

Thomas E Murphy

List of Publications by Year in descending order

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135
papers

5,687
citations

87401

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90395

73
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135
all docs

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docs citations

135
times ranked

6584
citing authors

#	ARTICLE	IF	CITATIONS
1	Plasmonic Terahertz Nonlinearity in Graphene Disks. <i>Advanced Photonics Research</i> , 2022, 3, .	1.7	2
2	Plasmonic Terahertz Nonlinearity in Graphene Disks. <i>Advanced Photonics Research</i> , 2022, 3, 2100218.	1.7	3
3	Nonlinear rotation of spin-orbit coupled states in hollow ring-core fibers. <i>Optics Express</i> , 2022, 30, 18481.	1.7	3
4	2D THz Optoelectronics. <i>Advanced Optical Materials</i> , 2021, 9, 2001500.	3.6	42
5	Observation of strong magneto plasmonic nonlinearity in bilayer graphene discs. <i>JPhys Photonics</i> , 2021, 3, 01LT01.	2.2	2
6	Nonlinear optical control of chiral charge pumping in a topological Weyl semimetal. <i>Physical Review B</i> , 2020, 102, .	1.1	15
7	Low-loss and ultra-broadband silicon nitride angled MMI polarization splitter/combiner. <i>Optics Express</i> , 2020, 28, 34111.	1.7	16
8	Control of hot-carrier relaxation time in Au-Ag thin films through alloying. <i>Optics Express</i> , 2020, 28, 33528.	1.7	3
9	Surface plasmon assisted control of hot-electron relaxation time. <i>Optica</i> , 2020, 7, 608.	4.8	11
10	Guiding and confining of light in a two-dimensional synthetic space using electric fields. <i>Optica</i> , 2020, 7, 506.	4.8	14
11	Spatiotemporal characterization of nonlinear intermodal interference between selectively excited modes of a few-mode fiber. <i>Optica</i> , 2020, 7, 1796.	4.8	9
12	Magnetically Tuned THz Nonlinearity in Bilayer Graphene Disc Arrays. , 2020, , .		0
13	Plasmonic nanoarcs: a versatile platform with tunable localized surface plasmon resonances in octave intervals. <i>Optics Express</i> , 2020, 28, 30889.	1.7	2
14	Delayed dynamical systems: networks, chimeras and reservoir computing. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019, 377, 20180123.	1.6	30
15	Synthetic Gauge Field for Two-Dimensional Time-Multiplexed Quantum Random Walks. <i>Physical Review Letters</i> , 2019, 123, 150503.	2.9	43
16	Effect of defect-induced cooling on graphene hot-electron bolometers. <i>Carbon</i> , 2019, 154, 497-502.	5.4	15
17	Black phosphorus frequency mixer for infrared optoelectronic signal processing. <i>APL Photonics</i> , 2019, 4, 034502.	3.0	5
18	Revealing Network Symmetries Using Time-Series Data. <i>Understanding Complex Systems</i> , 2019, , 132-140.	0.3	0

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19	Optical Control of Plasmonic Hot Carriers in Graphene. ACS Photonics, 2019, 6, 302-307.	3.2	20
20	Wideband microwave electro-optic image rejection mixer. Optics Letters, 2019, 44, 4710.	1.7	21
21	Ultra-broadband photodetectors based on epitaxial graphene quantum dots. Nanophotonics, 2018, 7, 735-740.	2.9	28
22	Probing the free-carrier absorption in multi-layer black phosphorus. Applied Physics Letters, 2018, 113, .	1.5	7
23	Terahertz detection in 2D materials. , 2018, , .		1
24	Narrow plasmon resonances enabled by quasi-freestanding bilayer epitaxial graphene. 2D Materials, 2017, 4, 025034.	2.0	35
25	Discovering, Constructing, and Analyzing Synchronous Clusters of Oscillators in a Complex Network Using Symmetries. Advances in Dynamics, Patterns, Cognition, 2017, , 145-160.	0.2	2
26	Graphene-Based Waveguide-Integrated Terahertz Modulator. ACS Photonics, 2017, 4, 316-321.	3.2	96
27	Recommendations and illustrations for the evaluation of photonic random number generators. APL Photonics, 2017, 2, .	3.0	49
28	Optical Gating of Black Phosphorus for Terahertz Detection. Nano Letters, 2017, 17, 5811-5816.	4.5	21
29	Spectroscopic Characterization of Key Aromatic and Heterocyclic Molecules: A Route toward the Origin of Life. Astronomical Journal, 2017, 154, 82.	1.9	12
30	Experiments with arbitrary networks in time-multiplexed delay systems. Chaos, 2017, 27, 121103.	1.0	29
31	Terahertz photoresponse of black phosphorus. Optics Express, 2017, 25, 12666.	1.7	29
32	Broadband Third-Harmonic Generation in Black Phosphorus. , 2017, , .		0
33	Terahertz detection mechanisms in black phosphorus. , 2017, , .		0
34	Mid-Infrared Pump-Probe Measurements of Carrier Dynamics in Black Phosphorus. , 2017, , .		0
35	A Black Phosphorus Optoelectronic Mixer. , 2017, , .		0
36	Experimental observation of chimera and cluster states in a minimal globally coupled network. Chaos, 2016, 26, 094801.	1.0	116

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37	Tunable Ultrafast Thermal Relaxation in Graphene Measured by Continuous-Wave Photomixing. Physical Review Letters, 2016, 117, 257401.	2.9	16
38	Role of Transient Reflection in Graphene Nonlinear Infrared Optics. ACS Photonics, 2016, 3, 1069-1075.	3.2	14
39	The effects of surface conditions of TiO2 thin film on the UV assisted sensing response at room temperature. Thin Solid Films, 2016, 620, 76-81.	0.8	23
40	Mid-infrared time-resolved photoconduction in black phosphorus. 2D Materials, 2016, 3, 041006.	2.0	52
41	Complete characterization of the stability of cluster synchronization in complex dynamical networks. Science Advances, 2016, 2, e1501737.	4.7	174
42	Nonlinear Terahertz Absorption of Graphene Plasmons. Nano Letters, 2016, 16, 2734-2738.	4.5	77
43	THz Photoresponse of Thin Layers of Black Phosphorus. , 2016, , .		0
44	Intrinsic Speed of a Black Phosphorus Photoconductive Detector. , 2016, , .		0
45	Nonlinear Plasmonic THz Absorption in Graphene Ribbons. , 2016, , .		0
46	Dimensionality reduction and dynamical filtering: Stimulated Brillouin scattering in optical fibers. Physical Review E, 2015, 92, 022903.	0.8	0
47	Strong anisotropic thermal conductivity of nanoporous silicon. Journal of Applied Physics, 2015, 118, .	1.1	16
48	Pulsed Near-IR Photoresponse in a Bi-metal Contacted Graphene Photodetector. Scientific Reports, 2015, 5, 14803.	1.6	7
49	Harvesting entropy and quantifying the transition from noise to chaos in a photon-counting feedback loop. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9258-9263.	3.3	23
50	Plasmon-Enhanced Terahertz Photodetection in Graphene. Nano Letters, 2015, 15, 4295-4302.	4.5	94
51	Tunable Terahertz Hybrid Metal-Graphene Plasmons. Nano Letters, 2015, 15, 7099-7104.	4.5	135
52	Free space millimeter wave-coupled electro-optic high speed nonlinear polymer phase modulator with in-plane slotted patch antennas. Optics Express, 2015, 23, 9464.	1.7	34
53	Electro-optic millimeter-wave harmonic downconversion and vector demodulation using cascaded phase modulation and optical filtering. Optics Letters, 2015, 40, 2481.	1.7	47
54	Terahertz nonlinear conduction and absorption saturation in silicon waveguides. Optica, 2015, 2, 553.	4.8	12

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55	Universal ultrafast detector for short optical pulses based on graphene. Optics Express, 2015, 23, 28728.	1.7	23
56	Adding connections can hinder network synchronization of time-delayed oscillators. Physical Review E, 2015, 92, 022804.	0.8	23
57	Characterization of Graphene Photothermoelectric Detector via Two-wave Mixing Technique. , 2015, , .		0
58	Carrier dynamics and transient photobleaching in thin layers of black phosphorus. Applied Physics Letters, 2015, 107, .	1.5	77
59	Silicon-Integrated Graphene-Based THz Modulator. , 2015, , .		0
60	10.1063/1.4933176.1. , 2015, , .		0
61	Electrooptic millimeter-wave downconversion and vector demodulation using phase-modulation and optical filtering. , 2014, , .		3
62	Characterization of optical nonlinearities in nanoporous silicon waveguides via pump-probe heterodyning technique. Optics Express, 2014, 22, 17466.	1.7	7
63	Non-instantaneous optical nonlinearity of an a-Si:H nanowire waveguide. Optics Express, 2014, 22, 22730.	1.7	21
64	Enhanced continuous-wave four-wave mixing efficiency in nonlinear AlGaAs waveguides. Optics Express, 2014, 22, 26814.	1.7	31
65	Ultrafast carrier dynamics and optical properties of nanoporous silicon at terahertz frequencies. Optical Materials Express, 2014, 4, 300.	1.6	15
66	Plasmonic Terahertz Waveguide Based on Anisotropically Etched Silicon Substrate. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 454-458.	2.0	12
67	Sensitive room-temperature terahertz detection via the photothermoelectric effect in graphene. Nature Nanotechnology, 2014, 9, 814-819.	15.6	474
68	Efficient continuous-wave four-wave mixing in bandgap-engineered AlGaAs waveguides. Optics Letters, 2014, 39, 3161.	1.7	48
69	Cluster synchronization and isolated desynchronization in complex networks with symmetries. Nature Communications, 2014, 5, 4079.	5.8	418
70	Group Synchrony in an Experimental System of Delay-coupled Optoelectronic Oscillators. IEICE Proceeding Series, 2014, 1, 70-73.	0.0	3
71	Anisotropically Etched Silicon Surfaces for Planar Plasmonic Terahertz Guided Wave Devices. , 2014, , .		0
72	Synchronization patterns of an experimental ring of coupled optoelectronic oscillators. IEICE Proceeding Series, 2014, 2, 404-404.	0.0	0

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73	Frequency-Modulated Time-Delayed Microwave Chaotic Oscillator. IEICE Proceeding Series, 2014, 1, 670-673.	0.0	0
74	Synchronization states and multistability in a ring of periodic oscillators: Experimentally variable coupling delays. Chaos, 2013, 23, 043117.	1.0	43
75	Terahertz surface plasmon waveguide based on a one-dimensional array of silicon pillars. New Journal of Physics, 2013, 15, 085031.	1.2	66
76	Chaotic dynamics of a frequency-modulated microwave oscillator with time-delayed feedback. Chaos, 2013, 23, 013101.	1.0	5
77	Photothermal Response in Dual-Gated Bilayer Graphene. Physical Review Letters, 2013, 110, 247402.	2.9	41
78	Phase-Modulated Radio-over-Fiber Systems. , 2013, , .		2
79	Terahertz surface plasmon polaritons on a semiconductor surface structured with periodic V-grooves. Optics Express, 2013, 21, 7041.	1.7	66
80	Application of nanoporous silicon substrates for terahertz spectroscopy. Optical Materials Express, 2013, 3, 114.	1.6	6
81	Experimental Observations of Group Synchrony in a System of Chaotic Optoelectronic Oscillators. Physical Review Letters, 2013, 110, 064104.	2.9	91
82	Porous silicon integrated Mach-Zehnder interferometer waveguide for biological and chemical sensing. Optics Express, 2013, 21, 19488.	1.7	45
83	Non-Instantaneous Optical Nonlinearities in a-Si:H Nanowire Waveguides. , 2013, , .		0
84	Laser-written nanoporous silicon ridge waveguide for highly sensitive optical sensors. Optics Letters, 2012, 37, 256.	1.7	22
85	Simple method to characterize nonlinear refraction and loss in optical waveguides. Optics Letters, 2012, 37, 4693.	1.7	5
86	Third-Order Optical Nonlinearity in Bulk Nanoporous Silicon at Telecom Wavelengths. , 2012, , .		0
87	Millimeter-wave 6 Gb/s wireless BPSK electrooptic link. , 2012, , .		0
88	Experimental observation of chimeras in coupled-map lattices. Nature Physics, 2012, 8, 658-661.	6.5	515
89	Efficient Continuous-Wave Four-Wave Mixing and Self-Phase Modulation in a Bandgap-Engineered AlGaAs Waveguide. , 2012, , .		1
90	Wireless BPSK Communication Using Electrooptic Modulation for Coherent Microwave Detection. , 2012, , .		0

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91	Conversion of RZ-OOK to RZ-BPSK by XPM in a Passive AlGaAs Waveguide. IEEE Photonics Technology Letters, 2011, 23, 1397-1399.	1.3	18
92	Linearized electrooptic microwave downconversion using phase modulation and optical filtering. Optics Express, 2011, 19, 883.	1.7	122
93	Scalable parallel physical random number generator based on a superluminescent LED. Optics Letters, 2011, 36, 1020.	1.7	113
94	Linearized Downconverting Microwave Photonic Link Using Dual-Wavelength Phase Modulation and Optical Filtering. IEEE Photonics Journal, 2011, 3, 1-12.	1.0	42
95	Exploiting disparity. Nature Photonics, 2011, 5, 515-516.	15.6	0
96	Robustness of Optimal Synchronization in Real Networks. Physical Review Letters, 2011, 107, 034102.	2.9	71
97	Fiber-Optic Communications [In the Spotlight]. IEEE Signal Processing Magazine, 2011, 28, 152-150.	4.6	3
98	Dynamic synchronization of a time-evolving optical network of chaotic oscillators. Chaos, 2010, 20, 043142.	1.0	9
99	Complex dynamics and synchronization of delayed-feedback nonlinear oscillators. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 343-366.	1.6	74
100	Terahertz surface plasmon propagation in nanoporous silicon layers. Applied Physics Letters, 2010, 96, .	1.5	13
101	Background-Suppressed Ultrafast Optical Sampling Using Nondegenerate Two-Photon Absorption in a GaAs Photodiode. IEEE Photonics Technology Letters, 2010, 22, 212-214.	1.3	6
102	Wavelength Conversion of 10-Gb/s RZ-OOK Using Filtered XPM in a Passive GaAs-AlGaAs Waveguide. IEEE Photonics Technology Letters, 2010, 22, 637-639.	1.3	18
103	10-Gb/s Wavelength and Pulse Format Conversion Using Four-Wave Mixing in a GaAs Waveguide. IEEE Photonics Technology Letters, 2010, 22, 872-874.	1.3	9
104	Fast physical random number generator using amplified spontaneous emission. Optics Express, 2010, 18, 23584.	1.7	160
105	Terahertz transmission through porous silicon membranes. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1273-1277.	0.8	7
106	Adaptive synchronization of coupled chaotic oscillators. Physical Review E, 2009, 80, 056205.	0.8	29
107	Nanoporous silicon multilayers for terahertz filtering. Optics Letters, 2009, 34, 2921.	1.7	33
108	Nonlinearities in porous silicon optical waveguides at 1550 nm. Optics Express, 2009, 17, 3396.	1.7	37

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109	The world's fastest dice. <i>Nature Photonics</i> , 2008, 2, 714-715.	15.6	62
110	Techniques for Polarization-Independent Cross-Phase Modulation in Nonlinear Birefringent Fibers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2008, 14, 540-550.	1.9	8
111	Ultraviolet photoluminescence from 6H silicon carbide nanoparticles. <i>Applied Physics Letters</i> , 2008, 92, .	1.5	64
112	Vector Finite Difference Modesolver for Anisotropic Dielectric Waveguides. <i>Journal of Lightwave Technology</i> , 2008, 26, 1423-1431.	2.7	300
113	Dual-Wavelength Linearization of Optically Phase-Modulated Analog Microwave Signals. <i>Journal of Lightwave Technology</i> , 2008, 26, 2748-2753.	2.7	42
114	High-speed polarization independent demultiplexing using birefringent nonlinear fiber. , 2008, , .		0
115	Using Synchronization for Prediction of High-Dimensional Chaotic Dynamics. <i>Physical Review Letters</i> , 2008, 101, 154102.	2.9	48
116	A Simple, Linearized, Phase-Modulated Analog Optical Transmission System. <i>IEEE Photonics Technology Letters</i> , 2007, 19, 729-731.	1.3	89
117	Multi-Octave Microwave Transmission Over Fiber with a Single Optical Phase Modulator. , 2007, , .		1
118	Porous silicon biosensor for detection of viruses. <i>Biosensors and Bioelectronics</i> , 2007, 23, 741-745.	5.3	135
119	All-optical 80-gb/s time-division demultiplexing using polarization-insensitive cross-phase modulation in photonic crystal fiber. <i>IEEE Photonics Technology Letters</i> , 2006, 18, 1329-1331.	1.3	35
120	160-Gb/s Polarization-Independent Optical Demultiplexing in 2-m Nonlinear Fiber. <i>IEEE Photonics Technology Letters</i> , 2006, 18, 2245-2247.	1.3	16
121	Two-photon absorption for optical clock recovery in OTDM networks. <i>Journal of Lightwave Technology</i> , 2006, 24, 3353-3362.	2.7	14
122	Transmission of 80â€¦Gbitâ€¦s over 840â€¦km in standard fibre without polarisation control. <i>Electronics Letters</i> , 2005, 41, 1394.	0.5	2
123	Polarization-insensitive optical clock recovery at 80 Gb/s using a silicon photodiode. <i>IEEE Photonics Technology Letters</i> , 2005, 17, 1968-1970.	1.3	25
124	Broad-Band Optical Clock Recovery System Using Two-Photon Absorption. <i>IEEE Photonics Technology Letters</i> , 2004, 16, 2141-2143.	1.3	23
125	Polarization-insensitive cross correlation using two-photon absorption in a silicon photodiode. <i>Optics Letters</i> , 2004, 29, 1524.	1.7	33
126	Broadband Optical Clock Recovery System Based on Two-Photon Absorption. , 2004, , .		0

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127	Ultrasensitive and high-dynamic-range two-photon absorption in a GaAs photomultiplier tube. <i>Optics Letters</i> , 2002, 27, 2076.	1.7	89
128	100 Gb/s optical time-division multiplexed networks. <i>Journal of Lightwave Technology</i> , 2002, 20, 2086-2100.	2.7	95
129	10-GHz 1.3-ps pulse generation using chirped soliton compression in a Raman gain medium. <i>IEEE Photonics Technology Letters</i> , 2002, 14, 1424-1426.	1.3	53
130	Fabrication and characterization of narrow-band Bragg-reflection filters in silicon-on-insulator ridge waveguides. <i>Journal of Lightwave Technology</i> , 2001, 19, 1938-1942.	2.7	132
131	Characterization of field stitching in electron-beam lithography using moiré metrology. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2000, 18, 3287.	1.6	4
132	Fabrication techniques for grating-based optical devices. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1999, 17, 3208.	1.6	23
133	Fabrication of 200 nm period nanomagnet arrays using interference lithography and a negative resist. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1999, 17, 3182.	1.6	73
134	Design rules for maximally flat wavelength-insensitive optical power dividers using Mach-Zehnder structures. <i>IEEE Photonics Technology Letters</i> , 1997, 9, 1607-1609.	1.3	70
135	Distributed Bragg grating integrated-optical filters: Synthesis and fabrication. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1995, 13, 2859.	1.6	19