Luiz G CanÃ§ado

List of Publications by Year
in descending order

100 papers	14,793 citations	70961 41 h-index	48187 88 g-index
100 all docs	100 docs citations	100 times ranked	19858 citing authors

#	Article	IF	Citations
1	Studying disorder in graphite-based systems by Raman spectroscopy. Physical Chemistry Chemical Physics, 2007, 9, 1276-1290.	1.3	3,775
2	Quantifying Defects in Graphene via Raman Spectroscopy at Different Excitation Energies. Nano Letters, 2011, 11, 3190-3196.	4.5	2,807
3	General equation for the determination of the crystallite size La of nanographite by Raman spectroscopy. Applied Physics Letters, 2006, 88, 163106.	1.5	2,071
4	Influence of the Atomic Structure on the Raman Spectra of Graphite Edges. Physical Review Letters, 2004, 93, 247401.	2.9	594
5	Raman characterization of defects and dopants in graphene. Journal of Physics Condensed Matter, 2015, 27, 083002.	0.7	451
6	Measuring the degree of stacking order in graphite by Raman spectroscopy. Carbon, 2008, 46, 272-275.	5.4	358
7	Measuring the absolute Raman cross section of nanographites as a function of laser energy and crystallite size. Physical Review B, 2007, 76, .	1.1	234
8	Raman Signature of Graphene Superlattices. Nano Letters, 2011, 11, 4527-4534.	4.5	234
9	Double resonance Raman spectroscopy of single-wall carbon nanotubes. New Journal of Physics, 2003, 5, 157-157.	1.2	229
10	D-band Raman intensity of graphitic materials as a function of laser energy and crystallite size. Chemical Physics Letters, 2006, 427, 117-121.	1.2	219
11	Anisotropy of the Raman Spectra of Nanographite Ribbons. Physical Review Letters, 2004, 93, 047403.	2.9	195
12	Structural analysis of polycrystalline graphene systems by Raman spectroscopy. Carbon, 2015, 95, 646-652.	5.4	184
13	Group theory analysis of phonons in two-dimensional transition metal dichalcogenides. Physical Review B, 2014, 90, .	1.1	182
14	Geometrical approach for the study of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>G</mml:mi><mml:mo>â€²</mml:mo></mml:msup></mml:math>band in the Raman spectrum of monolayer graphene, bilayer graphene, and bulk graphite. Physical Review B, 2008, 77, .	1.1	168
15	Stokes and anti-Stokes double resonance Raman scattering in two-dimensional graphite. Physical Review B, 2002, 66, .	1.1	152
16	Characterization of Few-Layer 1Tâ€² MoTe₂ by Polarization-Resolved Second Harmonic Generation and Raman Scattering. ACS Nano, 2016, 10, 9626-9636.	7.3	148
17	Disentangling contributions of point and line defects in the Raman spectra of graphene-related materials. 2D Materials, 2017, 4, 025039.	2.0	146
18	Localization of lattice dynamics in low-angle twisted bilayer graphene. Nature, 2021, 590, 405-409.	13.7	139

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19	Raman evidence for pressure-induced formation of diamondene. Nature Communications, 2017, 8, 96.	5.8	132
20	Resonance effects on the Raman spectra of graphene superlattices. Physical Review B, 2013, 88, .	1.1	128
21	Roomâ€Temperature Compressionâ€Induced Diamondization of Fewâ€Layer Graphene. Advanced Materials, 2011, 23, 3014-3017.	11.1	124
22	Tipâ€enhanced Raman spectroscopy of carbon nanotubes. Journal of Raman Spectroscopy, 2009, 40, 1420-1426.	1.2	122
23	Origin of the 2450cmâˆ’1 Raman bands in HOPG, single-wall and double-wall carbon nanotubes. Carbon, 2005, 43, 1049-1054.	5.4	120
24	Determination of two-dimensional phonon dispersion relation of graphite by Raman spectroscopy. Physical Review B, 2002, 65, .	1.1	99
25	Raman spectroscopy of twisted bilayer graphene. Solid State Communications, 2013, 175-176, 3-12.	0.9	90
26	Second Harmonic Generation in WSe ₂. 2D Materials, 2015, 2, 045015.	2.0	88
27	Raman spectroscopy analysis of number of layers in mass-produced graphene flakes. Carbon, 2020, 161, 181-189.	5.4	87
28	Raman scattering study of the phonon dispersion in twisted bilayer graphene. Nano Research, 2013, 6, 269-274.	5.8	85
29	Group theory for structural analysis and lattice vibrations in phosphorene systems. Physical Review B, 2015, 91, .	1.1	82
30	Mechanism of Near-Field Raman Enhancement in One-Dimensional Systems. Physical Review Letters, 2009, 103, 186101.	2.9	71
31	Low Temperature Raman Study of the Electron Coherence Length near Graphene Edges. Nano Letters, 2011, 11, 1177-1181.	4.5	70
32	Spatial Coherence in Near-Field Raman Scattering. Physical Review Letters, 2014, 113, 186101.	2.9	63
33	Tip-enhanced Raman mapping of local strain in graphene. Nanotechnology, 2015, 26, 175702.	1.3	62
34	The use of Raman spectroscopy to characterize the carbon materials found in Amazonian anthrosoils. Journal of Raman Spectroscopy, 2013, 44, 283-289.	1.2	59
35	Tuning Localized Surface Plasmon Resonance in Scanning Near-Field Optical Microscopy Probes. ACS Nano, 2015, 9, 6297-6304.	7.3	59
36	Mechanism of near-field Raman enhancement in two-dimensional systems. Physical Review B, 2012, 85, .	1.1	52

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37	Perspectives on Raman spectroscopy of graphene-based systems: from the perfect two-dimensional surface to charcoal. Physical Chemistry Chemical Physics, 2012, 14, 15246.	1.3	50
38	Modulating the Electronic Properties along Carbon Nanotubes via Tubeâ˘'Substrate Interaction. Nano Letters, 2010, 10, 5043-5048.	4.5	49
39	Optical absorption of graphite and single-wall carbon nanotubes. Applied Physics A: Materials Science and Processing, 2004, 78, 1099-1105.	1.1	47
40	X-ray study of atomic ordering in self-assembled Ge islands grown on Si(001). Physical Review B, 2005, 72, .	1.1	45
41	Two-Dimensional Molecular Crystals of Phosphonic Acids on Graphene. ACS Nano, 2011, 5, 394-398.	7.3	43
42	Giant and Tunable Anisotropy of Nanoscale Friction in Graphene. Scientific Reports, 2016, 6, 31569.	1.6	41
43	Graphene nanoribbon superlattices fabricated via He ion lithography. Applied Physics Letters, 2014, 104, .	1.5	35
44	Plasmonâ€Tunable Tip Pyramids: Monopole Nanoantennas for Nearâ€Field Scanning Optical Microscopy. Advanced Optical Materials, 2018, 6, 1800528.	3.6	35
45	Theory of Spatial Coherence in Near-Field Raman Scattering. Physical Review X, 2014, 4, .	2.8	31
46	Hard, transparent, sp3-containing 2D phase formed from few-layer graphene under compression. Carbon, 2021, 173, 744-757.	5.4	31
47	Probing Spatial Phonon Correlation Length in Post-Transition Metal Monochalcogenide GaS Using Tip-Enhanced Raman Spectroscopy. Nano Letters, 2019, 19, 7357-7364.	4.5	30
48	Micro-Raman spectroscopy of refractive index microstructures in silicone-based hydrogel polymers created by high-repetition-rate femtosecond laser micromachining. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 595.	0.9	26
49	Studying 2D materials with advanced Raman spectroscopy: CARS, SRS and TERS. Physical Chemistry Chemical Physics, 2021, 23, 23428-23444.	1.3	26
50	Optical studies of carbon nanotubes and nanographites. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 37, 88-92.	1.3	22
51	First and Second-Order Resonance Raman Process in Graphite and Single Wall Carbon Nanotubes. Japanese Journal of Applied Physics, 2002, 41, 4878-4882.	0.8	21
52	Nanoscale mapping of carbon oxidation in pyrogenic black carbon from ancient Amazonian anthrosols. Environmental Sciences: Processes and Impacts, 2015, 17, 775-779.	1.7	21
53	Enhanced Mechanical Stability of Gold Nanotips through Carbon Nanocone Encapsulation. Scientific Reports, 2015, 5, 10408.	1.6	21
54	Depth dependence of black carbon structure, elemental and microbiological composition in anthropic Amazonian dark soil. Soil and Tillage Research, 2016, 155, 298-307.	2.6	21

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55	Controlling the Morphology of Nanoflakes Obtained by Liquid-Phase Exfoliation: Implications for the Mass Production of 2D Materials. ACS Applied Nano Materials, 2020, 3, 12095-12105.	2.4	21
56	Optical Nanoantennas for Tip-Enhanced Raman Spectroscopy. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-11.	1.9	21
57	Twisted Bilayer Graphene: A Versatile Fabrication Method and the Detection of Variable Nanometric Strain Caused by Twist-Angle Disorder. ACS Applied Nano Materials, 2021, 4, 1858-1866.	2.4	19
58	The Kataura plot for single wall carbon nanotubes on top of crystalline quartz. Physica Status Solidi (B): Basic Research, 2010, 247, 2835-2837.	0.7	18
59	A semi-automated general statistical treatment of graphene systems. 2D Materials, 2020, 7, 025045.	2.0	17
60	Raman spectroscopy polarization dependence analysis in two-dimensional gallium sulfide. Physical Review B, 2020, 102, .	1.1	16
61	Linkage Between Micro- and Nano-Raman Spectroscopy of Defects in Graphene. Physical Review Applied, 2020, 14, .	1.5	15
62	In Situ Atomic Force Microscopy Tip-Induced Deformations and Raman Spectroscopy Characterization of Single-Wall Carbon Nanotubes. Nano Letters, 2012, 12, 4110-4116.	4.5	14
63	Nanofabrication of plasmon-tunable nanoantennas for tip-enhanced Raman spectroscopy. Journal of Chemical Physics, 2020, 153, 114201.	1.2	14
64	Nano-optical Imaging of In-Plane Homojunctions in Graphene and MoS₂ van der Waals Heterostructures on Talc and SiO₂. Journal of Physical Chemistry Letters, 2021, 12, 7625-7631.	2.1	14
65	Impact of substrate on tip-enhanced Raman spectroscopy: A comparison between field-distribution simulations and graphene measurements. Physical Review Research, 2020, 2, .	1.3	14
66	Optical Properties of Plasmonâ€Tunable Tip Pyramids for Tipâ€Enhanced Raman Spectroscopy. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000212.	1.2	13
67	Near-field Raman spectroscopy of nanocarbon materials. Faraday Discussions, 2015, 184, 193-206.	1.6	11
68	Physiological changes of the lichen Parmotrema tinctorum as result of carbon nanotubes exposition. Ecotoxicology and Environmental Safety, 2015, 120, 110-116.	2.9	11
69	Deepâ€learningâ€based denoising approach to enhance Raman spectroscopy in massâ€produced graphene. Journal of Raman Spectroscopy, 2022, 53, 863-871.	1.2	10
70	Electro-optical interfacial effects on a graphene/Ï€-conjugated organic semiconductor hybrid system. Beilstein Journal of Nanotechnology, 2018, 9, 963-974.	1.5	8
71	Vibrations in Graphene. , 2017, , 71-89.		7
72	International interlaboratory comparison of Raman spectroscopic analysis of CVD-grown graphene. 2D Materials, 2022, 9, 035010.	2.0	7

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73	Topological vectors as a fingerprinting system for 2D-material flake distributions. Npj 2D Materials and Applications, 2021, 5, .	3.9	6
74	Raman spectra of multilayer graphene under high temperatures. Journal of Physics Condensed Matter, 2020, 32, 385704.	0.7	6
75	Raman Spectroscopy: Characterization of Edges, Defects, and the Fermi Energy of Graphene and sp 2 Carbons. Nanoscience and Technology, 2011, , 15-55.	1.5	5
76	Observing the Angular Distribution of Raman Scattered Fields. ACS Nano, 2016, 10, 1722-1723.	7.3	5
77	Tip-enhanced Raman Spectroscopy of Graphene. , 2019, , .		5
78	Event chronology analysis of the historical development of tipâ€enhanced Raman spectroscopy. Journal of Raman Spectroscopy, 2021, 52, 587-599.	1.2	5
79	Strain Discontinuity, Avalanche, and Memory in Carbon Nanotube Serpentine Systems. Nano Letters, 2015, 15, 5899-5904.	4.5	4
80	Near-field coherence reveals defect densities in atomic monolayers. Optica, 2017, 4, 527.	4.8	4
81	Nanomechanics of few-layer materials: do individual layers slide upon folding?. Beilstein Journal of Nanotechnology, 2020, 11, 1801-1808.	1.5	4
82	Tip-Enhanced Spectroscopy and Imaging of Carbon Nanomaterials. World Scientific Series on Carbon Nanoscience, 2019, , 175-221.	0.1	4
83	Nanowires and Nanoribbons Formed by Methylphosphonic Acid. Journal of Nanoscience and Nanotechnology, 2007, 7, 3071-3080.	0.9	3
84	Passive near-field imaging with pseudo-thermal sources. Optics Letters, 2017, 42, 1137.	1.7	3
85	Protocol and reference material for measuring the nanoantenna enhancement factor in Tip-enhanced Raman Spectroscopy. , 2019, , .		3
86	Inclusion of the sample-tip interaction term in the theory of tip-enhanced Raman spectroscopy. Physical Review B, 2022, 105, .	1.1	3
87	Electron Microscopy and Spectroscopy Analysis of Carbon Nanostructures in Highly Fertile Amazonian Anthrosoils. Microscopy and Microanalysis, 2012, 18, 1502-1503.	0.2	2
88	Resonance Raman Spectroscopy to Study and Characterize Defects on Carbon Nanotubes and other Nano-Graphite Systems. Materials Research Society Symposia Proceedings, 2004, 858, 1.	0.1	1
89	Trigonal Anisotropy in Graphite and Carbon Nanotubes. Molecular Crystals and Liquid Crystals, 2006, 455, 287-294.	0.4	1
90	Raman Spectroscopy to Study Disorder and Perturbations in sp[sup 2] Nano-Carbons. , 2010, , .		1

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91	Vision-based position control applied to probe positioning for Tip Enhanced Raman Spectroscopy. , 2016, , .		1
92	Study of the interaction between light and nanoantennas in Tip-Enhanced Raman Spectroscopy. , 2019, , .		1
93	Disorder and Defects in Two-Dimensional Materials Probed by Raman Spectroscopy. Springer Series in Materials Science, 2019, , 99-110.	0.4	1
94	Study of Carbon Nanostructures for Soil Fertility Improvement. Nanomedicine and Nanotoxicology, 2016, , 85-104.	0.1	1
95	Spectroscopy of small diameter single-wall carbon nanotubes. AIP Conference Proceedings, 2005, , .	0.3	0
96	Raman spectroscopic study of silicone-based hydrogel polymers with large index changes induced by femtosecond laser micromachining. , 2008, , .		0
97	The role of interference and polarization effects in the optical visualization of carbon nanotubes. Journal of Applied Physics, 2013, 113, 084314.	1.1	0
98	Polarization Dependence of the Second Harmonic Generation and Raman Scattering from Atomically Thin MoTe2. , 2016, , .		0
99	Quantifying Defect Densities in Monolayer Graphene Using Near-field Coherence Measurements. , 2016, , .		0
100	Near-field imaging with pseudo-thermal sources. , 2017, , .		0