Paola Borri

List of Publications by Year
in descending order

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113 papers	3,849 citations	126907 33 h-index	128289 60 g-index
114 all docs	114 docs citations	114 times ranked	3308 citing authors

#	Article	IF	Citations
1	Ultralong Dephasing Time in InGaAs Quantum Dots. Physical Review Letters, 2001, 87, 157401.	7.8	870
2	Spectral hole-burning and carrier-heating dynamics in InGaAs quantum-dot amplifiers. IEEE Journal of Selected Topics in Quantum Electronics, 2000, 6, 544-551.	2.9	161
3	Ultrafast gain dynamics in InAs-InGaAs quantum-dot amplifiers. IEEE Photonics Technology Letters, 2000, 12, 594-596.	2.5	156
4	Giant exciton oscillator strength and radiatively limited dephasing in two-dimensional platelets. Physical Review B, 2015, 91, .	3.2	143
5	Dephasing in InAs/GaAs quantum dots. Physical Review B, 1999, 60, 7784-7787.	3.2	117
6	Coherent anti-Stokes Raman microspectroscopy using spectral focusing with glass dispersion. Applied Physics Letters, 2008, 93, .	3.3	112
7	Exciton Dephasing in Quantum Dot Molecules. Physical Review Letters, 2003, 91, 267401.	7.8	100
8	Exciton relaxation and dephasing in quantum-dot amplifiers from room to cryogenic temperature. IEEE Journal of Selected Topics in Quantum Electronics, 2002, 8, 984-991.	2.9	93
9	Nonlinear vibrational microscopy applied to lipid biology. Progress in Lipid Research, 2013, 52, 615-632.	11.6	93
10	Quantitative Chemical Imaging and Unsupervised Analysis Using Hyperspectral Coherent Anti-Stokes Raman Scattering Microscopy. Analytical Chemistry, 2013, 85, 10820-10828.	6.5	87
11	Time-resolved optical characterization of InAs/InGaAs quantum dots emitting at 1.3 Î¼m. Applied Physics Letters, 2000, 76, 3430-3432.	3.3	85
12	Receptor Crosslinking: A General Method to Trigger Internalization and Lysosomal Targeting of Therapeutic Receptor:Ligand Complexes. Molecular Therapy, 2015, 23, 1888-1898.	8.2	83
13	Ultrafast carrier dynamics in InGaAs quantum dot materials and devices. Journal of Optics, 2006, 8, S33-S46.	1.5	75
14	Linewidth enhancement factor in InGaAs quantum-dot amplifiers. IEEE Journal of Quantum Electronics, 2004, 40, 1423-1429.	1.9	73
15	Ultrafast carrier dynamics and dephasing in InAs quantum-dot amplifiers emitting near 1.3-Î¼m-wavelength at room temperature. Applied Physics Letters, 2001, 79, 2633-2635.	3.3	69
16	Measurement of the dynamics of plasmons inside individual gold nanoparticles using a femtosecond phase-resolved microscope. Physical Review B, 2012, 85, .	3.2	69
17	Heterodyne pump-probe and four-wave mixing in semiconductor optical amplifiers using balanced lock-in detection. Optics Communications, 1999, 169, 317-324.	2.1	66
18	Quantitative imaging of lipids in live mouse oocytes and early embryos using CARS microscopy. Development (Cambridge), 2016, 143, 2238-47.	2.5	61

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19	Long Exciton Dephasing Time and Coherent Phonon Coupling in CsPbBr₂Cl Perovskite Nanocrystals. Nano Letters, 2018, 18, 7546-7551.	9.1	60
20	Simultaneous hyperspectral differential-CARS, TPF and SHG microscopy with a single 5 fs Ti:Sa laser. Optics Express, 2013, 21, 7096.	3.4	58
21	Coherent anti-Stokes Raman scattering microscopy of single nanodiamonds. Nature Nanotechnology, 2014, 9, 940-946.	31.5	56
22	Coherent antiâ€Stokes Raman microâ€spectroscopy using spectral focusing: theory and experiment. Journal of Raman Spectroscopy, 2009, 40, 800-808.	2.5	55
23	Differential coherent anti-Stokes Raman scattering microscopy with linearly chirped femtosecond laser pulses. Optics Letters, 2009, 34, 2258.	3.3	49
24	Spin-Flip Limited Exciton Dephasing in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>CdSe</mml:mi><mml:mo>/</mml:mo><mml:mi>ZnS</mml:mi></mml:math>Colloidal Quantum Dots. Physical Review Letters, 2012, 108, 087401.	7.8	48
25	Hyperspectral and differential CARS microscopy for quantitative chemical imaging in human adipocytes. Biomedical Optics Express, 2014, 5, 1378.	2.9	47
26	Single source coherent anti-Stokes Raman microspectroscopy using spectral focusing. Applied Physics Letters, 2009, 95, 081109.	3.3	46
27	A monolithic optical sensor based on whispering-gallery modes in polystyrene microspheres. Applied Physics Letters, 2008, 93, .	3.3	42
28	Resonant four-wave mixing of gold nanoparticles for three-dimensional cell microscopy. Optics Letters, 2009, 34, 1816.	3.3	41
29	Engineering the Spinâ€“Flip Limited Exciton Dephasing in Colloidal CdSe/CdS Quantum Dots. ACS Nano, 2012, 6, 5227-5233.	14.6	40
30	Quantitative Spatiotemporal Chemical Profiling of Individual Lipid Droplets by Hyperspectral CARS Microscopy in Living Human Adipose-Derived Stem Cells. Analytical Chemistry, 2016, 88, 3677-3685.	6.5	39
31	Hyperspectral image analysis for CARS, SRS, and Raman data. Journal of Raman Spectroscopy, 2015, 46, 727-734.	2.5	37
32	Four-wave mixing dynamics of excitons in InGaAs self-assembled quantum dots. Journal of Physics Condensed Matter, 2007, 19, 295201.	1.8	34
33	Lipid Bilayer Thickness Measured by Quantitative DIC Reveals Phase Transitions and Effects of Substrate Hydrophilicity. Langmuir, 2019, 35, 13805-13814.	3.5	34
34	Ultrafast gain dynamics in 1.3Î¼m InAsâ•GaAs quantum-dot optical amplifiers: The effect of p doping. Applied Physics Letters, 2007, 90, 201103.	3.3	33
35	Effect of slurry composition on the chemical mechanical polishing of thin diamond films. Science and Technology of Advanced Materials, 2017, 18, 654-663.	6.1	28
36	Label-Free Volumetric Quantitative Imaging of the Human Somatic Cell Division by Hyperspectral Coherent Anti-Stokes Raman Scattering. Analytical Chemistry, 2019, 91, 2813-2821.	6.5	25

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37	High Q optical resonances of polystyrene microspheres in water controlled by optical tweezers. Applied Physics Letters, 2007, 91, 141116.	3.3	24
38	Separation of coherent and incoherent nonlinearities in a heterodyne pump-probe experiment. Optics Express, 2000, 7, 107.	3.4	23
39	Polarization-resolved extinction and scattering cross-sections of individual gold nanoparticles measured by wide-field microscopy on a large ensemble. Applied Physics Letters, 2013, 102, 131107.	3.3	23
40	Exciton dephasing in lead sulfide quantum dots by<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>X</mml:mi></mml:mrow></mml:math>-point phonons. Physical Review B, 2011, 83, .	3.2	21
41	Hyperspectral analysis applied to micro-Brillouin maps of amyloid-beta plaques in Alzheimer's disease brains. Analyst, The, 2018, 143, 6095-6102.	3.5	21
42	Chemicallyâ€specific dual/differential CARS microâ€spectroscopy of saturated and unsaturated lipid droplets. Journal of Biophotonics, 2014, 7, 68-76.	2.3	20
43	Hyperspectral volumetric coherent antiâ€Stokes Raman scattering microscopy: quantitative volume determination and NaCl as nonâ€resonant standard. Journal of Raman Spectroscopy, 2016, 47, 1167-1173.	2.5	20
44	Bessel-Beam Hyperspectral CARS Microscopy with Sparse Sampling: Enabling High-Content High-Throughput Label-Free Quantitative Chemical Imaging. Analytical Chemistry, 2018, 90, 3775-3785.	6.5	20
45	Quantitative Label-Free Imaging of Lipid Domains in Single Bilayers by Hyperspectral Coherent Raman Scattering. Analytical Chemistry, 2020, 92, 14657-14666.	6.5	19
46	Quantitative Measurement of the Optical Cross Sections of Single Nano-objects by Correlative Transmission and Scattering Microspectroscopy. ACS Photonics, 2019, 6, 2149-2160.	6.6	18
47	Role of interband and photoinduced absorption in the nonlinear refraction and absorption of resonantly excited PbS quantum dots around 1550 nm. Physical Review B, 2012, 85, .	3.2	17
48	Polarization-resolved ultrafast dynamics of the complex polarizability in single gold nanoparticles. Physical Chemistry Chemical Physics, 2013, 15, 4226.	2.8	17
49	Switching of Macromolecular Ligand Display by Thermoresponsive Polymers Mediates Endocytosis of Multiconjugate Nanoparticles. Bioconjugate Chemistry, 2018, 29, 1030-1046.	3.6	16
50	Refractive Index Dynamics and Linewidth Enhancement Factor in p-Doped InAsâ€“GaAs Quantum-Dot Amplifiers. IEEE Journal of Quantum Electronics, 2009, 45, 579-585.	1.9	15
51	Biexcitons in semiconductor microcavities. Semiconductor Science and Technology, 2003, 18, S351-S360.	2.0	14
52	Ultrafast gain dynamics in InP quantum-dot optical amplifiers. Applied Physics Letters, 2010, 97, 211103.	3.3	13
53	Four-wave-mixing imaging and carrier dynamics of PbS colloidal quantum dots. Physical Review B, 2010, 82, .	3.2	13
54	The optical nanosizer â€“ quantitative size and shape analysis of individual nanoparticles by high-throughput widefield extinction microscopy. Nanoscale, 2020, 12, 16215-16228.	5.6	13

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55	Dynamic label-free imaging of lipid droplets and their link to fatty acid and pyruvate oxidation in mouse eggs. Journal of Cell Science, 2019, 132, .	2.0	12
56	Multiphoton microscopy based on four-wave mixing of colloidal quantum dots. Applied Physics Letters, 2008, 93, 021114.	3.3	11
57	Comparison of Methods for Generating Planar DNA-Modified Surfaces for Hybridization Studies. ACS Applied Materials & Interfaces, 2009, 1, 1793-1798.	8.0	11
58	The role of p-doping in the gain dynamics of InAs/GaAs quantum dots at low temperature. Applied Physics Letters, 2009, 94, 041110.	3.3	11
59	Dephasing of excitons and multiexcitons in undoped andp-doped InAs/GaAs quantum dots-in-a-well. Physical Review B, 2010, 82, .	3.2	11
60	Sparse sampling for fast hyperspectral coherent anti-Stokes Raman scattering imaging. Optics Express, 2014, 22, 4021.	3.4	11
61	Optical micro-spectroscopy of single metallic nanoparticles: quantitative extinction and transient resonant four-wave mixing. Faraday Discussions, 2015, 184, 305-320.	3.2	11
62	Background-Free 3D Nanometric Localization and Sub-nm Asymmetry Detection of Single Plasmonic Nanoparticles by Four-Wave Mixing Interferometry with Optical Vortices. Physical Review X, 2017, 7, .	8.9	11
63	Production of Metal-Free Diamond Nanoparticles. ACS Omega, 2018, 3, 16099-16104.	3.5	10
64	Four-wave-mixing microscopy reveals non-colocalisation between gold nanoparticles and fluorophore conjugates inside cells. Nanoscale, 2020, 12, 4622-4635.	5.6	10
65	Live Cell Imaging with Chemical Specificity Using Dual Frequency CARS Microscopy. Methods in Enzymology, 2012, 504, 273-291.	1.0	9
66	Plasmonics, Tracking and Manipulating, and Living Cells: general discussion. Faraday Discussions, 2015, 184, 451-473.	3.2	9
67	Wide-Field Imaging of Single-Nanoparticle Extinction with Sub- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow><mml:mi>nm</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Sensitivity. Physical Review Applied, 2018, 9, .	3.8	8
68	Invited Article: Heterodyne dual-polarization epi-detected CARS microscopy for chemical and topographic imaging of interfaces. APL Photonics, 2018, 3, 092402.	5.7	8
69	Identifying subpopulations in multicellular systems by quantitative chemical imaging using label-free hyperspectral CARS microscopy. Analyst, The, 2021, 146, 2277-2291.	3.5	8
70	Brillouinâ€“Raman microspectroscopy for the morpho-mechanical imaging of human lamellar bone. Journal of the Royal Society Interface, 2022, 19, 20210642.	3.4	8
71	Measurement of the ultrafast gain recovery in InGaAs/GaAs quantum dots: Beyond a mean-field description. Physical Review B, 2010, 82, .	3.2	7
72	Quadruplex CARS microâ€spectroscopy. Journal of Raman Spectroscopy, 2013, 44, 255-261.	2.5	7

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73	Labelâ€free quantitative chemical imaging and classification analysis of adipogenesis using mouse embryonic stem cells. Journal of Biophotonics, 2018, 11, e201700219.	2.3	6
74	Sizing individual dielectric nanoparticles with quantitative differential interference contrast microscopy. Analyst, The, 2022, 147, 1567-1580.	3.5	6
75	Dual/differential coherent anti-Stokes Raman scattering module for multiphoton microscopes with a femtosecond Ti:sapphire oscillator. Journal of Biomedical Optics, 2013, 18, 1.	2.6	5
76	Quantitative Imaging of B1 Cyclin Expression Across the Cell Cycle Using Green Fluorescent Protein Tagging and Epifluorescence. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2020, 97, 1066-1072.	1.5	5
77	Quantitative optical microspectroscopy, electron microscopy, and modelling of individual silver nanocubes reveal surface compositional changes at the nanoscale. Nanoscale Advances, 2020, 2, 2485-2496.	4.6	5
78	Roadmap on bio-nano-photonics. Journal of Optics (United Kingdom), 2021, 23, 073001.	2.2	4
79	Quantification of the nonlinear susceptibility of the hydrogen and deuterium stretch vibration for biomolecules in coherent Raman microâ€spectroscopy. Journal of Raman Spectroscopy, 2021, 52, 1540-1551.	2.5	4
80	Fabrication and optical properties of thin silicaâ€coated CdSe/ZnS quantum dots. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2822-2825.	1.8	3
81	Functional imaging of a model unicell: Spironucleus vortens as an anaerobic but aerotolerant flagellated protist. Advances in Microbial Physiology, 2020, 76, 41-79.	2.4	3
82	Biofunctionalisation of gallium arsenide with neutravidin. Journal of Colloid and Interface Science, 2022, 608, 2399-2406.	9.4	3
83	Hyperspectral CARS microscopy and quantitative unsupervised analysis of deuterated and non-deuterated fatty acid storage in human cells. Journal of Chemical Physics, 2021, 155, 224202.	3.0	3
84	A primary effect of palmitic acid on mouse oocytes is the disruption of the structure of the endoplasmic reticulum. Reproduction, 2022, 163, 45-56.	2.6	3
85	Semiconductor quantum-dot lasers and amplifiers. , 2002, , .		2
86	Novel multi-photon microscopy based on resonant nonlinear optics of colloidal quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 916-919.	0.8	2
87	Triply surface-plasmon resonant four-wave mixing imaging of gold nanoparticles. Proceedings of SPIE, 2011, , .	0.8	2
88	Quantitative morphometric analysis of single gold nanoparticles by optical extinction microscopy: Material permittivity and surface damping effects. Journal of Chemical Physics, 2021, 154, 044702.	3.0	2
89	Ultrafast Optical Properties of Quantum Dot Amplifiers. Nanoscience and Technology, 2002, , 411-430.	1.5	2
90	MasiaetÂal.Reply:. Physical Review Letters, 2012, 109, .	7.8	1

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91	Imaging lipids in living mammalian oocytes and early embryos by coherent Raman scattering microscopy. , 2019, , .		1
92	Imaging and tracking single plasmonic nanoparticles in 3D background-free with four-wave mixing interferometry. , 2019, , .		1
93	Quantitative high-throughput optical sizing of individual colloidal nanoparticles by wide-field imaging extinction microscopy. , 2019, , .		1
94	Dephasing processes in InGaAs quantum dots and quantum-dot molecules. , 2004, , .		0
95	Sensitive optical biosensor based on whispering-gallery modes of dielectric microspheres. , 2007, , .		0
96	Ultrafast pulse-pair amplification in InGaAs quantum-dot amplifiers. , 2009, , .		0
97	CARS Microscopy using linearly-chirped ultrafast laser pulses. , 2009, , .		0
98	Four-wave mixing of gold nanoparticles for three-dimensional cell microscopy. , 2009, , .		0
99	CARS microscopy using linearly chirped ultrafast laser pulses. , 2009, , .		0
100	Modelling the response of whispering-gallery-mode optical resonators for biosensing applications. , 2009, , .		0
101	Whispering-gallery modes in dielectric microspheres for biosensing applications. , 2009, , .		0
102	Doing More with Less: A Method for Low Total Mass, Affinity Measurement Using Variable-Length Nanotethers. Analytical Chemistry, 2011, 83, 8900-8905.	6.5	0
103	Ultrafast conditional carrier dynamics in semiconductor quantum dots. Proceedings of SPIE, 2011, , .	0.8	0
104	Ultrafast exciton dephasing in PbS colloidal quantum dots. , 2011, , .		0
105	Differential CARS microscopy with chirped femtosecond laser pulses. , 2011, , .		0
106	Differential CARS microscopy with linearly chirped femtosecond laser pulses. Proceedings of SPIE, 2011, , .	0.8	0
107	Quantitative coherent Raman scattering microscopy for bioimaging. , 2021, , .		0
108	Simultaneous microscopic imaging of thickness and refractive index of thin layers by heterodyne interferometric reï¬,ectometry (HiRef). Journal Physics D: Applied Physics, 0, , .	2.8	0

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109	Label-free volumetric quantitative imaging of human osteosarcoma cells by hyperspectral coherent anti-Stokes Raman scattering. , 2019, , .		0
110	Measuring sub-nanometre thickness changes during phase transitions of supported lipid bilayers with quantitative differential interference contrast microscopy. , 2019, , .		0
111	Heterodyne dual-polarization epi-detected CARS microscopy for chemical and topographic imaging of interfaces. , 2019, , .		0
112	Optimisation of multimodal coherent anti-Stokes Raman scattering microscopy for the detection of isotope-labelled molecules. , 2019, , .		0
113	Background-free 3D four-wave mixing microscopy of single gold nanoparticles inside biological systems. , 2021, , .		0