Yuriy Fedoryshyn

List of Publications by Year
in descending order

115	4,227	117625	114465
papers	citations	34 h-index	63 g-index

116	116	116	3551
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Transparent Optical-THz-Optical Link at 240/192 Gbit/s Over 5/115 m Enabled by Plasmonics. Journal of Lightwave Technology, 2022, 40, 1690-1697.	4.6	24
2	180 GBd Electronic-Plasmonic IC Transmitter. , 2022, , .		3
3	Ultrahigh-Net-Bitrate 363 Gbit/s PAM-8 and 279 Gbit/s Polybinary Optical Transmission Using Plasmonic Mach-Zehnder Modulator. Journal of Lightwave Technology, 2022, 40, 3338-3346.	4.6	21
4	Plasmonics in Future Radio Communications: Potential and Challenges. , 2022, , .		0
5	Plasmonicsâ€"high-speed photonics for co-integration with electronics. Japanese Journal of Applied Physics, 2021, 60, SB0806.	1.5	12
6	Plasmonic Data Center Interconnects (DCIs). , 2021, , .		1
7	Transparent Optical-THz-Optical Link Transmission over 5/115 m at 240/190 Gbit/s Enabled by Plasmonics. , 2021, , .		12
8	Plasmonic-MZM-based Short-Reach Transmission up to 10 km Supporting >304 GBd Polybinary or 432 Gbit/s PAM-8 Signaling. , 2021, , .		10
9	Broadband, High-Temperature Stable Reflector for Aerospace Thermal Radiation Protection. ACS Applied Materials & Interfaces, 2020, 12, 9925-9934.	8.0	18
10	A monolithic bipolar CMOS electronicâ€"plasmonic high-speed transmitter. Nature Electronics, 2020, 3, 338-345.	26.0	89
11	Ultra-High-Speed 2:1 Digital Selector and Plasmonic Modulator IM/DD Transmitter Operating at 222ÂGBaud for Intra-Datacenter Applications. Journal of Lightwave Technology, 2020, 38, 2734-2739.	4.6	45
12	Compact Mid-Infrared Gas Sensing Enabled by an All-Metamaterial Design. Nano Letters, 2020, 20, 4169-4176.	9.1	83
13	100 GBd IM/DD transmission over 14â€...km SMF in the C-band enabled by a plasmonic SSB MZM. Optics Express, 2020, 28, 8601.	3.4	13
14	Coherent few mode demultiplexer realized as a 2D grating coupler array in silicon. Optics Express, 2020, 28, 36009.	3.4	19
15	Electro-optic interface for ultrasensitive intracavity electric field measurements at microwave and terahertz frequencies. Optica, 2020, 7, 498.	9.3	39
16	Atomic-Scale Photonic Memristive and Nano-Opto-Electro-Mechanical Devices Enabled by Plasmonics. , 2020, , .		0
17	Novel applications of plasmonics and photonics devices to sub-THz wireless. , 2020, , .		2
18	MEMS Plasmonics and Memristive Plasmonics for Optical Communications. , 2020, , .		0

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19	Low-Power Data Center Transponders Enabled by Micrometer-scale Plasmonic Modulators. , 2020, , .		1
20	Integrated Plasmonic Terahertz Field Detector. , 2020, , .		0
21	Broadband, Temperature-Stable, Reflective Additives to Enhance Thermal Radiation Protection Systems. , 2020, , .		0
22	Electro-optic interface for ultrasensitive intra-cavity electric field sensing. , 2020, , .		0
23	2-D Grating Couplers for Vertical Fiber Coupling in Two Polarizations. IEEE Photonics Journal, 2019, 11, 1-9.	2.0	38
24	Nanoâ€“opto-electro-mechanical switches operated at CMOS-level voltages. Science, 2019, 366, 860-864.	12.6	64
25	500 GHz plasmonic Mach-Zehnder modulator enabling sub-THz microwave photonics. APL Photonics, 2019, 4, .	5.7	176
26	Plasmonic IQ modulators with attojoule per bit electrical energy consumption. Nature Communications, 2019, 10, 1694.	12.8	112
27	All-Plasmonic IQ Modulator With a 36 Î¼m Fiber-to-Fiber Pitch. Journal of Lightwave Technology, 2019, 37, 1492-1497.	4.6	10
28	Ultra compact electrochemical metallization cells offering reproducible atomic scale memristive switching. Communications Physics, 2019, 2, .	5.3	35
29	Reduced Equalization Needs of 100 GHz Bandwidth Plasmonic Modulators. Journal of Lightwave Technology, 2019, 37, 2050-2057.	4.6	14
30	Ultra-Compact Terabit Plasmonic Modulator Array. Journal of Lightwave Technology, 2019, 37, 1484-1491.	4.6	26
31	300 GHz Plasmonic Mixer. , 2019, , .		6
32	Compact and ultra-efficient broadband plasmonic terahertz field detector. Nature Communications, 2019, 10, 5550.	12.8	77
33	Sub-V Opto-Electro-Mechanical Switch. , 2019, , .		3
34	500 GHz Plasmonic Mach-Zehnder Modulator. , 2019, , .		3
35	Ultra-Compact All-Metamaterial NDIR CO2 Sensor. , 2019, , .		1
36	Low-loss hybrid plasmonic coupler. Optics Express, 2019, 27, 11862.	3.4	19

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37	120 GBd plasmonic Mach-Zehnder modulator with a novel differential electrode design operated at a peak-to-peak drive voltage of 178 mV. Optics Express, 2019, 27, 16823.	3.4	44
38	Compact, ultra-broadband plasmonic grating couplers. Optics Express, 2019, 27, 29719.	3.4	11
39	Dual-Drive Plasmonic Transmitter with Co-Designed Driver Electronics operated at 120 GBd On-Off Keying. , 2019, , .		0
40	All-Plasmonic 100 GBd Optical Communication Link. , 2019, , .		0
41	Integrated photonic and plasmonic technologies for microwave signal processing enabling mm-wave and sub-THz wireless communication systems. , 2019, , .		1
42	Low-loss plasmon-assisted electro-optic modulator. Nature, 2018, 556, 483-486.	27.8	312
43	Nonlinear Distortions in Plasmonic Mach-Zehnder Modulators. , 2018, , .		1
44	Ultra-Compact 0.8 Tbit/s Plasmonic Modulator Array. , 2018, , .		3
45	100 GBd Ultra-Compact Plasmonic Graphene Photodetector. , 2018, , .		1
46	What can Plasmonics Bring to Microwave Photonics?. , 2018, , .		0
47	Bypassing Loss in Plasmonic Modulators. , 2018, , .		1
48	Photonic-Plasmonic Hybrid Waveguide Couplers with a 91% Efficiency. , 2018, , .		1
49	Microwave plasmonic mixer in a transparent fibreâ€“wireless link. Nature Photonics, 2018, 12, 749-753.	31.4	67
50	100 GHz Plasmonic Photodetector. ACS Photonics, 2018, 5, 3291-3297.	6.6	146
51	Optimization of Plasmonic-Organic Hybrid Electro-Optics. Journal of Lightwave Technology, 2018, 36, 5036-5047.	4.6	41
52	Plasmonics for Next-Generation Wireless Systems. , 2018, , .		0
53	Driver-Less Sub 1 Vpp Operation of a Plasmonic-Organic Hybrid Modulator at 100 GBd NRZ. , 2018, , .		12
54	Plasmonics for Communications. , 2018, , .		3

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55	Plasmonics for RF Photonics. , 2018, , .		0
56	Plasmonic-Organic Hybrid Modulators for Optical Interconnects beyond 100G/Ì». , 2018, , .		1
57	Ultrafast Beam Steering Enabled by Photonics & Plasmonics. , 2018, , .		1
58	Multi-scale theory-assisted nano-engineering of plasmonic-organic hybrid electro-optic device performance. , 2018, , .		1
59	Complementary split-ring resonator antenna coupled quantum dot infrared photodetector. Applied Physics Letters, 2017, 110, 091106.	3.3	8
60	On-Chip Narrowband Thermal Emitter for Mid-IR Optical Gas Sensing. ACS Photonics, 2017, 4, 1371-1380.	6.6	190
61	Siliconâ€“Organic and Plasmonicâ€“Organic Hybrid Photonics. ACS Photonics, 2017, 4, 1576-1590.	6.6	123
62	Monitoring the transformation of aliphatic and fullerene molecules by high-energy electrons using surface-enhanced Raman spectroscopy. Nanotechnology, 2017, 28, 165701.	2.6	2
63	High-speed plasmonic modulator in a single metal layer. Science, 2017, 358, 630-632.	12.6	236
64	Perpendicular Grating Coupler Based on a Blazed Antiback-Reflection Structure. Journal of Lightwave Technology, 2017, 35, 4663-4669.	4.6	103
65	PIPED: A silicon-plasmonic high-speed photodetector. , 2017, , .		1
66	Visualizing Local Morphology and Conductivity Switching in Interface-Assembled Nanoporous C₆₀ Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 27166-27172.	8.0	2
67	Optical Interconnect Solution With Plasmonic Modulator and Ge Photodetector Array. IEEE Photonics Technology Letters, 2017, 29, 1760-1763.	2.5	19
68	Effect of Rigid Bridge-Protection Units, Quadrupolar Interactions, and Blending in Organic Electro-Optic Chromophores. Chemistry of Materials, 2017, 29, 6457-6471.	6.7	76
69	Plasmonic modulator with >170 GHz bandwidth demonstrated at 100 GBd NRZ. Optics Express, 2017, 25, 1762.	3.4	125
70	Nonlinearities of organic electro-optic materials in nanoscale slots and implications for the optimum modulator design. Optics Express, 2017, 25, 2627.	3.4	114
71	Harnessing nonlinearities near material absorption resonances for reducing losses in plasmonic modulators. Optical Materials Express, 2017, 7, 2168.	3.0	51
72	Plasmonic interconnects - a dense and fast interconnect solution. , 2017, , .		0

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73	Perfect Vertical Grating Coupler with Directionality of 97% on a Standard SOI Platform. , 2017, , .		1
74	Broadband Plasmonic Modulator Enabling Single Carrier Operation Beyond 100 Gbit/s. , 2017, , .		3
75	High Speed Photoconductive Plasmonic Germanium Detector. , 2017, , .		6
76	Plasmonic Modulators for Microwave Photonics Applications. , 2017, , .		1
77	Vertical Metallic Grating Couplers Enabling Direct Access to Plasmonic Devices. , 2017, , .		0
78	Plasmonic phased array feeder enabling ultra-fast beam steering at millimeter waves. Optics Express, 2016, 24, 25608.	3.4	32
79	Surface Chemical Tuning of Phonon and Electron Transport in Free-Standing Silicon Nanowire Arrays. Nano Letters, 2016, 16, 6364-6370.	9.1	16
80	Wired and wireless high-speed communications enabled by plasmonics. , 2016, , .		1
81	Silicon-plasmonic internal-photoemission detector for 40â€‰â€‰Gbit/s data reception. Optica, 2016, 3, 741.	9.3	84
82	Resistive switching of alkanethiolated nanoparticle monolayers patterned by electron-beam exposure. Physical Chemistry Chemical Physics, 2016, 18, 22783-22788.	2.8	8
83	Atomic scale plasmonic devices. , 2016, , .		0
84	Plasmonic Organic Hybrid Modulatorsâ€”Scaling Highest Speed Photonics to the Microscale. Proceedings of the IEEE, 2016, 104, 2362-2379.	21.3	76
85	Evidence for faster etching at the mask-substrate interface: atomistic simulation of complex cavities at the micron-/submicron-scale by the continuous cellular automaton. Journal of Micromechanics and Microengineering, 2016, 26, 045013.	2.6	7
86	108 Gbit/s Plasmonic Machâ€“Zehnder Modulator with > 70-GHz Electrical Bandwidth. Journal of Lightwave Technology, 2016, 34, 393-400.	4.6	71
87	Plasmonic phased array feeder enabling symbol-by-symbol mm-wave beam steering at 60 GHz. , 2016, , .		0
88	Microwave plasmonics: A novel platform for RF photonics. , 2016, , .		3
89	Plasmonic Internal Photoemission Detectors with Responsivities above 0.12 A/W. , 2015, , .		3
90	Ultra-compact plasmonic IQ-modulator. , 2015, , .		7

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91	High speed plasmonic modulator array enabling dense optical interconnect solutions. Optics Express, 2015, 23, 29746.	3.4	49
92	Electrically Controlled Plasmonic Switches and Modulators. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 276-283.	2.9	88
93	All-plasmonic Machâ€“Zehnder modulator enabling optical high-speed communication at the microscale. Nature Photonics, 2015, 9, 525-528.	31.4	466
94	Water-Mediated Assembly of Gold Nanoparticles into Aligned One-Dimensional Superstructures. Langmuir, 2015, 31, 7220-7227.	3.5	6
95	Plasmonic-organic hybrid (POH) modulators for OOK and BPSK signaling at 40 Gbit/s. Optics Express, 2015, 23, 9938.	3.4	65
96	Plasmonic devices for communications. , 2015, , .		7
97	Direct Conversion of Free Space Millimeter Waves to Optical Domain by Plasmonic Modulator Antenna. Nano Letters, 2015, 15, 8342-8346.	9.1	85
98	Antenna Coupled Plasmonic Modulator. , 2015, , .		5
99	Latching Plasmonic Switch with High Extinction Ratio. , 2014, , .		2
100	The plasmonic memristor: a latching optical switch. Optica, 2014, 1, 198.	9.3	100
101	High-speed plasmonic Mach-Zehnder modulator in a waveguide. , 2014, , .		10
102	Growth parameter optimization and interface treatment for enhanced electron mobility in heavily strained GaInAs/AlInAs high electron mobility transistor structures. Journal of Applied Physics, 2014, 115, 043718.	2.5	2
103	Three Operation Modes for Tb/s All-Optical Switching With Intersubband Transitions in InGaAs/AlAs/AlAsSb Quantum Wells. IEEE Journal of Quantum Electronics, 2012, 48, 885-890.	1.9	7
104	Direct-Gap Gain and Optical Absorption in Germanium Correlated to the Density of Photoexcited Carriers, Doping, and Strain. Physical Review Letters, 2012, 109, 057402.	7.8	84
105	Compact Inline Resonant Photonic Crystal Fabryâ€“PÃ©rot Cavities for TM-Polarized Light. IEEE Photonics Technology Letters, 2011, 23, 224-226.	2.5	3
106	Modeling of ultrafast recovery times and saturation intensities of the intersubband absorption in InGaAs/AlAs/AlAsSb coupled double quantum wells. Proceedings of SPIE, 2011, , .	0.8	2
107	Ultrafast all-optical switching based on cross modulation utilizing intersubband transitions in InGaAs/AlAs/AlAsSb coupled quantum wells with DFB grating waveguides. Optics Express, 2011, 19, 9461.	3.4	5
108	Characterization of Si volume- and delta-doped InGaAs grown by molecular beam epitaxy. Journal of Applied Physics, 2010, 107, 093710.	2.5	20

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109	InP-based planar photonic crystal waveguide in honeycomb lattice geometry for TM-polarized light. Optics Letters, 2009, 34, 1558.	3.3	10
110	Quantum Cascade Detectors. IEEE Journal of Quantum Electronics, 2009, 45, 1039-1052.	1.9	175
111	Optical waveguide structure for an all-optical switch based on intersubband transitions in InGaAs/AlAsSb quantum wells. Optics Letters, 2007, 32, 2680.	3.3	15
112	Photonic integration for high-denisty and multifunctionality in the InP-material system. , 2006, , .		3
113	Tuning the intersubband absorption in strained AlAsSbâˆ•InGaAs quantum wells towards the telecommunications wavelength range. Journal of Applied Physics, 2006, 100, 116104.	2.5	16
114	Growth of AlAsSb/InGaAs MBE-layers for all-optical switches. Journal of Crystal Growth, 2005, 278, 544-547.	1.5	9
115	Powerful light pulse formation in passive cavities. , 2003, , .		0