

Luca Razzari

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6469886/publications.pdf>

Version: 2024-02-01

154
papers

5,412
citations

109137

35
h-index

88477

70
g-index

154
all docs

154
docs citations

154
times ranked

5099
citing authors

#	ARTICLE	IF	CITATIONS
1	CMOS-compatible integrated optical hyper-parametric oscillator. Nature Photonics, 2010, 4, 41-45.	15.6	519
2	Micro-combs: A novel generation of optical sources. Physics Reports, 2018, 729, 1-81.	10.3	448
3	Low-power continuous-wave nonlinear optics in doped silica glass integrated waveguide structures. Nature Photonics, 2008, 2, 737-740.	15.6	328
4	Generation of 1.5 μJ single-cycle terahertz pulses by optical rectification from a large aperture ZnTe crystal. Optics Express, 2007, 15, 13212.	1.7	313
5	Engineering the Absorption and Field Enhancement Properties of Au@TiO ₂ Nanohybrids via Whispering Gallery Mode Resonances for Photocatalytic Water Splitting. ACS Nano, 2016, 10, 4496-4503.	7.3	230
6	On-chip CMOS-compatible all-optical integrator. Nature Communications, 2010, 1, 29.	5.8	220
7	Z-scan measurements using high repetition rate lasers: how to manage thermal effects. Optics Express, 2005, 13, 7976.	1.7	191
8	Integrated frequency comb source of heralded single photons. Optics Express, 2014, 22, 6535.	1.7	187
9	Self-locked optical parametric oscillation in a CMOS compatible microring resonator: a route to robust optical frequency comb generation on a chip. Optics Express, 2013, 21, 13333.	1.7	128
10	Supercontinuum generation in a high index doped silica glass spiral waveguide. Optics Express, 2010, 18, 923.	1.7	127
11	Low power four wave mixing in an integrated, micro-ring resonator with Q = 12 million. Optics Express, 2009, 17, 14098.	1.7	123
12	Nonlinear ultrafast modulation of the optical absorption of intense few-cycle terahertz pulses in n -doped semiconductors. Physical Review B, 2009, 79, .	1.1	114
13	Efficient self-phase modulation in low loss, high index doped silica glass integrated waveguides. Optics Express, 2009, 17, 1865.	1.7	112
14	Laser-assisted guiding of electric discharges around objects. Science Advances, 2015, 1, e1400111.	4.7	110
15	Generation of Intense Terahertz Radiation via Optical Methods. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 5-16.	1.9	104
16	Subpicosecond optical pulse compression via an integrated nonlinear chirper. Optics Express, 2010, 18, 7625.	1.7	101
17	Improved terahertz two-color plasma sources pumped by high intensity laser beam. Optics Express, 2009, 17, 6044.	1.7	100
18	Reduced photorefractive scattering in hafnium-doped single-domain and periodically poled lithium niobate crystals. Applied Physics Letters, 2004, 84, 1880-1882.	1.5	98

#	ARTICLE	IF	CITATIONS
19	Photorefractivity of Hafnium-doped congruent lithium niobate crystals. Applied Physics Letters, 2005, 86, 131914.	1.5	96
20	Terahertz pulse induced intervalley scattering in photoexcited GaAs. Optics Express, 2009, 17, 9620.	1.7	92
21	Squeezing Terahertz Light into Nanovolumes: Nanoantenna Enhanced Terahertz Spectroscopy (NETS) of Semiconductor Quantum Dots. Nano Letters, 2015, 15, 386-391.	4.5	86
22	Direct compression of 170-fs 50-cycle pulses down to 1.5 cycles with 70% transmission. Scientific Reports, 2018, 8, 11794.	1.6	78
23	Multifrequency sources of quantum correlated photon pairs on-chip: a path toward integrated Quantum Frequency Combs. Nanophotonics, 2016, 5, 351-362.	2.9	70
24	All-optical 1st and 2nd order integration on a chip. Optics Express, 2011, 19, 23153.	1.7	65
25	Extremely large extinction efficiency and field enhancement in terahertz resonant dipole nanoantennas. Optics Express, 2011, 19, 26088.	1.7	60
26	Terahertz Faraday rotation in a magnetic liquid: High magneto-optical figure of merit and broadband operation in a ferrofluid. Applied Physics Letters, 2012, 100, .	1.5	56
27	Plasmonic Au-Loaded Hierarchical Hollow Porous TiO ₂ Spheres: Synergistic Catalysts for Nitroaromatic Reduction. Journal of Physical Chemistry Letters, 2018, 9, 5317-5326.	2.1	56
28	Enhanced Luminescence, Collective Heating, and Nanothermometry in an Ensemble System Composed of Lanthanide-Doped Upconverting Nanoparticles and Gold Nanorods. Advanced Optical Materials, 2015, 3, 1606-1613.	3.6	54
29	A Microorganism Bred TiO ₂ /Au/TiO ₂ Heterostructure for Whispering Gallery Mode Resonance Assisted Plasmonic Photocatalysis. ACS Nano, 2020, 14, 13876-13885.	7.3	54
30	Effective Mass Anisotropy of Hot Electrons in Nonparabolic Conduction Bands of n-Doped InGaAs Films Using Ultrafast Terahertz Pump-Probe Techniques. Physical Review Letters, 2011, 107, 107401.	2.9	53
31	Concurrent field enhancement and high transmission of THz radiation in nanoslit arrays. Applied Physics Letters, 2011, 99, .	1.5	51
32	Surface plasmon polariton compression through radially and linearly polarized source. Optics Letters, 2012, 37, 545.	1.7	51
33	Extreme Raman red shift: ultrafast multimode nonlinear space-time dynamics, pulse compression, and broadly tunable frequency conversion. Optica, 2020, 7, 1349.	4.8	45
34	Strong enhancement of the Faraday rotation in Ce and Bi comodified epitaxial iron garnet thin films. Applied Physics Letters, 2009, 94, 181916.	1.5	38
35	Fully analytical description of adiabatic compression in dissipative polaritonic structures. Physical Review B, 2012, 86, .	1.1	38
36	Terahertz Dipole Nanoantenna Arrays: Resonance Characteristics. Plasmonics, 2013, 8, 133-138.	1.8	35

#	ARTICLE	IF	CITATIONS
37	Kerr and four-wave mixing spectroscopy at the band edge of one-dimensional photonic crystals. Applied Physics Letters, 2005, 86, 231106.	1.5	33
38	Plasmonic Moon: A Fano-Like Approach for Squeezing the Magnetic Field in the Infrared. Nano Letters, 2015, 15, 6128-6134.	4.5	32
39	Room-Temperature and Selective Triggering of Supramolecular DNA Assembly/Disassembly by Nonionizing Radiation. Journal of the American Chemical Society, 2019, 141, 3456-3469.	6.6	32
40	Quantifying the photothermal conversion efficiency of plasmonic nanoparticles by means of terahertz radiation. APL Photonics, 2019, 4, .	3.0	32
41	Optical frequency conversion in integrated devices [Invited]. Journal of the Optical Society of America B: Optical Physics, 2011, 28, A67.	0.9	31
42	Time-domain terahertz compressive imaging. Optics Express, 2020, 28, 3795.	1.7	31
43	Reshaping the phonon energy landscape of nanocrystals inside a terahertz plasmonic nanocavity. Nature Communications, 2018, 9, 763.	5.8	30
44	Solid-state-biased coherent detection of ultra-broadband terahertz pulses. Optica, 2017, 4, 1358.	4.8	27
45	Enhancement of Scattering and Near Field of TiO ₂ @Au Nanohybrids Using a Silver Resonator for Efficient Plasmonic Photocatalysis. ACS Applied Materials & Interfaces, 2021, 13, 34714-34723.	4.0	27
46	Terahertz Thermometry: Combining Hyperspectral Imaging and Temperature Mapping at Terahertz Frequencies. Laser and Photonics Reviews, 2017, 11, 1600342.	4.4	25
47	Nonlinear Mid-Infrared Metasurface based on a Phase-Change Material. Laser and Photonics Reviews, 2021, 15, 2000373.	4.4	25
48	Plasmon enhanced upconverting core@triple-shell nanoparticles as recyclable panchromatic initiators (blue to infrared) for radical polymerization. Nanoscale Horizons, 2019, 4, 907-917.	4.1	24
49	Generation of high-field terahertz pulses in an HMQ-TMS organic crystal pumped by an ytterbium laser at 1030 nm. Optics Express, 2018, 26, 2509.	1.7	23
50	Time-Resolved Terahertz Spectroscopy of Free Carrier Nonlinear Dynamics in Semiconductors. IEEE Photonics Journal, 2010, 2, 578-592.	1.0	20
51	Intense few-cycle visible pulses directly generated via nonlinear fibre mode mixing. Nature Photonics, 0, , .	15.6	20
52	Nanoplasmonic structures for biophotonic applications: SERS overview. Annalen Der Physik, 2012, 524, 620-636.	0.9	18
53	Gain and loss mixed in the same cauldron. Nature, 2012, 488, 163-164.	13.7	17
54	Molecular gases for pulse compression in hollow core fibers. Optics Express, 2018, 26, 25426.	1.7	17

#	ARTICLE	IF	CITATIONS
55	Dynamics of Strongly Coupled Hybrid States by Transient Absorption Spectroscopy. <i>Advanced Functional Materials</i> , 2018, 28, 1801761.	7.8	17
56	Extremely broadband terahertz generation via pulse compression of an Ytterbium laser amplifier. <i>Optics Express</i> , 2019, 27, 32659.	1.7	17
57	Pockels response in calcium barium niobate thin films. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	16
58	Two-photon photodetector in a multiquantum well GaAs laser structure at 1551/4m. <i>Optics Express</i> , 2009, 17, 5298.	1.7	16
59	Fabrication and characterization of a nanoantenna-based Raman device for ultrasensitive spectroscopic applications. <i>Microelectronic Engineering</i> , 2012, 98, 424-427.	1.1	15
60	Direct determination of the resonance properties of metallic conical nanoantennas. <i>Optics Letters</i> , 2014, 39, 571.	1.7	15
61	A nanogapâ€‘array platform for testing the optically modulated conduction of goldâ€‘octithiopheneâ€‘gold junctions for molecular optoelectronics. <i>RSC Advances</i> , 2012, 2, 10985.	1.7	14
62	Terahertz three-dimensional monitoring of nanoparticle-assisted laser tissue soldering. <i>Biomedical Optics Express</i> , 2020, 11, 2254.	1.5	14
63	Hybrid integration of Ca_028Ba_072Nb_2O_6 thin film electro-optic waveguides with silica/silicon substrates. <i>Optics Express</i> , 2009, 17, 15128.	1.7	13
64	Excited-state dynamics and nonlinear optical response of Ge nanocrystals embedded in silica matrix. <i>Applied Physics Letters</i> , 2006, 88, 181901.	1.5	12
65	CCD-based imaging and 3D spaceâ€‘time mapping of terahertz fields via Kerr frequency conversion. <i>Optics Letters</i> , 2013, 38, 1899.	1.7	12
66	Wavelength conversion and pulse reshaping through cascaded interactions in an MZI configuration. <i>IEEE Journal of Quantum Electronics</i> , 2003, 39, 1486-1491.	1.0	11
67	Invited Article: Ultra-broadband terahertz coherent detection via a silicon nitride-based deep sub-wavelength metallic slit. <i>APL Photonics</i> , 2018, 3, 110805.	3.0	11
68	Highly Sensitive Polarization Rotation Measurement through a Highâ€‘Order Vector Beam Generated by a Metasurface. <i>Advanced Materials Technologies</i> , 2020, 5, 1901008.	3.0	10
69	Rotational Doppler Frequency Shift from Timeâ€‘Evolving Highâ€‘Order Pancharatnamâ€‘Berry Phase: A Metasurface Approach. <i>Laser and Photonics Reviews</i> , 2021, 15, 2000576.	4.4	10
70	MICRORAMAN AND PHOTOREFRACTIVITY STUDY OF HAFNIUM-DOPED LITHIUM NIOBATE CRYSTALS. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2006, 15, 9-21.	1.1	8
71	Active terahertz two-wire waveguides. <i>Optics Express</i> , 2014, 22, 22340.	1.7	8
72	The role of Bi3+ ions in magneto-optic Ce and Bi comodified epitaxial iron garnet films. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	7

#	ARTICLE	IF	CITATIONS
73	Design and top-down fabrication of metallic L-shape gap nanoantennas supporting plasmon-polariton modes. <i>Microelectronic Engineering</i> , 2013, 111, 91-95.	1.1	7
74	Homodyne Solid-State Biased Coherent Detection of Ultra-Broadband Terahertz Pulses with Static Electric Fields. <i>Nanomaterials</i> , 2021, 11, 283.	1.9	7
75	An In Situ Polymerization-Encapsulation Approach to Prepare TiO ₂ -Graphite Carbon-Au Photocatalysts for Efficient Photocatalysis. <i>Particle and Particle Systems Characterization</i> , 2018, 35, 1700297.	1.2	6
76	Strongly Coupled Hybrid States: Dynamics of Strongly Coupled Hybrid States by Transient Absorption Spectroscopy (<i>Adv. Funct. Mater.</i> 48/2018). <i>Advanced Functional Materials</i> , 2018, 28, 1870342.	7.8	6
77	Improving nanoscale terahertz field localization by means of sharply tapered resonant nanoantennas. <i>Nanophotonics</i> , 2020, 9, 683-690.	2.9	6
78	Ultra-Fast Integrated All-Optical Integrator. , 2010, , .		5
79	The Dawn of Ultrafast Nonlinear Optics in the Terahertz Regime. <i>Springer Series in Optical Sciences</i> , 2012, , 297-323.	0.5	5
80	Effect of Extrinsic Disorder on the Magnetoresistance Response of Gated Single-Layer Graphene Devices. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 26152-26160.	4.0	5
81	Custom measurement system for memristor characterisation. <i>Solid-State Electronics</i> , 2021, 186, 108049.	0.8	5
82	Polarization proximity effect in isolator crystal pairs. <i>Optics Letters</i> , 2008, 33, 2871.	1.7	4
83	THz imaging and spectroscopy using intense THz sources at the advanced laser light source. <i>Physics Procedia</i> , 2010, 5, 119-124.	1.2	4
84	Terahertz Nanoantennas for Enhanced Spectroscopy. , 0, , .		4
85	Numerical study of cascaded wavelength conversion in quadratic media. <i>Journal of Optics</i> , 2002, 4, 457-462.	1.5	3
86	A novel integrated laser source without a laser. <i>SPIE Newsroom</i> , 0, , .	0.1	3
87	High Performance, Low-loss Nonlinear Integrated Glass Waveguides. <i>Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium</i> , 2010, 6, 283-286.	0.4	3
88	Large Kerr nonlinearity in ultra-low loss high-index glass waveguides. , 2008, , .		2
89	CMOS compatible waveguides for all-optical signal processing. , 2011, , .		2
90	Phonon Analysis of 2D Organic-Halide Perovskites in the Low- and Mid-IR Region. <i>Advanced Optical Materials</i> , 0, , 2100439.	3.6	2

#	ARTICLE	IF	CITATIONS
91	Large faraday effect in ce:biig epitaxial thin films. , 2009, , .		1
92	Two-Photon Detection in a MQW GaAs Laser at 1.55 ¹ / ₄ m. , 2009, , .		1
93	Nonlinear Optics in Doped Silica Glass Integrated Waveguide Structures. , 0, , .		1
94	CMOS-Compatible Integrated Multiple Wavelength Laser. Optics and Photonics News, 2010, 21, 36.	0.4	1
95	Monolithic CMOS compatible 1 st and 2 nd order 400GHz all-optical integrator. , 2011, , .		1
96	Optimization of Rare-earth Modified Iron Garnet Epitaxial Films for Magneto-Optic Applications. , 2012, , .		1
97	Terahertz Field Induced Second Harmonic Coherent Detection Scheme based on a Biased Nonlinear Micro-slit. , 2014, , .		1
98	Conical nanoantenna arrays for terahertz light. , 2016, , .		1
99	Ultra-fast All-optical Integration on a Silicon Chip. , 2010, , .		1
100	Optical Parametric Oscillation on a Chip. , 2010, , .		1
101	CMOS Compatible Monolithic 1st and 2nd Order All-Optical Integrator. , 2012, , .		1
102	Advanced Integrated Photonics in Doped Silica Glass. Springer Series in Optical Sciences, 2012, , 47-92.	0.5	1
103	Generation of intense THz pulses in ZnTe. , 2008, , .		0
104	Evaluation of the Radiative Recombination Mechanism in Si Nanocrystals Embedded in Silica Matrix. Journal of Nanoscience and Nanotechnology, 2008, 8, 823-827.	0.9	0
105	Nonlinear Two-photon photodetection and autocorrelation in a GaAs MQW waveguide. , 2009, , .		0
106	Temporal pulse compression in low dispersion Hydex® glass integrated waveguides. , 2009, , .		0
107	Low power parametric wave-mixing in a zero dispersive CMOS compatible micro-ring resonator. , 2009, , .		0
108	Terahertz nonlinear spectroscopy of free-carriers in semiconductors. , 2009, , .		0

#	ARTICLE	IF	CITATIONS
109	Nonlinear pulse processing in High Index Glass Integrated devices: pulse compression. , 2010, , .		0
110	Integrated optical hyper-parametric oscillator. , 2010, , .		0
111	Supercontinuum Generation in an Integrated High-Index Glass Spiral Waveguide. , 2010, , .		0
112	Anisotropy of hot electron effective mass in n-doped InGaAs revealed by nonlinear THz-pump/THz-probe spectroscopy. , 2010, , .		0
113	Optical Parametric Oscillation in a High-index Doped Silica Glass Micro-ring Resonator. , 2010, , .		0
114	Evaluation of the Electromagnetic Hazard of intense THz pulses on neural cells. , 2010, , .		0
115	CMOS compatible all-optical waveguides. , 2010, , .		0
116	High power terahertz sources for nonlinear spectroscopy of direct bandgap semiconductors. , 2010, , .		0
117	Application of high power terahertz sources to nonlinear spectroscopy of direct bandgap semiconductors. , 2010, , .		0
118	Response to "Comment on "The role of Bi ³⁺ ions in magneto-optic Ce and Bi comodified epitaxial iron garnet films" [Appl. Phys. Lett. 99, 126101 (2011)]. Applied Physics Letters, 2011, 99, .	1.5	0
119	High index glass CMOS compatible all-optical chips for telecom and optical interconnects. , 2011, , .		0
120	Self-locked low threshold OPO in a CMOS-compatible microring resonator. , 2012, , .		0
121	CMOS compatible micro-ring resonator lasers. , 2013, , .		0
122	Direct Generation of Orthogonally Polarized Photon Pairs on a Chip via Spontaneous Non-Degenerate FWM. , 2014, , .		0
123	Integrated Source of Multiplexed Heralded Photons. , 2014, , .		0
124	Quantum photonic circuits for optical signal processing. , 2015, , .		0
125	Micro-Slit Based Coherent Detection of Terahertz Pulses in Biased, Solid State Media. , 2015, , .		0
126	Antenna Tapering Strategy for Near-Field Enhancement Optimization in Terahertz Gold Nanocavities. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
127	Molecular Gases for Low Energy Pulse Compression in Hollow Core Fibers. , 2019, , .		0
128	Guiding of Laser Pulses at the Theoretical Limit “ 97% Throughput Hollow-Core Fibers. , 2021, , .		0
129	3D-Printed Resonant Gold Nanocones for Out-of-Plane Terahertz-Field-Driven Electron Photoemission. , 2021, , .		0
130	High-Power Terahertz Pulses at the Advanced Laser Light Source (ALLS) Laboratory. , 2007, , .		0
131	Polarization proximity effect in isolator crystal pairs. , 2009, , .		0
132	Polarization proximity effect in isolator crystal pairs. , 2009, , .		0
133	Effect and elimination of source position shifting in two-color plasma terahertz sources. , 2009, , .		0
134	Magnetic Proximity Effect in Isolator Crystal Pairs. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2009, 5, 145-148.	0.4	0
135	Temporal Pulse Compression in High-Index Doped Silica Glass Integrated Waveguides. , 2009, , .		0
136	Ultrafast Optical Pulse Compression on a Chip. , 2010, , .		0
137	CMOS Compatible All-Optical Chips. , 2010, , .		0
138	Broadband enhanced 26 MV/cm THz radiation in uniform nano-slit arrays. , 2011, , .		0
139	Ultrafast THz pulse shaping: generation of Half-cycle pulse from multi-cycle THz pulse. , 2011, , .		0
140	A self-locking scheme for robust parametric oscillation in CMOS-compatible microring resonators. , 2012, , .		0
141	Self-locked OPO in CMOS-compatible microring resonators. , 2012, , .		0
142	Parametric oscillation in CMOS-compatible microring resonators induced with a self-locking scheme. , 2012, , .		0
143	Low Energy Hollow Core Fiber Pulse Compression Using Molecular Gases. , 2019, , .		0
144	Guiding of Laser Pulses at the Theoretical Limit “ 97% Throughput Hollow-Core Fibers. , 2020, , .		0

#	ARTICLE	IF	CITATIONS
145	Polarization rotation measurements via a high-order vector beam generated by a metasurface. , 2020, , .		0
146	Homodyne Coherent Detection of THz Pulses via DC-biased Solid-State Devices. , 2020, , .		0
147	Field-driven electron photoemission via 3D-printed terahertz resonant vertical nanostructures. , 2021, , .		0
148	Enhanced Third-Harmonic Generation by a Mid-Infrared Phase-Change Metasurface. , 2021, , .		0
149	Ge ₂ Sb ₂ Se ₄ Te ₁ Metasurface for Enhancing Third-Harmonic Generation in the Mid-Infrared. , 2021, , .		0
150	Dynamic Terahertz Investigation of Nanoparticle-assisted Laser-tissue Interaction. , 2020, , .		0
151	Nanocavities for Terahertz Light. , 2020, , .		0
152	Guiding of Laser Pulses at the Theoretical Limit “ 97% Throughput Hollow-Core Fibers. , 2021, , .		0
153	Few-Cycle Visible Light Generation in a Hollow-Core Fiber. , 2021, , .		0
154	Terahertz multi-dimensional imaging for nanoparticle-assisted therapeutics. , 2022, , .		0