Alessandro De Giacomo

List of Publications by Year
in descending order

91	5,692	57631	76769
papers	citations	44 h-index	74 g-index

94	94	94	3007
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Local Thermodynamic Equilibrium in Laser-Induced Breakdown Spectroscopy: Beyond the McWhirter criterion. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2010, 65, 86-95.	1.5	514
2	Laser Induced Breakdown Spectroscopy for Elemental Analysis in Environmental, Cultural Heritage and Space Applications: A Review of Methods and Results. Sensors, 2010, 10, 7434-7468.	2.1	235
3	Mechanisms and processes of pulsed laser ablation in liquids during nanoparticle production. Applied Surface Science, 2015, 348, 4-9.	3.1	201
4	From single pulse to double pulse ns-Laser Induced Breakdown Spectroscopy under water: Elemental analysis of aqueous solutions and submerged solid samples. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 721-738.	1.5	193
5	Laser-induced plasma expansion: theoretical and experimental aspects. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2004, 59, 271-289.	1.5	189
6	Heavy metal concentrations in soils as determined by laser-induced breakdown spectroscopy (LIBS), with special emphasis on chromium. Environmental Research, 2009, 109, 413-420.	3.7	184
7	Nanoparticle-Enhanced Laser-Induced Breakdown Spectroscopy of Metallic Samples. Analytical Chemistry, 2013, 85, 10180-10187.	3.2	175
8	Sample treatment and preparation for laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2016, 115, 52-63.	1.5	158
9	Cavitation dynamics of laser ablation of bulk and wire-shaped metals in water during nanoparticles production. Physical Chemistry Chemical Physics, 2013, 15, 3083-3092.	1.3	155
10	Experimental and theoretical comparison of single-pulse and double-pulse laser induced breakdown spectroscopy on metallic samples. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2008, 63, 805-816.	1.5	144
11	Nanoparticle Enhanced Laser Induced Breakdown Spectroscopy (NELIBS), a first review. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2018, 148, 105-112.	1.5	143
12	Nanoparticles Engineering by Pulsed Laser Ablation in Liquids: Concepts and Applications. Nanomaterials, 2020, 10, 2317.	1.9	140
13	Laser induced breakdown spectroscopy on meteorites. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 1606-1611.	1.5	121
14	Double pulse laser produced plasma on metallic target in seawater: basic aspects and analytical approach. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2004, 59, 1431-1438.	1.5	114
15	Nanoparticle Enhanced Laser Induced Breakdown Spectroscopy: Effect of nanoparticles deposited on sample surface on laser ablation and plasma emission. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 98, 19-27.	1.5	111
16	Laser-induced plasma emission: from atomic to molecular spectra. Journal Physics D: Applied Physics, 2017, 50, 183002.	1.3	110
17	Nanoparticle Enhanced Laser-Induced Breakdown Spectroscopy for Microdrop Analysis at subppm Level. Analytical Chemistry, 2016, 88, 5251-5257.	3.2	109
18	Laser Ablation of Graphite in Water in a Range of Pressure from 1 to 146 atm Using Single and Double Pulse Techniques for the Production of Carbon Nanostructures. Journal of Physical Chemistry C, 2011, 115, 5123-5130.	1.5	103

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19	Single Pulse-Laser Induced Breakdown Spectroscopy in aqueous solution. Applied Physics A: Materials Science and Processing, 2004, 79, 1035-1038.	1.1	102
20	Effects of the background environment on formation, evolution and emission spectra of laser-induced plasmas. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2012, 78, 1-19.	1.5	102
21	Double-pulse LIBS in bulk water and on submerged bronze samples. Applied Surface Science, 2005, 247, 157-162.	3.1	100
22	Experimental investigation and modelling of double pulse laser induced plasma spectroscopy under water. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2005, 60, 975-985.	1.5	92
23	The role of continuum radiation in laser induced plasma spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2010, 65, 385-394.	1.5	92
24	Perspective on the use of nanoparticles to improve LIBS analytical performance: nanoparticle enhanced laser induced breakdown spectroscopy (NELIBS). Journal of Analytical Atomic Spectrometry, 2016, 31, 1566-1573.	1.6	82
25	Experimental characterization of metallic titanium-laser induced plasma by time and space resolved optical emission spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2003, 58, 71-83.	1.5	81
26	Monitoring of Cr, Cu, Pb, V and Zn in polluted soils by laser induced breakdown spectroscopy (LIBS). Journal of Environmental Monitoring, 2011, 13, 1422.	2.1	71
27	Spatial distribution of hydrogen and other emitters in aluminum laser-induced plasma in air and consequences on spatially integrated Laser-Induced Breakdown Spectroscopy measurements. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2008, 63, 980-987.	1.5	69
28	Elemental chemical analysis of submerged targets by double-pulse laser-induced breakdown spectroscopy. Analytical and Bioanalytical Chemistry, 2006, 385, 303-311.	1.9	68
29	Pulsed laser ablation of a continuously-fed wire in liquid flow for high-yield production of silver nanoparticles. Physical Chemistry Chemical Physics, 2013, 15, 3093-3098.	1.3	64
30	Laser Induced Breakdown Spectroscopy methodology for the analysis of copper-based-alloys used in ancient artworks. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2008, 63, 585-590.	1.5	62
31	Laser Induced Breakdown Spectroscopy applications to meteorites: Chemical analysis and composition profiles. Geochimica Et Cosmochimica Acta, 2010, 74, 7329-7339.	1.6	62
32	Early stage emission spectroscopy study of metallic titanium plasma induced in air by femtosecond- and nanosecond-laser pulses. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2005, 60, 935-947.	1.5	60
33	Laser-induced breakdown spectroscopy of archaeological findings with calibration-free inverse method: Comparison with classical laser-induced breakdown spectroscopy and conventional techniques. Analytica Chimica Acta, 2014, 813, 15-24.	2.6	59
34	Optical emission spectroscopy and modeling of plasma produced by laser ablation of titanium oxides. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 753-776.	1.5	56
35	Kinetic processes for laser induced plasma diagnostic: A collisional-radiative model approach. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2010, 65, 616-626.	1.5	56
36	Nanoparticle-Enhanced Laser Induced Breakdown Spectroscopy for the noninvasive analysis of transparent samples and gemstones. Talanta, 2018, 182, 253-258.	2.9	54

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37	Comparison of two laser-induced breakdown spectroscopy techniques for total carbon measurement in soils. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2009, 64, 899-904.	1.5	52
38	Laser-induced plasma analysis of copper alloys based on Local Thermodynamic Equilibrium: An alternative approach to plasma temperature determination and archeometric applications. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2012, 74-75, 38-45.	1.5	52
39	ns- and fs-LIBS of copper-based-alloys: A different approach. Applied Surface Science, 2007, 253, 7677-7681.	3.1	48
40	Collinear double pulse laser ablation in water for the production of silver nanoparticles. Physical Chemistry Chemical Physics, 2013, 15, 20868.	1.3	48
41	High productive and continuous nanoparticle fabrication by laser ablation of a wire-target in a liquid jet. Applied Surface Science, 2017, 403, 487-499.	3.1	48
42	A Laser Induced Breakdown Spectroscopy application based on Local Thermodynamic Equilibrium assumption for the elemental analysis of alexandrite gemstone and copper-based alloys. Chemical Physics, 2012, 398, 233-238.	0.9	47
43	On the determination of plasma electron number density from Stark broadened hydrogen Balmer series lines in Laser-Induced Breakdown Spectroscopy experiments. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2013, 88, 98-103.	1.5	46
44	On the stability of gold nanoparticles synthesized by laser ablation in liquids. Journal of Colloid and Interface Science, 2017, 489, 47-56.	5.0	45
45	Plasma processes and emission spectra in laser induced plasmas: A point of view. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 100, 180-188.	1.5	42
46	Nanoparticle Enhanced Laser Induced Breakdown Spectroscopy for Improving the Detection of Molecular Bands. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2016, 125, 11-17.	1.5	42
47	Experimental and theoretical investigation of laser-induced plasma of a titanium target. Applied Optics, 2003, 42, 5963.	2.1	41
48	Silver and gold nanoparticles produced by pulsed laser ablation in liquid to investigate their interaction with Ubiquitin. Applied Surface Science, 2016, 374, 297-304.	3.1	40
49	Spectroscopic investigation of the technique of plasma assisted pulsed laser deposition of titanium dioxide. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 1459-1472.	1.5	39
50	Thermodynamic Properties of Sodiumn-Perfluoroalkanoates in Water and in Water + Cyclodextrins Mixturesâ€. Langmuir, 1999, 15, 5014-5022.	1.6	36
51	Multi-methodological investigation of kunzite, hiddenite, alexandrite, elbaite and topaz, based on laser-induced breakdown spectroscopy and conventional analytical techniques for supporting mineralogical characterization. Physics and Chemistry of Minerals, 2014, 41, 127-140.	0.3	34
52	Carbon-Based Nanostructures Obtained in Water by Ultrashort Laser Pulses. Journal of Physical Chemistry C, 2011, 115, 5160-5164.	1.5	33
53	On the growth mechanism of nanoparticles in plasma during pulsed laser ablation in liquids. Plasma Sources Science and Technology, 2017, 26, 045002.	1.3	31
54	Plasma-assisted pulsed laser deposition for the improvement of the film growth process. Applied Surface Science, 2002, 186, 533-537.	3.1	30

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55	Application of gold nanoparticles embedded in the amyloids fibrils as enhancers in the laser induced breakdown spectroscopy for the metal quantification in microdroplets. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2019, 155, 115-122.	1.5	29
56	Laser Ablation of Titanium Metallic Targets: Comparison Between Theory and Experiment. Journal of Thermophysics and Heat Transfer, 2003, 17, 225-231.	0.9	28
57	Double pulse laser induced breakdown spectroscopy of a solid in water: Effect of hydrostatic pressure on laser induced plasma, cavitation bubble and emission spectra. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 133, 63-71.	1.5	28
58	Plasma charging effect on the nanoparticles releasing from the cavitation bubble to the solution during nanosecond Pulsed Laser Ablation in Liquid. Applied Surface Science, 2020, 515, 146031.	3.1	28
59	Stand-off laser induced breakdown spectroscopy on meteorites: calibration-free approach. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2018, 147, 87-92.	1.5	27
60	Effect of spherical gold nanoparticles size on nanoparticle enhanced Laser Induced Breakdown Spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2021, 179, 106105.	1.5	27
61	Study of the Effect of Water Pressure on Plasma and Cavitation Bubble Induced by Pulsed Laser Ablation in Liquid of Silver and Missed Variations of Observable Nanoparticle Features. ChemPhysChem, 2017, 18, 1165-1174.	1.0	26
62	A novel approach to elemental analysis by Laser Induced Breakdown Spectroscopy based on direct correlation between the electron impact excitation cross section and the optical emission intensity. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2011, 66, 661-670.	1.5	25
63	Amyloid Transition of Ubiquitin on Silver Nanoparticles Produced by Pulsed Laser Ablation in Liquid as a Function of Stabilizer and Singleâ€Point Mutations. Chemistry - A European Journal, 2014, 20, 10745-10751.	1.7	24
64	Nanoparticle enhanced laser ablation and consequent effects on laser induced plasma optical emission. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2020, 166, 105794.	1.5	23
65	Pulsed laser ablation of wire-shaped target in a thin water jet: effects of plasma features and bubble dynamics on the PLAL process. Journal Physics D: Applied Physics, 2017, 50, 185204.	1.3	22
66	Investigation on the material in the plasma phase by high temporally and spectrally resolved emission imaging during pulsed laser ablation in liquid (PLAL) for NPs production and consequent considerations on NPs formation. Plasma Sources Science and Technology, 2019, 28, 085017.	1.3	22
67	Laser Induced Breakdown Spectroscopy of meteorites as a probe of the early solar system. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 101, 68-75.	1.5	21
68	Optical emission spectroscopy investigation of an ultra-short laser induced titanium plasma reheated by a ns laser pulse. Applied Surface Science, 2007, 253, 7792-7797.	3.1	20
69	Elemental Composition Analysis of Plants and Composts Used for Soil Remediation by Laserâ€Induced Breakdown Spectroscopy. Clean - Soil, Air, Water, 2014, 42, 791-798.	0.7	19
70	A combined fluid dynamic and chemical model to investigate the laser induced plasma expansion. Applied Physics A: Materials Science and Processing, 2004, 79, 1315-1317.	1.1	15
71	Effect of the Surface Chemical Composition and of Added Metal Cation Concentration on the Stability of Metal Nanoparticles Synthesized by Pulsed Laser Ablation in Water. Applied Sciences (Switzerland), 2020, 10, 4169.	1.3	14
72	The effect of oxygen rf discharge on pulsed laser deposition of oxide films. Applied Physics A: Materials Science and Processing, 2004, 79, 1405-1407.	1.1	13

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73	Spectroscopic investigation of laserâ€“water interaction beyond the breakdown threshold energy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 87-93.	1.5	12
74	Comparison between laser induced plasmas in gas and in liquid. Journal of Applied Physics, 2021, 129, .	1.1	12
75	Sensing nanoparticle-protein corona using nanoparticle enhanced Laser Induced Breakdown Spectroscopy signal enhancement. Talanta, 2021, 235, 122741.	2.9	11
76	A Quantum Chemistry Approach Based on the Analogy with Ï€-System in Polymers for a Rapid Estimation of the Resonance Wavelength of Nanoparticle Systems. Nanomaterials, 2019, 9, 929.	1.9	10
77	Gold nanoparticles obtained by ns-pulsed laser ablation in liquids (ns-PLAL) are arranged in the form of fractal clusters. Journal of Nanoparticle Research, 2021, 23, 1.	0.8	9
78	Nanoparticle enhanced laser ablation inductively coupled plasma mass spectrometry. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2020, 163, 105731.	1.5	8
79	Influence of sample surface topography on laser ablation process. Talanta, 2021, 222, 121512.	2.9	8
80	Laser induced plasma spectroscopy by air spark ablation. Thin Solid Films, 2004, 453-454, 328-333.	0.8	7
81	Title is missing!. Journal of Solution Chemistry, 1999, 28, 1001-1018.	0.6	3
82	<title>Plasma-assisted pulsed laser deposition of titanium dioxide</title>. , 2000, 4070, 394.		3
83	Femtosecond/Nanosecond dual-pulse orthogonal geometry plasma plume reheating for compositional analysis of ancient copper-based-alloy artworks. Journal of Physics: Conference Series, 2007, 59, 585-590.	0.3	3
84	Optical Diagnostics during Pulsed Laser Ablation in Liquid (PLAL) for the Production of Metallic Nanoparticles. Applied Sciences (Switzerland), 2021, 11, 10344.	1.3	3
85	Characterization of polycrystalline diamond films grown by Microwave Plasma Enhanced Chemical Vapor Deposition (MWPECVD) for UV radiation detection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 617, 405-406.	0.7	2
86	Reply to Comment on â€œNanoparticle Enhanced Laser-Induced Breakdown Spectroscopy for Microdrop Analysis at subppm Levelâ€• Analytical Chemistry, 2016, 88, 9871-9872.	3.2	2
87	Laser Ablation of Titanium Metallic Targets: A Comparison Between Theoretical and Experimental Results. , 2002, , .		1
88	Preliminary study on polycrystalline diamond films suitable for radiation detection. , 2009, , .		0
89	A comparative study on comb electrodes devices made of MWPECVD diamond films grown on p-doped and intrinsic silicon substrate. Diamond and Related Materials, 2011, 20, 1005-1009.	1.8	0
90	Fundamental Study and Analytical Applications of Nanoparticle-Enhanced Laser-Induced Breakdown Spectroscopy (NELIBS) of Metals, Semiconductors and Insulators. NATO Science for Peace and Security Series B: Physics and Biophysics, 2017, , 505-506.	0.2	0

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91	Elsevier/spectrochimica acta atomic spectroscopy award 2021. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2022, , 106447.	1.5	0