

Luca Razzari

List of Publications by Year in descending order

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154
papers

5,412
citations

109137

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154
all docs

154
docs citations

154
times ranked

5099
citing authors

#	ARTICLE	IF	CITATIONS
1	Terahertz multi-dimensional imaging for nanoparticle-assisted therapeutics. , 2022, , .		0
2	Guiding of Laser Pulses at the Theoretical Limit â€“ 97% Throughput Hollow-Core Fibers. , 2021, , .		0
3	Homodyne Solid-State Biased Coherent Detection of Ultra-Broadband Terahertz Pulses with Static Electric Fields. Nanomaterials, 2021, 11, 283.	1.9	7
4	Nonlinear Mid-Infrared Metasurface based on a Phase-Change Material. Laser and Photonics Reviews, 2021, 15, 2000373.	4.4	25
5	Rotational Doppler Frequency Shift from Time-Evolving High-Order Pancharatnam-Berry Phase: A Metasurface Approach. Laser and Photonics Reviews, 2021, 15, 2000576.	4.4	10
6	Effect of Extrinsic Disorder on the Magnetoresistance Response of Gated Single-Layer Graphene Devices. ACS Applied Materials & Interfaces, 2021, 13, 26152-26160.	4.0	5
7	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
8	Custom measurement system for memristor characterisation. Solid-State Electronics, 2021, 186, 108049.	0.8	5
9	3D-Printed Resonant Gold Nanocones for Out-of-Plane Terahertz-Field-Driven Electron Photoemission. , 2021, , .		0
10	Field-driven electron photoemission via 3D-printed terahertz resonant vertical nanostructures. , 2021, , .		0
11	Enhanced Third-Harmonic Generation by a Mid-Infrared Phase-Change Metasurface. , 2021, , .		0
12	Ge ₂ Sb ₂ Se ₄ Te ₁ Metasurface for Enhancing Third-Harmonic Generation in the Mid-Infrared. , 2021, , .		0
13	Guiding of Laser Pulses at the Theoretical Limit â€“ 97% Throughput Hollow-Core Fibers. , 2021, , .		0
14	Few-Cycle Visible Light Generation in a Hollow-Core Fiber. , 2021, , .		0
15	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
16	Improving nanoscale terahertz field localization by means of sharply tapered resonant nanoantennas. Nanophotonics, 2020, 9, 683-690.	2.9	6
17	Highly Sensitive Polarization Rotation Measurement through a High-Order Vector Beam Generated by a Metasurface. Advanced Materials Technologies, 2020, 5, 1901008.	3.0	10
18	Terahertz three-dimensional monitoring of nanoparticle-assisted laser tissue soldering. Biomedical Optics Express, 2020, 11, 2254.	1.5	14

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19	Time-domain terahertz compressive imaging. <i>Optics Express</i> , 2020, 28, 3795.	1.7	31
20	Extreme Raman red shift: ultrafast multimode nonlinear space-time dynamics, pulse compression, and broadly tunable frequency conversion. <i>Optica</i> , 2020, 7, 1349.	4.8	45
21	Guiding of Laser Pulses at the Theoretical Limit – 97% Throughput Hollow-Core Fibers. , 2020, , .		0
22	Polarization rotation measurements via a high-order vector beam generated by a metasurface. , 2020, , .		0
23	Homodyne Coherent Detection of THz Pulses via DC-biased Solid-State Devices. , 2020, , .		0
24	Dynamic Terahertz Investigation of Nanoparticle-assisted Laser-tissue Interaction. , 2020, , .		0
25	Nanocavities for Terahertz Light. , 2020, , .		0
26	Room-Temperature and Selective Triggering of Supramolecular DNA Assembly/Disassembly by Nonionizing Radiation. <i>Journal of the American Chemical Society</i> , 2019, 141, 3456-3469.	6.6	32
27	Plasmon enhanced upconverting core@triple-shell nanoparticles as recyclable panchromatic initiators (blue to infrared) for radical polymerization. <i>Nanoscale Horizons</i> , 2019, 4, 907-917.	4.1	24
28	Antenna Tapering Strategy for Near-Field Enhancement Optimization in Terahertz Gold Nanocavities. , 2019, , .		0
29	Quantifying the photothermal conversion efficiency of plasmonic nanoparticles by means of terahertz radiation. <i>APL Photonics</i> , 2019, 4, .	3.0	32
30	Molecular Gases for Low Energy Pulse Compression in Hollow Core Fibers. , 2019, , .		0
31	Extremely broadband terahertz generation via pulse compression of an Ytterbium laser amplifier. <i>Optics Express</i> , 2019, 27, 32659.	1.7	17
32	Low Energy Hollow Core Fiber Pulse Compression Using Molecular Gases. , 2019, , .		0
33	Reshaping the phonon energy landscape of nanocrystals inside a terahertz plasmonic nanocavity. <i>Nature Communications</i> , 2018, 9, 763.	5.8	30
34	Micro-combs: A novel generation of optical sources. <i>Physics Reports</i> , 2018, 729, 1-81.	10.3	448
35	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
36	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

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37	Strongly Coupled Hybrid States: Dynamics of Strongly Coupled Hybrid States by Transient Absorption Spectroscopy (Adv. Funct. Mater. 48/2018). Advanced Functional Materials, 2018, 28, 1870342.	7.8	6
38	Molecular gases for pulse compression in hollow core fibers. Optics Express, 2018, 26, 25426.	1.7	17
39	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
40	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
41	Dynamics of Strongly Coupled Hybrid States by Transient Absorption Spectroscopy. Advanced Functional Materials, 2018, 28, 1801761.	7.8	17
42	Direct compression of 170-fs 50-cycle pulses down to 1.5 cycles with 70% transmission. Scientific Reports, 2018, 8, 11794.	1.6	78
43	Terahertz Thermometry: Combining Hyperspectral Imaging and Temperature Mapping at Terahertz Frequencies. Laser and Photonics Reviews, 2017, 11, 1600342.	4.4	25
44	Solid-state-biased coherent detection of ultra-broadband terahertz pulses. Optica, 2017, 4, 1358.	4.8	27
45	Multifrequency sources of quantum correlated photon pairs on-chip: a path toward integrated Quantum Frequency Combs. Nanophotonics, 2016, 5, 351-362.	2.9	70
46	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
47	Conical nanoantenna arrays for terahertz light. , 2016, , .		1
48	Quantum photonic circuits for optical signal processing. , 2015, , .		0
49	Micro-Slit Based Coherent Detection of Terahertz Pulses in Biased, Solid State Media. , 2015, , .		0
50	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
51	Laser-assisted guiding of electric discharges around objects. Science Advances, 2015, 1, e1400111.	4.7	110
52	Plasmonic Moon: A Fano-Like Approach for Squeezing the Magnetic Field in the Infrared. Nano Letters, 2015, 15, 6128-6134.	4.5	32
53	Squeezing Terahertz Light into Nanovolumes: Nanoantenna Enhanced Terahertz Spectroscopy (NETS) of Semiconductor Quantum Dots. Nano Letters, 2015, 15, 386-391.	4.5	86
54	Terahertz Field Induced Second Harmonic Coherent Detection Scheme based on a Biased Nonlinear Micro-slit. , 2014, , .		1

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55	Direct Generation of Orthogonally Polarized Photon Pairs on a Chip via Spontaneous Non-Degenerate FWM. , 2014, , .		0
56	Integrated frequency comb source of heralded single photons. Optics Express, 2014, 22, 6535.	1.7	187
57	Direct determination of the resonance properties of metallic conical nanoantennas. Optics Letters, 2014, 39, 571.	1.7	15
58	Active terahertz two-wire waveguides. Optics Express, 2014, 22, 22340.	1.7	8
59	Integrated Source of Multiplexed Heralded Photons. , 2014, , .		0
60	Terahertz Dipole Nanoantenna Arrays: Resonance Characteristics. Plasmonics, 2013, 8, 133-138.	1.8	35
61	CMOS compatible micro-ring resonator lasers. , 2013, , .		0
62	Design and top-down fabrication of metallic L-shape gap nanoantennas supporting plasmon-polariton modes. Microelectronic Engineering, 2013, 111, 91-95.	1.1	7
63	CCD-based imaging and 3D space-time mapping of terahertz fields via Kerr frequency conversion. Optics Letters, 2013, 38, 1899.	1.7	12
64	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
65	The Dawn of Ultrafast Nonlinear Optics in the Terahertz Regime. Springer Series in Optical Sciences, 2012, , 297-323.	0.5	5
66	Surface plasmon polariton compression through radially and linearly polarized source. Optics Letters, 2012, 37, 545.	1.7	51
67	Optimization of Rare-earth Modified Iron Garnet Epitaxial Films for Magneto-Optic Applications. , 2012, , .		1
68	Self-locked low threshold OPO in a CMOS-compatible microring resonator. , 2012, , .		0
69	Fabrication and characterization of a nanoantenna-based Raman device for ultrasensitive spectroscopic applications. Microelectronic Engineering, 2012, 98, 424-427.	1.1	15
70	A nanogap-array platform for testing the optically modulated conduction of gold-octithiophene-gold junctions for molecular optoelectronics. RSC Advances, 2012, 2, 10985.	1.7	14
71	Fully analytical description of adiabatic compression in dissipative polaritonic structures. Physical Review B, 2012, 86, .	1.1	38
72	Nanoplasmonic structures for biophotonic applications: SERS overview. Annalen Der Physik, 2012, 524, 620-636.	0.9	18

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73	Gain and loss mixed in the same cauldron. Nature, 2012, 488, 163-164.	13.7	17
74	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
75	CMOS Compatible Monolithic 1st and 2nd Order All-Optical Integrator. , 2012, , .		1
76	A self-locking scheme for robust parametric oscillation in CMOS-compatible microring resonators. , 2012, , .		0
77	Self-locked OPO in CMOS-compatible microring resonators. , 2012, , .		0
78	Parametric oscillation in CMOS-compatible microring resonators induced with a self-locking scheme. , 2012, , .		0
79	Advanced Integrated Photonics in Doped Silica Glass. Springer Series in Optical Sciences, 2012, , 47-92.	0.5	1
80	Monolithic CMOS compatible 1 st and 2 nd order 400GHz all-optical integrator. , 2011, , .		1
81	Effective Mass Anisotropy of Hot Electrons in Nonparabolic Conduction Bands of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline">n \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -Doped InGaAs Films Using Ultrafast Terahertz Pump-Probe Techniques. Physical Review Letters. 2011, 107, 107401.	2.9	53
82	Concurrent field enhancement and high transmission of THz radiation in nanoslit arrays. Applied Physics Letters, 2011, 99, .	1.5	51
83	Optical frequency conversion in integrated devices [Invited]. Journal of the Optical Society of America B: Optical Physics, 2011, 28, A67.	0.9	31
84	All-optical 1st and 2nd order integration on a chip. Optics Express, 2011, 19, 23153.	1.7	65
85	Extremely large extinction efficiency and field enhancement in terahertz resonant dipole nanoantennas. Optics Express, 2011, 19, 26088.	1.7	60
86	CMOS compatible waveguides for all-optical signal processing. , 2011, , .		2
87	Generation of Intense Terahertz Radiation via Optical Methods. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 5-16.	1.9	104
88	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
89	High index glass CMOS compatible all-optical chips for telecom and optical interconnects. , 2011, , .		0
90	Broadband enhanced 26 MV/cm THz radiation in uniform nano-slit arrays. , 2011, , .		0

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91	Ultrafast THz pulse shaping: generation of Half-cycle pulse from multi-cycle THz pulse. , 2011, , .		0
92	Nonlinear pulse processing in High Index Glass Integrated devices: pulse compression. , 2010, , .		0
93	Integrated optical hyper-parametric oscillator. , 2010, , .		0
94	Supercontinuum Generation in an Integrated High-Index Glass Spiral Waveguide. , 2010, , .		0
95	Anisotropy of hot electron effective mass in n-doped InGaAs revealed by nonlinear THz-pump/THz-probe spectroscopy. , 2010, , .		0
96	Ultra-Fast Integrated All-Optical Integrator. , 2010, , .		5
97	Optical Parametric Oscillation in a High-index Doped Silica Glass Micro-ring Resonator. , 2010, , .		0
98	THz imaging and spectroscopy using intense THz sources at the advanced laser light source. Physics Procedia, 2010, 5, 119-124.	1.2	4
99	CMOS-compatible integrated optical hyper-parametric oscillator. Nature Photonics, 2010, 4, 41-45.	15.6	519
100	Evaluation of the Electromagnetic Hazard of intense THz pulses on neural cells. , 2010, , .		0
101	CMOS compatible all-optical waveguides. , 2010, , .		0
102	The role of Bi ³⁺ ions in magneto-optic Ce and Bi comodified epitaxial iron garnet films. Applied Physics Letters, 2010, 97, .	1.5	7
103	High power terahertz sources for nonlinear spectroscopy of direct bandgap semiconductors. , 2010, , .		0
104	Subpicosecond optical pulse compression via an integrated nonlinear chirper. Optics Express, 2010, 18, 7625.	1.7	101
105	CMOS-Compatible Integrated Multiple Wavelength Laser. Optics and Photonics News, 2010, 21, 36.	0.4	1
106	Supercontinuum generation in a high index doped silica glass spiral waveguide. Optics Express, 2010, 18, 923.	1.7	127
107	Time-Resolved Terahertz Spectroscopy of Free Carrier Nonlinear Dynamics in Semiconductors. IEEE Photonics Journal, 2010, 2, 578-592.	1.0	20
108	On-chip CMOS-compatible all-optical integrator. Nature Communications, 2010, 1, 29.	5.8	220

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109	Application of high power terahertz sources to nonlinear spectroscopy of direct bandgap semiconductors. , 2010, , .		0
110	High Performance, Low-loss Nonlinear Integrated Glass Waveguides. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2010, 6, 283-286.	0.4	3
111	Ultrafast Optical Pulse Compression on a Chip. , 2010, , .		0
112	Ultra-fast All-optical Integration on a Silicon Chip. , 2010, , .		1
113	Optical Parametric Oscillation on a Chip. , 2010, , .		1
114	CMOS Compatible All-Optical Chips. , 2010, , .		0
115	Nonlinear Two-photon photodetection and autocorrelation in a GaAs MQW waveguide. , 2009, , .		0
116	Temporal pulse compression in low dispersion Hydex® glass integrated waveguides. , 2009, , .		0
117	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
118	Efficient self-phase modulation in low loss, high index doped silica glass integrated waveguides. Optics Express, 2009, 17, 1865.	1.7	112
119	Two-photon photodetector in a multiquantum well GaAs laser structure at 1551/4m. Optics Express, 2009, 17, 5298.	1.7	16
120	Improved terahertz two-color plasma sources pumped by high intensity laser beam. Optics Express, 2009, 17, 6044.	1.7	100
121	Terahertz pulse induced intervalley scattering in photoexcited GaAs. Optics Express, 2009, 17, 9620.	1.7	92
122	Low power four wave mixing in an integrated, micro-ring resonator with Q = 12 million. Optics Express, 2009, 17, 14098.	1.7	123
123	Hybrid integration of Ca _{0.28} Ba _{0.72} Nb ₂ O ₆ thin film electro-optic waveguides with silica/silicon substrates. Optics Express, 2009, 17, 15128.	1.7	13
124	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
125	Low power parametric wave-mixing in a zero dispersive CMOS compatible micro-ring resonator. , 2009, , .		0
126	Terahertz nonlinear spectroscopy of free-carriers in semiconductors. , 2009, , .		0

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127	Large faraday effect in ce:biig epitaxial thin films. , 2009, , .		1
128	Two-Photon Detection in a MQW GaAs Laser at 1.55 $\hat{1}$ / ₄ m. , 2009, , .		1
129	Polarization proximity effect in isolator crystal pairs. , 2009, , .		0
130	Polarization proximity effect in isolator crystal pairs. , 2009, , .		0
131	Effect and elimination of source position shifting in two-color plasma terahertz sources. , 2009, , .		0
132	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
133	Temporal Pulse Compression in High-Index Doped Silica Glass Integrated Waveguides. , 2009, , .		0
134	Low-power continuous-wave nonlinear optics in doped silica glass integrated waveguide structures. Nature Photonics, 2008, 2, 737-740.	15.6	328
135	Polarization proximity effect in isolator crystal pairs. Optics Letters, 2008, 33, 2871.	1.7	4
136	Generation of intense THz pulses in ZnTe. , 2008, , .		0
137	Large Kerr nonlinearity in ultra-low loss high-index glass waveguides. , 2008, , .		2
138	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
139	Pockels response in calcium barium niobate thin films. Applied Physics Letters, 2007, 91, .	1.5	16
140	Generation of 1.5 \hat{A} µJ single-cycle terahertz pulses by optical rectification from a large aperture ZnTe crystal. Optics Express, 2007, 15, 13212.	1.7	313
141	High-Power Terahertz Pulses at the Advanced Laser Light Source (ALLS) Laboratory. , 2007, , .		0
142	Excited-state dynamics and nonlinear optical response of Ge nanocrystals embedded in silica matrix. Applied Physics Letters, 2006, 88, 181901.	1.5	12
143	MICRORAMAN AND PHOTOREFRACTIVITY STUDY OF HAFNIUM-DOPED LITHIUM NIOBATE CRYSTALS. Journal of Nonlinear Optical Physics and Materials, 2006, 15, 9-21.	1.1	8
144	Photorefractivity of Hafnium-doped congruent lithium \hat{A} niobate crystals. Applied Physics Letters, 2005, 86, 131914.	1.5	96

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145	Kerr and four-wave mixing spectroscopy at the band edge of one-dimensional photonic crystals. Applied Physics Letters, 2005, 86, 231106.	1.5	33
146	Z-scan measurements using high repetition rate lasers: how to manage thermal effects. Optics Express, 2005, 13, 7976.	1.7	191
147	Reduced photorefraction in hafnium-doped single-domain and periodically poled lithium niobate crystals. Applied Physics Letters, 2004, 84, 1880-1882.	1.5	98
148	Wavelength conversion and pulse reshaping through cascaded interactions in an MZI configuration. IEEE Journal of Quantum Electronics, 2003, 39, 1486-1491.	1.0	11
149	Numerical study of cascaded wavelength conversion in quadratic media. Journal of Optics, 2002, 4, 457-462.	1.5	3
150	Nonlinear Optics in Doped Silica Glass Integrated Waveguide Structures. , 0, , .		1
151	Terahertz Nanoantennas for Enhanced Spectroscopy. , 0, , .		4
152	A novel integrated laser source without a laser. SPIE Newsroom, 0, , .	0.1	3
153	Intense few-cycle visible pulses directly generated via nonlinear fibre mode mixing. Nature Photonics, 0, , .	15.6	20
154	Phonon Analysis of 2D Organic-Halide Perovskites in the Low- and Mid-IR Region. Advanced Optical Materials, 0, , 2100439.	3.6	2