Maria Antonietta Ferrara

List of Publications by Year
in descending order

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Version: 2024-02-01

91 papers	977 citations	394421 19 h-index	477307 29 g-index
91 all docs	91 docs citations	91 times ranked	849 citing authors

#	Article	IF	Citations
1	Giant Raman gain in silicon nanocrystals. Nature Communications, 2012, 3, 1220.	12.8	91
2	Optical Properties of Diatom Nanostructured Biosilica in Arachnoidiscus sp: Micro-Optics from Mother Nature. PLoS ONE, 2014, 9, e103750.	2.5	82
3	Holographic imaging of unlabelled sperm cells for semen analysis: a review. Journal of Biophotonics, 2015, 8, 779-789.	2.3	56
4	Roadmap on holography. Journal of Optics (United Kingdom), 2020, 22, 123002.	2.2	54
5	Fiber Amplifiers and Fiber Lasers Based on Stimulated Raman Scattering: A Review. Micromachines, 2020, 11, 247.	2.9	43
6	Label-Free Imaging and Biochemical Characterization of Bovine Sperm Cells. Biosensors, 2015, 5, 141-157.	4.7	42
7	Advances in stimulated Raman scattering in nanostructures. Advances in Optics and Photonics, 2017, 9, 169.	25.5	40
8	Study of strain and wetting phenomena in porous silicon by Raman scattering. Journal of Raman Spectroscopy, 2008, 39, 199-204.	2.5	32
9	Non-invasive sex assessment in bovine semen by Raman spectroscopy. Laser Physics Letters, 2014, 11, 055604.	1.4	32
10	Enhanced stimulated Raman scattering in silicon nanocrystals embedded in silicon-rich nitride/silicon superlattice structures. Applied Physics Letters, 2008, 93, 251104.	3.3	29
11	Enhanced gain coefficient in Raman amplifier based on silicon nanocomposites. Photonics and Nanostructures - Fundamentals and Applications, 2011, 9, 1-7.	2.0	29
12	Broadening and tuning of spontaneous Raman emission in porous silicon at 1.5Î¼m. Applied Physics Letters, 2006, 88, 211105.	3.3	27
13	Observation of stimulated Raman scattering in silicon nanocomposites. Applied Physics Letters, 2009, 94, 221106.	3.3	27
14	Three-dimensional label-free imaging throughout adipocyte differentiation by stimulated Raman microscopy. PLoS ONE, 2019, 14, e0216811.	2.5	27
15	Subcellular chemical and morphological analysis by stimulated Raman scattering microscopy and image analysis techniques. Biomedical Optics Express, 2016, 7, 1853.	2.9	26
16	Volume Holographic Optical Elements as Solar Concentrators: An Overview. Applied Sciences (Switzerland), 2019, 9, 193.	2.5	26
17	Combined Raman and polarization sensitive holographic imaging for a multimodal label-free assessment of human sperm function. Scientific Reports, 2019, 9, 4823.	3.3	23
18	Simultaneous Holographic Microscopy and Raman Spectroscopy Monitoring of Human Spermatozoa Photodegradation. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 27-34.	2.9	21

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19	Label-free imaging of small lipid droplets by femtosecond-stimulated Raman scattering microscopy. Journal of Nonlinear Optical Physics and Materials, 2017, 26, 1750052.	1.8	21
20	Integrated Raman Laser: A Review of the Last Two Decades. Micromachines, 2020, 11, 330.	2.9	21
21	Photopolymer-based volume holographic optical elements: design and possible applications. Journal of the European Optical Society-Rapid Publications, 2015, 10, 15057.	1.9	20
22	Polarization-Sensitive Digital Holographic Imaging for Characterization of Microscopic Samples: Recent Advances and Perspectives. Applied Sciences (Switzerland), 2020, 10, 4520.	2.5	19
23	Integration of stimulated Raman gain and stimulated Raman losses detection modes in a single nonlinear microscope. Optics Express, 2018, 26, 26317.	3.4	16
24	Combined Raman Spectroscopy and Digital Holographic Microscopy for Sperm Cell Quality Analysis. Journal of Spectroscopy, 2017, 2017, 1-14.	1.3	15
25	Raman Amplifier Based on Amorphous Silicon Nanoparticles. International Journal of Photoenergy, 2012, 2012, 1-5.	2.5	13
26	Toward an ideal nanomaterial for on-chip Raman laser. Journal of Nonlinear Optical Physics and Materials, 2017, 26, 1750039.	1.8	13
27	Integrated Photodetectors Based on Group IV and Colloidal Semiconductors: Current State of Affairs. Micromachines, 2020, 11, 842.	2.9	13
28	Implementation of a Nonlinear Microscope Based on Stimulated Raman Scattering. Journal of Visualized Experiments, 2019, , .	0.3	12
29	Optics with diatoms: towards efficient, bioinspired photonic devices at the micro-scale. , 2013, , .		10
30	Analysis of Pulses Bandwidth and Spectral Resolution in Femtosecond Stimulated Raman Scattering Microscopy. Applied Sciences (Switzerland), 2021, 11, 3903.	2.5	9
31	Spontaneous Raman emission in porous silicon at 1.5 Âµm and prospects for a Raman amplifier. Journal of Optics, 2006, 8, S574-S577.	1.5	8
32	Volume holographic gratings: fabrication and characterization. Proceedings of SPIE, 2015, , .	0.8	8
33	EXPERIMENTAL INVESTIGATION OF STIMULATED RAMAN SCATTERING GAIN IN SILICON NANOCOMPOSITE AND IN AMORPHOUS SILICON NANOPARTICLES. Journal of Nonlinear Optical Physics and Materials, 2012, 21, 1250039.	1.8	7
34	Volume holographic gratings as optical sensor for heavy metal in bathing waters. Proceedings of SPIE, 2015, , .	0.8	7
35	Diatom Valve Three-Dimensional Representation: A New Imaging Method Based on Combined Microscopies. International Journal of Molecular Sciences, 2016, 17, 1645.	4.1	7
36	Characterization of photopolymers as optical recording materials by means of digital holography microscopy. , 2013, , .		6

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37	Underwater Light Manipulation by the Benthic Diatom Ctenophora pulchella: From PAR Efficient Collection to UVR Screening. Nanomaterials, 2021, 11, 2855.	4.1	6
38	Noises investigations and image denoising in femtosecond stimulated Raman scattering microscopy. Journal of Biophotonics, 2022, 15, e202100379.	2.3	5
39	Multiplexed holographic lenses : realization and optical characterization. , 2015, , .		4
40	Analysis of phase patterns in photochromic polyurethanes by a holographic approach. Optical Materials Express, 2015, 5, 2281.	3.0	4
41	Polarized Digital Holography as Valuable Analytical Tool in Biological and Medical Research. , 2019, , .		3
42	Holographic Optical Lenses Recorded on a Glassy Matrix-Based Photopolymer for Solar Concentrators. Photonics, 2021, 8, 585.	2.0	3
43	Measurements of adsorption strain in porous silicon by Raman scattering. , 2007, , .		2
44	Investigation of Porous Silicon Wetting by Raman Scattering. Spectroscopy Letters, 2008, 41, 174-178.	1.0	2
45	Raman amplifier based on Si-nc. , 2014, , .		2
46	Implementation of stimulated Raman scattering microscopy for single cell analysis. Proceedings of SPIE, 2017, , .	0.8	2
47	Volume Holographic Optical Elements as Solar Concentrators. , 2017, , .		2
48	Prospects for a waveguide Raman amplifier in porous silicon at 1.5 Î¼m. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1644-1647.	0.8	1
49	Stimulated Raman scattering in quantum dots and nanocomposites silicon based materials. , 2011, , .		1
50	Raman sex sorting of bovine spermatozoa. , 2014, , .		1
51	A combined holographic and Raman microscopy approach for the assessment of spermatozoa. , 2015, , .		1
52	Study of Raman amplification in nanostructured materials. , 2015, , .		1
53	Analysis of bovine sperm cells by a combined holographic and Raman microscopy approach. , 2015, , .		1
54	Stimulated Raman scattering in nanostructured materials. , 2015, , .		1

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55	Stimulated Raman Scattering in Micro- and Nanophotonics. , 0, , .		1
56	Label-free imaging of lipid droplets in cells by stimulated Raman microscopy. , 2018, , .		1
57	CHAPTER 5. Micro- and Nano-optical Devices from Diatom Nanostructures: Light Control by Mother Nature. RSC Nanoscience and Nanotechnology, 0, , 111-125.	0.2	1
58	Raman sensing of vapors and liquids in porous silicon. , 2005, , .		0
59	Spontaneous Raman emission and tunable Stokes shift in porous silicon. , 0, , .		0
60	Raman emission in porous silicon at 1.5 micron: a possible approach. , 2005, , .		0
61	Raman approach for study of amplification in porous silicon at 1.5 Î¼m. , 2006, , .		0
62	Study of the effects on the Raman spectra of adsorption strain in porous silicon. , 2007, , .		0
63	RAMAN APPROACH IN POROUS SILICON AT 1.5 Î¼M. Journal of Nonlinear Optical Physics and Materials, 2008, 17, 37-48.	1.8	0
64	Enhanced Stimulated Raman Scattering in silicon nanocrystals embedded in silicon-rich nitride/silicon superlattice structures. , 2009, , .		0
65	Micro and nanophotonics in silicon: new perspectives and applications. , 2009, , .		0
66	New perspectives and applications of silicon nanophotonics. Proceedings of SPIE, 2010, , .	0.8	0
67	Nonlinear optics at nanoscale: The stimulated raman effect. , 2013, , .		0
68	Label-free biochemical characterization of bovine sperm cells using Raman microscopy. Proceedings of SPIE, 2013, , .	0.8	0
69	Label-free biochemical characterization of bovine sperm cells using Raman microscopy. Proceedings of SPIE, 2014, , .	0.8	0
70	Three-dimensional imaging using digital holography and scanning electron microscopy. , 2014, , .		0
71	Femtosecond stimulated Raman spectroscopy and preliminary steps for nonlinear microscopy. , 2015, , .		0
72	Tailoring nonlinear nanostructured materials for integrated sources based on stimulated Raman scattering. , 2015, , .		0

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73	Femtosecond stimulated Raman spectroscopy as a first step for nonlinear microscopy. , 2015, , .		0
74	Spermatozoa quality assessment: a combined holographic and Raman microscopy approach. Proceedings of SPIE, 2015, , .	0.8	0
75	Automatic method for features extraction for images achieved by stimulated Raman scattering microscopy. , 2017, , .		0
76	Stimulated Raman Imaging of Lipids Droplets. , 2018, , .		0
77	Advanced Label-Free Optical Methods for Spermatozoa Quality Assessment and Selection. , 2018, , .		0
78	Towards Applications of Stimulated Raman Scattering in Nanophotonics. , 2018, , .		0
79	Extending Femtosecond Stimulated Raman Microscopy Toward Silent and Fingerprint Region of Biomolecules. , 2020, , .		0
80	Adipocyte Differentiation Investigated by Stimulated Raman Microscopy Based on Femtosecond Laser Sources. , 2020, , .		0
81	Multimodal imaging for identification and classification of circulating tumor cells. , 2021, , .		0
82	Implementation of stimulated Raman losses and stimulated Raman gain microscopy using three femtosecond laser sources. , 2018, , .		0
83	Femtosecond Stimulated Raman Microscopy in Câ–¬H Region of Raman Spectra of Biomolecules and Its Extension to Silent and Fingerprint Regions. , 0, , .		0
84	Volume Phase Holographic Lenses for Efficient Planar Solar Track-Concentrators. Lecture Notes in Electrical Engineering, 2020, , 9-13.	0.4	0
85	Nonlinear optics at nanoscale: The stimulated Raman effect. , 2013, , .		0
86	Stimulated Raman Microscopy Implemented by Three Femtosecond Laser Sources. EPJ Web of Conferences, 2021, 255, 06003.	0.3	0
87	A Spectral Resolution study in Femtosecond Stimulated Raman Scattering Microscopy. EPJ Web of Conferences, 2021, 255, 11009.	0.3	0
88	Auto and cross correlation measurements of femtosecond laser beams in SRS microscope. , 2020, , .		0
89	Relative intensity noise measurement of femtosecond laser beams in SRS microscope. , 2020, , .		0
90	A Polarized Digital Holographic Approach in Biological and Medical Research. , 2020, , .		0

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91	Special Issue on Recent Advances and Future Trends in Nanophotonics. Applied Sciences (Switzerland), 2022, 12, 663.	2.5	0