Luiz G Canado

List of Publications by Year in Descending Order

91 papers	11,954 citations	39 h-index	100 g-index
100 ext. papers	13,411 ext. citations	6.2 avg, IF	6.03 L-index

#	Paper	IF	Citations
91	Topological vectors as a fingerprinting system for 2D-material flake distributions. *Npj 2D Materials and Applications*, **2021**, 5,	8.8	2
90	Optical Nanoantennas for Tip-Enhanced Raman Spectroscopy. *IEEE Journal of Selected Topics in Quantum Electronics*, **2021**, 27, 1-11	3.8	14
89	Hard, transparent, sp3-containing 2D phase formed from few-layer graphene under compression. *Carbon*, **2021**, 173, 744-757	10.4	15
88	Event chronology analysis of the historical development of tip-enhanced Raman spectroscopy. *Journal of Raman Spectroscopy*, **2021**, 52, 587-599	2.3	3
87	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	5.6	7
86	Localization of lattice dynamics in low-angle twisted bilayer graphene. *Nature*, **2021**, 590, 405-409	50.4	46
85	Nano-optical Imaging of In-Plane Homojunctions in Graphene and MoS van der Waals Heterostructures on Talc and SiO. *Journal of Physical Chemistry Letters*, **2021**, 12, 7625-7631	6.4	3
84	Studying 2D materials with advanced Raman spectroscopy: CARS, SRS and TERS. *Physical Chemistry Chemical Physics*, **2021**, 23, 23428-23444	3.6	4
83	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	5.6	8
82	Optical Properties of Plasmon-Tunable Tip Pyramids for Tip-Enhanced Raman Spectroscopy. *Physica Status Solidi - Rapid Research Letters*, **2020**, 14, 2000212	2.5	11
81	A semi-automated general statistical treatment of graphene systems. *2D Materials*, **2020**, 7, 025045	5.9	8
80	Raman spectroscopy analysis of number of layers in mass-produced graphene flakes. *Carbon*, **2020**, 161, 181-189	10.4	40
79	Impact of substrate on tip-enhanced Raman spectroscopy: A comparison between field-distribution simulations and graphene measurements. *Physical Review Research*, **2020**, 2,	3.9	8
78	Raman spectra of multilayer graphene under high temperatures. *Journal of Physics Condensed Matter*, **2020**, 32, 385704	1.8	0
77	Raman spectroscopy polarization dependence analysis in two-dimensional gallium sulfide. *Physical Review B*, **2020**, 102,	3.3	8
76	Nanofabrication of plasmon-tunable nanoantennas for tip-enhanced Raman spectroscopy. *Journal of Chemical Physics*, **2020**, 153, 114201	3.9	5
75	Nanomechanics of few-layer materials: do individual layers slide upon folding?. *Beilstein Journal of Nanotechnology*, **2020**, 11, 1801-1808	3	3

74	Linkage Between Micro- and Nano-Raman Spectroscopy of Defects in Graphene. *Physical Review Applied*, **2020**, 14,	4.3	8
73	Probing Spatial Phonon Correlation Length in Post-Transition Metal Monochalcogenide GaS Using Tip-Enhanced Raman Spectroscopy. *Nano Letters*, **2019**, 19, 7357-7364	11.5	19
72	Tip-enhanced Raman Spectroscopy of Graphene **2019**,		4
71	Tip-Enhanced Spectroscopy and Imaging of Carbon Nanomaterials. *World Scientific Series on Carbon Nanoscience*, **2019**, 175-221	0.5	3
70	Study of the interaction between light and nanoantennas in Tip-Enhanced Raman Spectroscopy **2019**,		1
69	Protocol and reference material for measuring the nanoantenna enhancement factor in Tip-enhanced Raman Spectroscopy **2019**,		2
68	Disorder and Defects in Two-Dimensional Materials Probed by Raman Spectroscopy. *Springer Series in Materials Science*, **2019**, 99-110	0.9	
67	Electro-optical interfacial effects on a graphene/π-conjugated organic semiconductor hybrid system. *Beilstein Journal of Nanotechnology*, **2018**, 9, 963-974	3	5
66	Plasmon-Tunable Tip Pyramids: Monopole Nanoantennas for Near-Field Scanning Optical Microscopy. *Advanced Optical Materials*, **2018**, 6, 1800528	8.1	22
65	Disentangling contributions of point and line defects in the Raman spectra of graphene-related materials. *2D Materials*, **2017**, 4, 025039	5.9	97
64	Raman evidence for pressure-induced formation of diamondene. *Nature Communications*, **2017**, 8, 96	17.4	94
63	Passive near-field imaging with pseudo-thermal sources. *Optics Letters*, **2017**, 42, 1137-1140	3	2
62	Near-field coherence reveals defect densities in atomic monolayers. *Optica*, **2017**, 4, 527	8.6	2
61	Giant and Tunable Anisotropy of Nanoscale Friction in Graphene. *Scientific Reports*, **2016**, 6, 31569	4.9	22
60	Vision-based position control applied to probe positioning for Tip Enhanced Raman Spectroscopy **2016**,		1
59	Observing the Angular Distribution of Raman Scattered Fields. *ACS Nano*, **2016**, 10, 1722-3	16.7	2
58	Depth dependence of black carbon structure, elemental and microbiological composition in anthropic Amazonian dark soil. *Soil and Tillage Research*, **2016**, 155, 298-307	6.5	16
57	Study of Carbon Nanostructures for Soil Fertility Improvement. *Nanomedicine and Nanotoxicology*, **2016**, 85-104	0.3	

56	Characterization of Few-Layer 1TTMoTe by Polarization-Resolved Second Harmonic Generation and Raman Scattering. *ACS Nano*, **2016**, 10, 9626-9636	16.7	104
55	Strain Discontinuity, Avalanche, and Memory in Carbon Nanotube Serpentine Systems. *Nano Letters* , **2015**, 15, 5899-904	11.5	4
54	Physiological changes of the lichen Parmotrema tinctorum as result of carbon nanotubes exposition. *Ecotoxicology and Environmental Safety*, **2015**, 120, 110-6	7	8
53	Enhanced Mechanical Stability of Gold Nanotips through Carbon Nanocone Encapsulation. *Scientific Reports*, **2015**, 5, 10408	4.9	13
52	Tuning Localized Surface Plasmon Resonance in Scanning Near-Field Optical Microscopy Probes. *ACS Nano*, **2015**, 9, 6297-304	16.7	50
51	Structural analysis of polycrystalline graphene systems by Raman spectroscopy. *Carbon*, **2015**, 95, 646-652	6.4	122
50	Tip-enhanced Raman mapping of local strain in graphene. *Nanotechnology*, **2015**, 26, 175702	3.4	53
49	Group theory for structural analysis and lattice vibrations in phosphorene systems. *Physical Review B*, **2015**, 91,	3.3	71
48	Near-field Raman spectroscopy of nanocarbon materials. *Faraday Discussions*, **2015**, 184, 193-206	3.6	10
47	Second Harmonic Generation in WSe 2. *2D Materials*, **2015**, 2, 045015	5.9	66
46	Nanoscale mapping of carbon oxidation in pyrogenic black carbon from ancient Amazonian anthrosols. *Environmental Sciences: Processes and Impacts*, **2015**, 17, 775-9	4.3	20
45	Raman characterization of defects and dopants in graphene. *Journal of Physics Condensed Matter*, **2015**, 27, 083002	1.8	339
44	Group theory analysis of phonons in two-dimensional transition metal dichalcogenides. *Physical Review B*, **2014**, 90,	3.3	130
43	Theory of Spatial Coherence in Near-Field Raman Scattering. *Physical Review X*, **2014**, 4,	9.1	24
42	Graphene nanoribbon superlattices fabricated via He ion lithography. *Applied Physics Letters*, **2014**, 104, 193114	3.4	29
41	Spatial coherence in near-field Raman scattering. *Physical Review Letters*, **2014**, 113, 186101	7.4	55
40	Resonance effects on the Raman spectra of graphene superlattices. *Physical Review B*, **2013**, 88,	3.3	104
39	Raman spectroscopy of twisted bilayer graphene. *Solid State Communications*, **2013**, 175-176, 3-12	1.6	70

38	The use of Raman spectroscopy to characterize the carbon materials found in Amazonian anthrosoils. *Journal of Raman Spectroscopy*, **2013**, 44, 283-289	2.3	44
37	The role of interference and polarization effects in the optical visualization of carbon nanotubes. *Journal of Applied Physics*, **2013**, 113, 084314	2.5	
36	Raman scattering study of the phonon dispersion in twisted bilayer graphene. *Nano Research*, **2013**, 6, 269-274	10	70
35	In situ atomic force microscopy tip-induced deformations and Raman spectroscopy characterization of single-wall carbon nanotubes. *Nano Letters*, **2012**, 12, 4110-6	11.5	14
34	Perspectives on Raman spectroscopy of graphene-based systems: from the perfect two-dimensional surface to charcoal. *Physical Chemistry Chemical Physics*, **2012**, 14, 15246-56	3.6	43
33	Mechanism of near-field Raman enhancement in two-dimensional systems. *Physical Review B*, **2012**, 85,	3.3	46
32	Electron Microscopy and Spectroscopy Analysis of Carbon Nanostructures in Highly Fertile Amazonian Anthrosoils. *Microscopy and Microanalysis*, **2012**, 18, 1502-1503	0.5	2
31	Two-dimensional molecular crystals of phosphonic acids on graphene. *ACS Nano*, **2011**, 5, 394-8	16.7	39
30	Raman signature of graphene superlattices. *Nano Letters*, **2011**, 11, 4527-34	11.5	191
29	Quantifying defects in graphene via Raman spectroscopy at different excitation energies. *Nano Letters*, **2011**, 11, 3190-6	11.5	2228
28	Raman Spectroscopy: Characterization of Edges, Defects, and the Fermi Energy of Graphene and sp2 Carbons. *Nanoscience and Technology*, **2011**, 15-55	0.6	3
27	Room-temperature compression-induced diamondization of few-layer graphene. *Advanced Materials*, **2011**, 23, 3014-7	24	89
26	Low temperature raman study of the electron coherence length near graphene edges. *Nano Letters* , **2011**, 11, 1177-81	11.5	57
25	Modulating the electronic properties along carbon nanotubes via tube-substrate interaction. *Nano Letters*, **2010**, 10, 5043-8	11.5	46
24	The Kataura plot for single wall carbon nanotubes on top of crystalline quartz. *Physica Status Solidi (B): Basic Research*, **2010**, 247, 2835-2837	1.3	16
23	Mechanism of near-field Raman enhancement in one-dimensional systems. *Physical Review Letters*, **2009**, 103, 186101	7.4	68
22	Tip-enhanced Raman spectroscopy of carbon nanotubes. *Journal of Raman Spectroscopy*, **2009**, 40, 1420-1426	2.5	116
21	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	1.7	21

20	Geometrical approach for the study of G? band in the Raman spectrum of monolayer graphene, bilayer graphene, and bulk graphite. *Physical Review B*, **2008**, 77,	3.3	145
19	Measuring the degree of stacking order in graphite by Raman spectroscopy. *Carbon*, **2008**, 46, 272-275	10.4	301
18	Optical studies of carbon nanotubes and nanographites. *Physica E: Low-Dimensional Systems and Nanostructures*, **2007**, 37, 88-92	3	22
17	Studying disorder in graphite-based systems by Raman spectroscopy. *Physical Chemistry Chemical Physics*, **2007**, 9, 1276-91	3.6	3172
16	Nanowires and nanoribbons formed by methylphosphonic acid. *Journal of Nanoscience and Nanotechnology*, **2007**, 7, 3071-80	1.3	3
15	Measuring the absolute Raman cross section of nanographites as a function of laser energy and crystallite size. *Physical Review B*, **2007**, 76,	3.3	196
14	Trigonal Anisotropy in Graphite and Carbon Nanotubes. *Molecular Crystals and Liquid Crystals*, **2006**, 455, 287-294	0.5	1
13	D-band Raman intensity of graphitic materials as a function of laser energy and crystallite size. *Chemical Physics Letters*, **2006**, 427, 117-121	2.5	187
12	General equation for the determination of the crystallite size La of nanographite by Raman spectroscopy. *Applied Physics Letters*, **2006**, 88, 163106	3.4	1736
11	X-ray study of atomic ordering in self-assembled Ge islands grown on Si(001). *Physical Review B*, **2005**, 72,	3.3	39
10	Origin of the 2450cm1 Raman bands in HOPG, single-wall and double-wall carbon nanotubes. *Carbon*, **2005**, 43, 1049-1054	10.4	101
9	Anisotropy of the Raman spectra of nanographite ribbons. *Physical Review Letters*, **2004**, 93, 047403	7.4	177
8	Resonance Raman Spectroscopy to Study and Characterize Defects on Carbon Nanotubes and other Nano-Graphite Systems. *Materials Research Society Symposia Proceedings*, **2004**, 858, 1		
7	Influence of the atomic structure on the Raman spectra of graphite edges. *Physical Review Letters*, **2004**, 93, 247401	7.4	521
6	Optical absorption of graphite and single-wall carbon nanotubes. *Applied Physics A: Materials Science and Processing*, **2004**, 78, 1099-1105	2.6	43
5	Double resonance Raman spectroscopy of single-wall carbon nanotubes. *New Journal of Physics*, **2003**, 5, 157-157	2.9	205
4	Determination of two-dimensional phonon dispersion relation of graphite by Raman spectroscopy. *Physical Review B*, **2002**, 65,	3.3	91
3	First and Second-Order Resonance Raman Process in Graphite and Single Wall Carbon Nanotubes. *Japanese Journal of Applied Physics*, **2002**, 41, 4878-4882	1.4	20

2	Stokes and anti-Stokes double resonance Raman scattering in two-dimensional graphite. *Physical Review B*, **2002**, 66,	3.3	137
1	Vibrations in Graphene71-89		4