slot waveguide for silicon-organic hybrid electro-optic modulators. Optics Letters, 2016, 41, 5466.	1.7	35
31	Geometrical tuning art for entirely subwavelength grating waveguide based integrated photonics circuits. Scientific Reports, 2016, 6, 24106.	1.6	35
32	Optimum access waveguide width for 1Ã—N multimode interference couplers on silicon nanomembrane. Optics Letters, 2010, 35, 2864.	1.7	31
33	Photonic Crystal Fiber Beamformer for Multiple X-Band Phased-Array Antenna Transmissions. IEEE Photonics Technology Letters, 2008, 20, 375-377.	1.3	30
34	Group-index independent coupling to band engineered SOI photonic crystal waveguide with large slow-down factor. Optics Express, 2011, 19, 21832.	1.7	30
35	Efficient light coupling into in-plane semiconductor nanomembrane photonic devices utilizing a sub-wavelength grating coupler. Optics Express, 2012, 20, 20659.	1.7	29
36	Design of Highly Efficient Hybrid Si-Au Taper for Dielectric Strip Waveguide to Plasmonic Slot Waveguide Mode Converter. Journal of Lightwave Technology, 2015, 33, 535-540.	2.7	29

#	Article	IF	Citations
37	Design of a broadband highly dispersive pure silica photonic crystal fiber. Applied Optics, 2007, 46, 3263.	2.1	28
38	Low Loss and Low Dispersion Fiber for Transmission Applications in the Terahertz Regime. IEEE Photonics Technology Letters, 2017, 29, 830-833.	1.3	28
39	Towards Realizing High-Throughput, Roll-to-Roll Manufacturing of Flexible Electronic Systems. Electronics (Switzerland), 2014, 3, 624-635.	1.8	26
40	Light Weight and Conformal 2-Bit, 1$,imes,$4 Phased-Array Antenna With CNT-TFT-Based Phase Shifter on a Flexible Substrate. IEEE Transactions on Antennas and Propagation, 2011, 59, 4553-4558.	3.1	25
41	Polarization filter realization using low-loss hollow-core anti-resonant fiber in THz regime. Results in Physics, 2020, 17, 103092.	2.0	24
42	Transfer of micro and nano-photonic silicon nanomembrane waveguide devices on flexible substrates. Optics Express, 2010, 18, 20086.	1.7	22
43	Integrated Broadband Bowtie Antenna on Transparent Silica Substrate. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 1377-1381.	2.4	22
44	A Highly Sensitive, Polarization Maintaining Photonic Crystal Fiber Sensor Operating in the THz Regime. Photonics, 2018, 5, 40.	0.9	22
45	Silicon-Based Hybrid Integrated Photonic Chip for K ${}_{u}$ band Electromagnetic Wave Sensing. Journal of Lightwave Technology, 2018, 36, 1568-1575.	2.7	21
46	Microfluidic channels with ultralow-loss waveguide crossings for various chip-integrated photonic sensors. Optics Letters, 2015, 40, 1563.	1.7	19
47	Inkjet-Printed Graphene-Based 1 Ã— 2 Phased Array Antenna. Micromachines, 2020, 11, 863.	1.4	18
48	Fully inkjet-printed multilayered graphene-based flexible electrodes for repeatable electrochemical response. RSC Advances, 2020, 10, 38205-38219.	1.7	17
49	Self-Aligned Carbon Nanotube Thin-Film Transistors on Flexible Substrates With Novel Sourceâ€“Drain Contact and Multilayer Metal Interconnection. IEEE Nanotechnology Magazine, 2012, 11, 44-50.	1.1	16
50	Quasi-vertical tapers for polymer-waveguide-based interboard optical interconnects. Photonics Research, 2015, 3, 317.	3.4	15
51	Generating Concentrically Embedded Spatially Divided OAM Carrying Vortex Beams Using Transmitarrays. IEEE Transactions on Antennas and Propagation, 2021, 69, 8436-8448.	3.1	14
52	Photonic dual RF beam reception of an X band phased array antenna using a photonic crystal fiber-based true-time-delay beamformer. Applied Optics, 2008, 47, 6448.	2.1	9
53	Fully printed phased-array antenna for space communications. Proceedings of SPIE, 2009, , .	0.8	9
54	One stage pulse compression at 1554nm through highly anomalous dispersive photonic crystal fiber. Optics Express, 2011, 19, 21809.	1.7	9

#	Article	IF	Citations
55	Phase change in Geâ€“Se chalcogenide glasses and its implications on optical temperature-sensing devices. Journal of Materials Science: Materials in Electronics, 2020, 31, 11211-11226.	1.1	9
56	Large Area Silicon Nanomembrane Photonic Devices on Unconventional Substrates. IEEE Photonics Technology Letters, 2013, 25, 1601-1604.	1.3	8
57	Modeling of the Creation of an Internal Cladding in Sapphire Optical Fiber Using the ⁶ Li(n,Î±)³H Reaction. Journal of Lightwave Technology, 2018, 36, 5381-5387.	2.7	7
58	High Speed Roll-to-Roll Printable Transistor Enabled by a Pulsed Light Curable CNT Ink. Journal of Manufacturing and Materials Processing, 2019, 3, 33.	1.0	7
59	Chalcogenide Glass-Capped Fiber-Optic Sensor for Real-Time Temperature Monitoring in Extreme Environments. Sensors, 2021, 21, 1616.	2.1	7
60	Metrology and instrumentation challenges with high-rate, roll-to-roll manufacturing of flexible electronic systems. Proceedings of SPIE, 2012, , .	0.8	6
61	Broadband Low-power Optical Modulator Based on Electro-optic Polymer Infiltrated Silicon Slot Photonic Crystal Waveguide. , 2014, , .		6
62	Reconfigurable Thermo-Optic Polymer Switch Based True-Time-Delay Network Utilizing Imprinting and Inkjet Printing. , 2014, , .		6
63	X-band printed phased array antennas using high-performance CNT/ion gel/Ag transistors. , 2016, , .		6
64	All-Printed Thin-Film Transistor Based on Purified Single-Walled Carbon Nanotubes with Linear Response. Journal of Nanotechnology, 2011, 2011, 1-4.	1.5	5
65	A 3µm channel, ink-jet printed CNT-TFT for phased array antenna applications. , 2013, , .		5
66	Bending tests of carbon nanotube thin-film transistors on flexible substrate. , 2010, , .		4
67	Design of a plasmonic-organic hybrid slot waveguide integrated with a bowtie-antenna for terahertz wave detection. Proceedings of SPIE, 2016, , .	0.8	4
68	Numerical Analysis of Radiation Effects on Fiber Optic Sensors. Sensors, 2021, 21, 4111.	2.1	4
69	Differently Structured Fabry-Perot Interferometers for Gas Pressure Monitoring. IEEE Sensors Journal, 2022, 22, 14102-14108.	2.4	4
70	Low dispersion slow light in silicon-on-insulator photonic crystal waveguide. , 2010, , .		3
71	Antenna-coupled silicon-organic hybrid integrated photonic crystal modulator for broadband electromagnetic wave detection. Proceedings of SPIE, 2015, , .	0.8	3
72	Electric Field Detection Using an Electro-optic Polymer Refilled Silicon Slot Photonic Crystal Waveguide. , 2014, , .		3

#	Article	IF	Citations
73	Dual-concentric-core Photonic Crystal Fiber with â˜’5400ps/nm/km Dispersion Coefficient. , 2009, , .		3
74	Silicon-organic Hybrid Electro-optic Modulator Based on One-dimensional Photonic Crystal Slot Waveguides. , 2016, , .		3
75	Towards the design of a wideband reflective long period grating distributed sensor. Journal of Physics Communications, 2020, 4, 065015.	0.5	3
76	A novel tri-band reconfigurable microstrip patch antenna. Frequenz, 2020, 74, 247-253.	0.6	3
77	Active Compensation of Radiation Effects on Optical Fibers for Sensing Applications. Sensors, 2021, 21, 8193.	2.1	3
78	Reply to Comment on â€œDesign of a broadband highly dispersive pure silica photonic crystal fiberâ€• Applied Optics, 2008, 47, 3330.	2.1	2
79	Phase shifter using carbon nanotube thin-film transistor for flexible phased-array antenna. Proceedings of SPIE, 2011, , .	0.8	2
80	Transfer and characterization of silicon nanomembrane-based photonic devices on flexible polyimide substrate. , 2011, , .		2
81	CMOS compatible subwavelength grating couplers for silicon integrated photonics. , 2012, , .		2
82	Reconfigurable thermo-optic polymer switch based true-time-delay network utilizing imprinting and inkjet printing. , 2015, , .		2
83	High optical coupling efficiency quasi-vertical taper for polymer waveguide devices. Proceedings of SPIE, 2015, , .	0.8	2
84	One-dimensional photonic crystal slot waveguide for silicon-organic hybrid electro-optic modulators. , 2017, , .		2
85	Materials Characterization of Thin Films Printed with Ge20Se80 Ink. Microscopy and Microanalysis, 2019, 25, 2606-2607.	0.2	2
86	Simultaneous Dual RF Beam Reception of an X-Band Phased Array Antenna Utilizing Highly Dispersive Photonic Crystal Fiber Based True-Time-Delay. , 2008, , .		2
87	Experimental validation of a reflective long period grating design methodology. Results in Optics, 2022, 7, 100224.	0.9	2
88	Spurious-Free Dynamic Range (SFDR) improvement in a true-time-delay system based on highly dispersive photonic crystal fiber. , 2009, , .		1
89	Flexible In-plane Photonic Devices Based on Transferrable Si Nanomembranes on Polyimide Film. Journal of Physics: Conference Series, 2011, 276, 012096.	0.3	1
90	Si photonic crystal waveguide based delay lines. Proceedings of SPIE, 2012, , .	0.8	1

#	Article	IF	Citations
91	Stamp Printing of Silicon Nanomembrane Based Flexible Photonic Devices. , 2012, , .		1
92	Towards high-rate fabrication of photonic devices utilizing a combination of roll-to-roll compatible imprint lithography and ink jet printing methods. , 2013, , .		1
93	Large area transferred silicon nanomembrane photonic devices on unconventional substrates. , 2013, , .		1
94	Board-to-board optical interconnects utilizing molded embedded 45 degree mirrors and print-on-demand micro-lenses as proximity vertical coupler. Proceedings of SPIE, 2013, , .	0.8	1
95	Methods to array photonic crystal microcavities for high throughput high sensitivity biosensing on a silicon-chip based platform. Proceedings of SPIE, 2014, , .	0.8	1
96	Electro-optic Polymer Infiltrated Silicon Slot Photonic Crystal Waveguide for Broadband Electromagnetic Field Sensing. , 2014, , .		1
97	Integrated strip and slot waveguides in silicon-on-sapphire for mid infrared VOC detection in water. , 2014, , .		1
98	Towards roll-to-roll manufacturing of polymer photonic devices. Proceedings of SPIE, 2014, , .	0.8	1
99	Ultralow-loss waveguide crossings for the integration of microfluidics and optical waveguide sensors. Proceedings of SPIE, 2015, , .	0.8	1
100	Broadband energy-efficient optical modulation by hybrid integration of silicon nanophotonics and organic electro-optic polymer. Proceedings of SPIE, 2015, , .	0.8	1
101	RF beam transmission of x-band PAA system utilizing large-area, polymer-based true-time-delay module developed using imprinting and inkjet printing. , 2016, , .		1
102	Towards a fully packaged high-performance RF sensor featuring slotted photonic crystal waveguides. , 2016, , .		1
103	Printed polymer photonic devices for optical interconnect systems. , 2016, , .		1
104	Reflective long period grating based temperature sensor. , 2021, , .		1
105	Printable EO-Polymer Modulators. , 2013, , .		1
106	Wideband Electromagnetic Wave Sensing Using Electro-optic Polymer Infiltrated Silicon Slot Photonic Crystal Waveguide. , 2014, , .		1
107	Role of Metal Coating Parameters on the Reflective Long Period Grating Spectrum. , 2019, , .		1
108	Aerosol Jet Printing of Ti3C2 Mxene Aqueous Ink. ECS Meeting Abstracts, 2019, , .	0.0	1

#	Article	IF	Citations
109	A simple and cost-effective metal coating method for reflective long period grating sensors. , 2020, , .		1
110	Simulation of 2D Model of Dielectric Barrier Discharge for Flexible Hybrid Electronics. , 2021, , .		1
111	Real-time measurement of parametric influences on the refractive index and length changes in silica optical fibers. Optics Express, 2022, 30, 15659.	1.7	1
112	Highly dispersive photonic crystal fiber for beamforming. Proceedings of SPIE, 2007, , .	0.8	0
113	Silicon nano- and micro-photonic devices. , 2009, , .		0
114	Modified slab photonic crystal structure for delay time enhancement using capsule shaped holes. , 2009, , .		0
115	Demonstration of compact 2×2 multimode interference coupler on silicon nanomembrane. , 2010, , .		0
116	On the Mechanism of Efficient Coupling into Slow Light Photonic Crystal Waveguides. , 2011, , .		0
117	Silicon nanomembranes for high-performance flexible photonic interconnects and devices. Proceedings of SPIE, 2012, , .	0.8	0
118	Extremely low V<inf>π</inf>×L slow light photonic crystal modulator with GHz bandwidth. , 2012, , .		0
119	2D silicon-based surface-normal vertical cavity photonic crystal waveguide array for high-density optical interconnects. Proceedings of SPIE, 2013, , .	0.8	0
120	Intra- and inter- board optical interconnects by polymeric waveguides and mirror coupler with inkjet-printed micro-lenses. , 2013, , .		0
121	Inkjet printing of carrier transport layers for inverted organic solar cells. Proceedings of SPIE, 2013, , .	0.8	0
122	Silicon nanomembrane based photonic crystal waveguide true-time-delay lines on a glass substrate. , 2013, , .		0
123	Subwavelength grating couplers for efficient light coupling into silicon nanomembrane based photonic devices. , 2013, , .		0
124	Colorless Grating Couplers Realized by Interleaving Dispersion Engineered Subwavelength Structures. , 2013, , .		0
125	High-performance conformal sensors employing single-crystal silicon nanomembranes. Proceedings of SPIE, 2014, , .	0.8	0
126	Micro-fluid Channel Based on Ultralow-loss Silicon Crossing Waveguide for Various Sensing. , 2014, , .		0

#	Article	IF	Citations
127	Optimization of highly efficient mode converter for coupling light into large-slot photonic crystal waveguide. , 2014, , .		0
128	Silicon nanomembrane-based compact true-time-delay module on unconventional substrates. , 2014, , .		0
129	Backside-gate-assisted broadband modulation on silicon-polymer hybrid photonic crystal waveguide. , 2015, , .		0
130	Integrated broadband bowtie antenna on transparent substrate. Proceedings of SPIE, 2015, , .	0.8	0
131	Bending behavior of a flexible single crystal nanomembrane photonic crystal cavity. , 2015, , .		0
132	Low-loss mode converter for coupling light into slotted photonic crystal waveguide. Proceedings of SPIE, 2015, , .	0.8	0
133	Ultra-compact electromagnetic wave sensor featuring electro-optics polymer infiltrated one-dimensional photonic-crystal-slotted waveguide (Conference Presentation). , 2017, , .		0
134	High speed attojoule/bit passive and active nanophotonic devices for computing and optical interconnects (Conference Presentation). , 2017, , .		0
135	CMOS Compatible, High Efficiency Subwavelength Grating Couplers for Silicon Integrated Photonics. , 2012, , .		0
136	Wavelength-Tunable on-Chip True Time Delay Lines Based on Photonic Crystal Waveguides for X-Band Phased Array Antenna Applications. , 2012, , .		0
137	Polymeric Thermo-Optic Switch with Imprinting and Print-on-Demand Technology. , 2013, , .		0
138	Silicon Nanomembrane Based Photonic Devices on Foreign Substrates. , 2013, , .		0
139	Polymeric Micro-Lenses Aided Free Space Optical Interconnects. , 2013, , .		0
140	Flexible Crystalline Silicon Nanomembrane Photonic Crystal Microcavity. , 2014, , .		0
141	High-speed Energy-efficient Silicon-polymer Hybrid Integrated Slot Photonic Crystal Waveguide Modulator. , 2015, , .		0
142	Bending Behavior of Flexible Crystalline Silicon Nanomembrane Photonic Crystal Microcavities. , 2015, , .		0
143	Low-loss Mode Converter for Silicon-Polymer Hybrid Slot Photonic Crystal Waveguide. , 2015, , .		0
144	Inkjet printing enabled rapid prototyping and model verification processes. , 2019, , .		0

#	Article	IF	Citations
145	Reflective Long Period Grating Based Refractive Index Sensor. , 2021, , .		0
146	Faculty Perspectives on the Impact of Virtual Office Hours in Engineering Courses. , 0, , .		0
147	Using Veterans' Technical Skills in an Engineering Laboratory. , 0, , .		0