Raffaele Velotta

List of Publications by Year in Descending Order

146 papers	6,108 citations	34 h-index	75 g-index
164 ext. papers	6,839 ext. citations	4 avg, IF	5.2 L-index

#	Paper	IF	Citations
146	Double-Resonant Nanostructured Gold Surface for Multiplexed Detection.. *ACS Applied Materials & Interfaces*, **2022**,	9.5	2
145	Nanostructured Surfaces as Plasmonic Biosensors: A Review (Adv. Mater. Interfaces 2/2022). *Advanced Materials Interfaces*, **2022**, 9, 2270009	4.6	0
144	Solid-state optical properties of self-assembling amyloid-like peptides with different charged states at the terminal ends.. *Scientific Reports*, **2022**, 12, 759	4.9	1
143	Plasmonic Nanomaterials for Colorimetric Biosensing: A Review. *Chemosensors*, **2022**, 10, 136	4	2
142	Loading of Polydimethylsiloxane with a Human ApoB-Derived Antimicrobial Peptide to Prevent Bacterial Infections.. *International Journal of Molecular Sciences*, **2022**, 23,	6.3	2
141	Analysis of the optical response of a SARS-CoV-2-directed colorimetric immunosensor. *AIP Advances*, **2021**, 11, 065319	1.5	4
140	Optimized Identification of High-Grade Prostate Cancer by Combining Different PSA Molecular Forms and PSA Density in a Deep Learning Model. *Diagnostics*, **2021**, 11,	3.8	4
139	Randomly positioned gold nanoparticles as fluorescence enhancers in apta-immunosensor for malaria test. *Mikrochimica Acta*, **2021**, 188, 88	5.8	10
138	Fluorescence Emission of Self-assembling Amyloid-like Peptides: Solution versus Solid State. *ChemPhysChem*, **2021**, 22, 2215-2221	3.2	3
137	Screen Printed Based Impedimetric Immunosensor for Rapid Detection of in Drinking Water. *Sensors*, **2020**, 20,	3.8	28
136	The Union Is Strength: The Synergic Action of Long Fatty Acids and a Bacteriophage against Biofilm. *Microorganisms*, **2020**, 9,	4.9	6
135	Colorimetric Test for Fast Detection of SARS-CoV-2 in Nasal and Throat Swabs. *ACS Sensors*, **2020**, 5, 3043-3048	9.2	76
134	LSPR-based colorimetric immunosensor for rapid and sensitive 17β-estradiol detection in tap water. *Sensors and Actuators B: Chemical*, **2020**, 308, 127699	8.5	28
133	Ultrasensitive antibody-aptamer plasmonic biosensor for malaria biomarker detection in whole blood. *Nature Communications*, **2020**, 11, 6134	17.4	29
132	Time-gated luminescence imaging of positively charged poly-l-lysine-coated highly microporous silicon nanoparticles in living Hydra polyp. *Journal of Biophotonics*, **2020**, 13, e202000272	3.1	6
131	Core-Shell Magnetic Nanoparticles for Highly Sensitive Magnetoelastic Immunosensor. *Nanomaterials*, **2020**, 10,	5.4	4
130	Effects of human antimicrobial cryptides identified in apolipoprotein B depend on specific features of bacterial strains. *Scientific Reports*, **2019**, 9, 6728	4.9	21

129	Biomimetic hydroxyapatite nanocrystals are an active carrier for bacteriophages. *International Journal of Nanomedicine*, **2019**, 14, 2219-2232	7.3	18
128	Photoemissive properties and stability of undecylenic acid-modified porous silicon nanoparticles in physiological medium. *Applied Physics Letters*, **2019**, 114, 113701	3.4	3
127	Ring laser gyroscopes in the underground Gran Sasso Laboratories. *Quantum Electronics*, **2019**, 49, 195-198	1.8	3
126	Green synthesis of conductive polyaniline by laccase using a DNA template. *Engineering in Life Sciences*, **2019**, 19, 631-642	3.4	7
125	Quartz Crystal Microbalance Sensors: New Tools for the Assessment of Organic Threats to the Quality of Water. *Handbook of Environmental Chemistry*, **2019**, 315-342	0.8	1
124	A multi-scale time-resolved study of photoactivated dynamics in 5-benzyl uracil, a model for DNA/protein interactions. *Physical Chemistry Chemical Physics*, **2019**, 21, 26301-26310	3.6	4
123	Biosensor surface functionalization by a simple photochemical immobilization of antibodies: experimental characterization by mass spectrometry and surface enhanced Raman spectroscopy. *Analyst, The*, **2019**, 144, 6871-6880	5	22
122	Biosensor for Point-of-Care Analysis of Immunoglobulins in Urine by Metal Enhanced Fluorescence from Gold Nanoparticles. *ACS Applied Materials & Interfaces*, **2019**, 11, 3753-3762	9.5	32
121	Colorimetric Immunosensor by Aggregation of Photochemically Functionalized Gold Nanoparticles. *ACS Omega*, **2018**, 3, 3805-3812	3.9	48
120	Self-Assembling of Fmoc-GC Peptide Nucleic Acid Dimers into Highly Fluorescent Aggregates. *Chemistry - A European Journal*, **2018**, 24, 4729-4735	4.8	16
119	QCM-based immunosensor for rapid detection of Salmonella Typhimurium in food. *Scientific Reports*, **2018**, 8, 16137	4.9	47
118	Label-Free Detection of Gliadin in Food by Quartz Crystal Microbalance-Based Immunosensor. *Journal of Agricultural and Food Chemistry*, **2017**, 65, 1281-1289	5.7	17
117	Flexible immunosensor for the detection of salivary □amylase in body fluids. *Talanta*, **2017**, 174, 52-58	6.2	29
116	Effective antibodies immobilization and functionalized nanoparticles in a quartz-crystal microbalance-based immunosensor for the detection of parathion. *PLoS ONE*, **2017**, 12, e0171754	3.7	36
115	Time-resolved analysis of DNA-protein interactions in living cells by UV laser pulses. *Scientific Reports*, **2017**, 7, 11725	4.9	9
114	Vmh2 hydrophobin as a tool for the development of "self-immobilizing" enzymes for biosensing. *Biotechnology and Bioengineering*, **2017**, 114, 46-52	4.9	28
113	Femtosecond UV-laser pulses to unveil protein-protein interactions in living cells. *Cellular and Molecular Life Sciences*, **2016**, 73, 637-48	10.3	25
112	Simple and Flexible Model for Laser-Driven Antibody-Gold Surface Interactions: Functionalization and Sensing. *ACS Applied Materials & Interfaces*, **2016**, 8, 21762-9	9.5	4

111	Vmh2 hydrophobin layer entraps glucose: A quantitative characterization by label-free optical and gravimetric methods. *Applied Surface Science*, **2016**, 364, 201-207	6.7	9
110	Single Molecule Characterization of UV-Activated Antibodies on Gold by Atomic Force Microscopy. *Langmuir*, **2016**, 32, 8084-91	4	24
109	Temporal and spectral characterization of femtosecond deep-UV chirped pulses. *Laser Physics Letters*, **2015**, 12, 025302	1.5	8
108	Detection of parathion and patulin by quartz-crystal microbalance functionalized by the photonics immobilization technique. *Biosensors and Bioelectronics*, **2015**, 67, 224-9	11.8	70
107	Nano-machining of biosensor electrodes through gold nanoparticles deposition produced by femtosecond laser ablation. *Applied Physics B: Lasers and Optics*, **2015**, 119, 497-501	1.9	6
106	Photophysics and photochemistry of a DNA-protein cross-linking model: a synergistic approach combining experiments and theory. *Journal of Physical Chemistry B*, **2014**, 118, 4983-92	3.4	12
105	Nano- and femtosecond UV laser pulses to immobilize biomolecules onto surfaces with preferential orientation. *Applied Physics A: Materials Science and Processing*, **2014**, 117, 185-190	2.6	3
104	Analysis of chromatin-nuclear receptor interactions by laser-chromatin immunoprecipitation. *Methods in Molecular Biology*, **2014**, 1204, 25-34	1.4	2
103	Analysis of simulated fluorescence intensities decays by a new maximum entropy method algorithm. *Journal of Fluorescence*, **2013**, 23, 203-11	2.4	10
102	Ultraviolet laser-induced cross-linking in peptides. *Rapid Communications in Mass Spectrometry*, **2013**, 27, 1660-8	2.2	30
101	Low-lying excited-states of 5-benzyluracil. *Physical Chemistry Chemical Physics*, **2013**, 15, 7161-73	3.6	11
100	Detection of parathion pesticide by quartz crystal microbalance functionalized with UV-activated antibodies. *Analytical Chemistry*, **2013**, 85, 6392-7	7.8	55
99	Influence of generalized focusing of few-cycle Gaussian pulses in attosecond pulse generation. *Optics Express*, **2013**, 21, 24991-9	3.3	11
98	Isolated Attosecond Pulse Generation by Two-Mid-IR Laser Fields. *IEEE Journal of Selected Topics in Quantum Electronics*, **2012**, 18, 239-247	3.8	16
97	Nonlinear protein - nucleic acid crosslinking induced by femtosecond UV laser pulses in living cells. *Laser Physics Letters*, **2012**, 9, 234-239	1.5	21
96	Single attosecond pulse generation by two laser fields **2012**,		1
95	Two-color mid-IR optical parametric amplifier for attosecond pulse generation **2012**,		2
94	Light assisted antibody immobilization for bio-sensing. *Biomedical Optics Express*, **2011**, 2, 3223-31	3.5	48

93	Gating of high-order harmonics generated by incommensurate two-color mid-IR laser pulses. *Laser Physics Letters*, **2011**, 8, 875-879	1.5	30
92	Single attosecond light pulses from multi-cycle laser sources. *Journal of Modern Optics*, **2011**, 58, 1585-1610	1.1	40
91	Glucose sensing by time-resolved fluorescence of sol-gel immobilized glucose oxidase. *Sensors*, **2011**, 11, 3483-97	3.8	25
90	Ultra-fast dynamic imaging: an overview of current techniques, their capabilities and future prospects. *Journal of Modern Optics*, **2010**, 57, 916-952	1.1	23
89	Revealing molecular structure and dynamics through high-order harmonic generation driven by mid-IR fields. *Physical Review A*, **2010**, 81,	2.6	76
88	Ultra-fast dynamic imaging of matter. *Journal of Modern Optics*, **2010**, 57, 915-915	1.1	0
87	Measurement of the two-photon absorption cross-section of liquid argon with a time projection chamber. *New Journal of Physics*, **2010**, 12, 113024	2.9	22
86	Extension of high harmonic spectroscopy in molecules by a 1300 nm laser field. *Optics Express*, **2010**, 18, 3174-80	3.3	55
85	Interplay between group-delay-dispersion-induced polarization gating and ionization to generate isolated attosecond pulses from multicycle lasers. *Optics Letters*, **2010**, 35, 2798-800	3	32
84	High harmonic generation spectroscopy of hydrocarbons. *Applied Physics Letters*, **2010**, 97, 241103	3.4	42
83	Polarization, ionization and spatial gates in single attosecond pulse generation. *Springer Series in Chemical Physics*, **2009**, 920-922	0.3	
82	Generation and application of high energy, 30 fs pulses at 527 nm by hollow-fiber compression technique. *European Physical Journal: Special Topics*, **2009**, 175, 11-14	2.3	2
81	Generating single attosecond pulse using multi-cycle lasers in a polarization gate. *Optics Express*, **2009**, 17, 17700-10	3.3	8
80	Ultrafast science and development at the Artemis facility **2009**,		18
79	Single isolated attosecond pulse from multicycle lasers. *Optics Letters*, **2008**, 33, 2943-5	3	38
78	Generation of high energy, 30 fs pulses at 527 nm by hollow-fiber compression technique. *Optics Express*, **2008**, 16, 3527-36	3.3	8
77	Measurement of electronic structure from high harmonic generation in non-adiabatically aligned polyatomic molecules. *New Journal of Physics*, **2008**, 10, 025008	2.9	19
76	Probing Molecular Structure and Dynamics by Laser-Driven Electron Recollisions. *Springer Series in Optical Sciences*, **2008**, 209-224	0.5	1

75	Probing electron dynamics by ellipticity effects in molecular high harmonic generation. *Journal of Modern Optics*, **2007**, 54, 1063-1074	1.1	2
74	A mass spectrometric study of gasoline anti-knocking additives. *International Journal of Mass Spectrometry*, **2007**, 262, 105-113	1.9	5
73	Beyond the single-atom response in isolated attosecond-pulse generation. *Physical Review A*, **2007**, 75,	2.6	31
72	Probing orbital structure of polyatomic molecules by high-order harmonic generation. *Physical Review Letters*, **2007**, 98, 203007	7.4	124
71	Hollow-fiber compression of visible, 200 fs laser pulses to 40 fs pulse duration. *Optics Letters*, **2007**, 32, 1866-8	3	8
70	Quantum Interference in Aligned Molecules. *Springer Series in Optical Sciences*, **2007**, 361-366	0.5	
69	Probing two-centre interference in molecular high harmonic generation. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2006**, 39, S457-S466	1.3	28
68	High-order harmonic generation in alkanes. *Physical Review A*, **2006**, 73,	2.6	13
67	Molecular orbital dependence of high-order harmonic generation. *Journal of Modern Optics*, **2006**, 53, 97-111	1.1	6
66	Isolated single-cycle attosecond pulses. *Science*, **2006**, 314, 443-6	33.3	1265
65	Controlling two-center interference in molecular high harmonic generation. *Physical Review Letters*, **2005**, 95, 153902	7.4	299
64	Ion kinetic energy distributions and cross sections for the electron impact ionization of ethyl tert-butyl ether. *Chemical Physics Letters*, **2005**, 415, 351-356	2.5	3
63	Characterization of LaMnO3 laser ablation in oxygen by ion probe and optical emission spectroscopy. *Applied Surface Science*, **2005**, 248, 45-49	6.7	25
62	An algorithm to determine cirrus properties from analysis of multiple-scattering influence on lidar signals. *Applied Physics B: Lasers and Optics*, **2005**, 80, 609-615	1.9	14
61	Dependence upon the molecular and atomic ground state of higher-order harmonic generation in the few-optical-cycle regime. *Physical Review A*, **2005**, 71,	2.6	16
60	Signatures of molecular structure in the strong-field response of aligned molecules. *Journal of Modern Optics*, **2005**, 52, 465-478	1.1	31
59	Electron and nuclear dynamics of a molecular ion in an intense laser field. *Physical Review A*, **2004**, 70,	2.6	10
58	Dynamical medium depletion in high-order above-threshold ionization with few-cycle laser pulses. *Physical Review A*, **2004**, 70,	2.6	14

57	Diagnostics of laser ablated plasma plumes. *Thin Solid Films*, **2004**, 453-454, 562-572	2.2	58
56	Measurement of the decay spectrum with the ICARUS liquid Argon TPC. *European Physical Journal C*, **2004**, 33, 233-241	4.2	41
55	Generation of silicon nanoparticles via femtosecond laser ablation in vacuum. *Applied Physics Letters*, **2004**, 84, 4502-4504	3.4	180
54	Study of the plasma plume generated during near IR femtosecond laser irradiation of silicon targets. *Applied Physics A: Materials Science and Processing*, **2004**, 79, 1377-1380	2.6	12
53	Analysis of the liquid argon purity in the ICARUS T600 TPC. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2004**, 516, 68-79	1.2	49
52	Study of electron recombination in liquid argon with the ICARUS TPC. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2004**, 523, 275-286	1.2	74
51	Design, construction and tests of the ICARUS T600 detector. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2004**, 527, 329-410	1.2	278
50	Dissociative electron impact ionization of methyl tert-butyl ether: total ionization cross-section and kinetic energy distributions. *Chemical Physics Letters*, **2004**, 400, 191-195	2.5	7
49	Role of orbital symmetry in high-order harmonic generation from aligned molecules. *Physical Review A*, **2004**, 69,	2.6	91
48	Emission of nanoparticles during ultrashort laser irradiation of silicon targets. *Europhysics Letters*, **2004**, 67, 404-410	1.6	37
47	Growth methods ofc-axis oriented MgB2thin films by pulsed laser deposition. *Superconductor Science and Technology*, **2003**, 16, 241-245	3.1	36
46	Pulsed laser ablation of borocarbide targets probed by time-of-flight mass spectrometry. *Optics and Lasers in Engineering*, **2003**, 39, 179-190	4.6	11
45	Pressure effects during excimer laser ablation of magnesium diboride targets. *Applied Surface Science*, **2003**, 208-209, 39-44	6.7	3
44	Dynamics of laser-ablated MgB2 plasma expanding in argon probed by optical emission spectroscopy. *Physical Review B*, **2003**, 67,	3.3	68
43	Investigations of electron wave-packet dynamics and high-order harmonic generation in laser-aligned molecules. *Journal of Modern Optics*, **2003**, 50, 561-577	1.1	8
42	Analysis of charged fragments emitted during excimer laser ablation of YNi2B2C borocarbide targets by time-of-flight mass spectrometry. *Applied Surface Science*, **2002**, 186, 303-308	6.7	6
41	Double-peak distribution of electron and ion emission profile during femtosecond laser ablation of metals. *Applied Surface Science*, **2002**, 186, 358-363	6.7	56
40	Development of a tunable IR lidar system. *Optics and Lasers in Engineering*, **2002**, 37, 521-532	4.6	6

39	Optical spectroscopy diagnostics and thin film deposition of laser ablated rare earth Ni2B2C plasma plumes. *Chemical Physics Letters*, **2002**, 353, 1-6	2.5	10
38	Optical emission investigation of laser-produced MgB2 plume expanding in an Ar buffer gas. *Applied Physics Letters*, **2002**, 80, 4315-4317	3.4	22
37	High-order harmonic generation in laser-aligned molecules. *Physical Review A*, **2002**, 65,	2.6	68
36	High-order harmonic generation efficiency increased by controlled dissociation of molecular iodine. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2002**, 35, 1051-1060	1.3	15
35	Interference effects in high-order harmonic generation with molecules. *Physical Review A*, **2002**, 66,	2.6	297
34	Role of the intramolecular phase in high-harmonic generation. *Physical Review Letters*, **2002**, 88, 183903	7.4	417
33	High-Order Harmonic Generation in Aligned Molecules. *Physical Review Letters*, **2001**, 87,	7.4	244
32	Charged species analysis in YNi2B2C laser ablation by time-of-flight mass spectrometry. *Applied Surface Science*, **2000**, 168, 100-103	6.7	7
31	Response to Comment on Emission of prompt electrons during excimer laser ablation of aluminum targets [Appl. Phys. Lett. 76, 248 (2000)]. *Applied Physics Letters*, **2000**, 76, 249-250	3.4	4
30	Thermal and nonthermal ion emission during high-fluence femtosecond laser ablation of metallic targets. *Applied Physics Letters*, **2000**, 77, 3728-3730	3.4	57
29	XeF excimer laser ablation of metallic targets probed by energy-selective time-of-flight mass spectrometry. *Applied Surface Science*, **1999**, 138-139, 250-255	6.7	10
28	Characterization of fast electron emission in UV laser ablation of metallic targets. *Applied Physics A: Materials Science and Processing*, **1999**, 69, S483	2.6	8
27	Emission of prompt electrons during excimer laser ablation of aluminum targets. *Applied Physics Letters*, **1999**, 75, 7-9	3.4	42
26	Characterization of laser-ablation plasmas. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **1999**, 32, R131-R172	1.3	295
25	High fluence visible and ultraviolet laser ablation of metallic targets. *Applied Surface Science*, **1998**, 127-129, 1017-1022	6.7	15
24	Analysis of the receiver response in lidar measurements. *Applied Optics*, **1998**, 37, 6999-7007	1.7	31
23	High fluence laser ablation of aluminum targets: Time-of-flight mass analysis of plasmas produced at wavelengths 532 and 355 nm. *Applied Physics A: Materials Science and Processing*, **1996**, 62, 533-541	2.6	26
22	Lidar observations of the stratospheric aerosol layer over southern Italy in the period 1991–1995. *Journal of Geophysical Research*, **1996**, 101, 18765-18773		22

21	Laser produced plasmas in high fluence ablation of metallic surfaces probed by time-of-flight mass spectrometry. *Applied Surface Science*, **1996**, 96-98, 175-180	6.7	26
20	Chargel species analysis as a diagnostic tool for laser produced plasma characterization. *Applied Surface Science*, **1996**, 106, 507-512	6.7	22
19	Direct measurement of macroscopic electric fields produced by collective effects in electron-impact experiments. *Physical Review A*, **1996**, 54, 2482-2485	2.6	1
18	Covariance mapping of charged species evolution in YBa2Cu3O7 laser ablation. *International Journal of Mass Spectrometry and Ion Processes*, **1995**, 144, 1-21		6
17	Time of flight mass spectrometry and covariance mapping technique investigation of charged specie evolution in Pb(Ti0.48Zr0.52)O3 laser ablation. *Applied Surface Science*, **1995**, 86, 35-39	6.7	9
16	Lidar measurements of atmospheric transmissivity **1995**, 18, 209-222		2
15	Laser ablation of Pb(Ti0.48Zr0.52)O3 target: Characterization and evolution of charged species. *Journal of Applied Physics*, **1995**, 78, 494-504	2.5	23
14	Two wavelength lidar analysis of stratospheric aerosol size distribution. *Journal of Aerosol Science*, **1995**, 26, 989-1001	4.3	25
13	Satellite- and ground-based atmospheric water vapor measurements: a comparative study **1995**, 2506, 372		
12	Kinetic-energy distributions of charged fragments from CO2dissociative ionization. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **1994**, 27, 2051-2061	1.3	19
11	Diagnostics of YBa2Cu3O7 laser plume by time-of-flight mass spectrometry. *Journal of Applied Physics*, **1994**, 76, 8077-8087	2.5	53
10	Experimental analysis of H3- and D3-molecule autoionization. *Physical Review A*, **1993**, 47, 986-993	2.6	6
9	Continuous-electron-beam focusing induced by collective plasma interactions in D2 and H2. *Physical Review E*, **1993**, 47, 1960-1967	2.4	4
8	Correlation analysis of laser ablated ions from YBCO. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1993**, 179, 116-121	2.3	18
7	Electron impact ionisation of H2 (D2) molecules: kinetic energy distributions of H+ (D+). *International Journal of Mass Spectrometry and Ion Processes*, **1993**, 127, 57-65		4
6	Dead time correction of time distribution measurements. *Review of Scientific Instruments*, **1991**, 62, 2822-2827	1.7	12
5	Experimental and Theoretical Analysis of Non-linear Vibrational Relaxation of Polyatomic Molecules Strongly Excited by Resonant Laser Radiation. *Laser Chemistry*, **1988**, 8, 315-334		
4	Interferometric studies of nonlinear relaxation processes in vibrationally highly excited SF_6 molecules. *Journal of the Optical Society of America B: Optical Physics*, **1987**, 4, 452	1.7	5

3	Nonlinear relaxation of partially dissociated SF6 molecules. *Optics Communications*, **1986**, 59, 183-187	2	5
2	Nanostructured Surfaces as Plasmonic Biosensors: A Review. *Advanced Materials Interfaces*,2101133	4.6	6
1	Colorimetric Test for Fast Detection of SARS-CoV-2 in Nasal and Throat Swabs		0