

Lucien Saviot

List of Publications by Year in descending order

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117
papers

3,096
citations

126708

33
h-index

182168

51
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119
all docs

119
docs citations

119
times ranked

3045
citing authors

#	ARTICLE	IF	CITATIONS
1	Size dependence of acoustic and optical vibrational modes of CdSe nanocrystals in glasses. Journal of Non-Crystalline Solids, 1996, 197, 238-246.	1.5	155
2	Resonant Raman scattering by breathing modes of metal nanoparticles. Journal of Chemical Physics, 2001, 115, 3444-3447.	1.2	119
3	Resonant Raman scattering by quadrupolar vibrations of Ni-Ag core-shell nanoparticles. Physical Review B, 2002, 65, .	1.1	103
4	From crystal to glass-like thermal conductivity in crystalline minerals. Physical Chemistry Chemical Physics, 2015, 17, 19751-19758.	1.3	96
5	Probing atomic ordering and multiple twinning in metal nanocrystals through their vibrations. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 14784-14789.	3.3	95
6	Size-selective resonant Raman scattering in CdS doped glasses. Physical Review B, 1998, 57, 341-346.	1.1	94
7	Quadrupolar vibrational mode of silver clusters from plasmon-assisted Raman scattering. Physical Review B, 1999, 60, 17107-17111.	1.1	89
8	Vibrations of free and embedded anisotropic elastic spheres: Application to low-frequency Raman scattering of silicon nanoparticles in silica. Physical Review B, 2004, 69, .	1.1	87
9	Boson peak and hybridization of acoustic modes with vibrations of nanometric heterogeneities in glasses. Physical Review B, 2007, 75, .	1.1	82
10	Phonons in an inhomogeneous continuum: Vibrations of an embedded nanoparticle. Physical Review B, 2004, 69, .	1.1	77
11	Acoustic vibrations of metal nanoparticles: high order radial mode detection. Applied Surface Science, 2004, 226, 209-215.	3.1	66
12	Nanovectorization of TRAIL with Single Wall Carbon Nanotubes Enhances Tumor Cell Killing. Nano Letters, 2015, 15, 891-895.	4.5	66
13	Surface Plasmons and Vibrations of Self-Assembled Silver Nanocolumns. Nano Letters, 2006, 6, 2037-2042.	4.5	63
14	Acoustic vibrations of anisotropic nanoparticles. Physical Review B, 2009, 79, .	1.1	63
15	Phonon density of states of silicon clathrates: Characteristic width narrowing effect with respect to the diamond phase. Physical Review B, 1999, 59, 10099-10104.	1.1	60
16	Vibrational modes in silicon clathrate compounds: A key to understanding superconductivity. Physical Review B, 2002, 66, .	1.1	54
17	Effect of Reaction Parameters on Composition and Morphology of Titanate Nanomaterials. Journal of Physical Chemistry C, 2009, 113, 12682-12689.	1.5	53
18	Crystallinity Dependence of the Plasmon Resonant Raman Scattering by Anisotropic Gold Nanocrystals. ACS Nano, 2010, 4, 3489-3497.	7.3	52

#	ARTICLE	IF	CITATIONS
19	<i>In vivo</i> protein corona on nanoparticles: does the control of all material parameters orient the biological behavior?. <i>Nanoscale Advances</i> , 2021, 3, 1209-1229.	2.2	52
20	Damping by Bulk and Shear Viscosity of Confined Acoustic Phonons for Nanostructures in Aqueous Solution. <i>Journal of Physical Chemistry B</i> , 2007, 111, 7457-7461.	1.2	51
21	Mechanical Coupling in Gold Nanoparticles Supermolecules Revealed by Plasmon-Enhanced Ultralow Frequency Raman Spectroscopy. <i>Nano Letters</i> , 2016, 16, 3843-3849.	4.5	49
22	Spatial coherence effect on the low-frequency Raman scattering from metallic nanoclusters. <i>Physical Review B</i> , 2001, 63, .	1.1	48
23	Low-frequency Raman characterization of size-controlled anatase TiO ₂ nanopowders prepared by continuous hydrothermal syntheses. <i>Journal of Nanoparticle Research</i> , 2007, 9, 309-315.	0.8	48
24	Acousto-Plasmonic and Surface-Enhanced Raman Scattering Properties of Coupled Gold Nanospheres/Nanodisk Trimers. <i>Nano Letters</i> , 2011, 11, 431-437.	4.5	47
25	Structural, optical and electronic properties of hydrogenated polymorphous silicon films deposited at 150Å°C. <i>Journal of Non-Crystalline Solids</i> , 2000, 266-269, 263-268.	1.5	46
26	Loading of Cisplatin into Mesoporous Silica Nanoparticles: Effect of Surface Functionalization. <i>Langmuir</i> , 2019, 35, 8984-8995.	1.6	44
27	Acousto-plasmonic Hot Spots in Metallic Nano-Objects. <i>Nano Letters</i> , 2009, 9, 3732-3738.	4.5	43
28	Optimization of MCM-41 type silica nanoparticles for biological applications: Control of size and absence of aggregation and cell cytotoxicity. <i>Journal of Non-Crystalline Solids</i> , 2015, 408, 87-97.	1.5	41
29	Propagating to nonpropagating vibrational modes in amorphous polycarbonate. <i>Physical Review B</i> , 1999, 60, 18-21.	1.1	39
30	Longitudinal versus transverse spheroidal vibrational modes of an elastic sphere. <i>Physical Review B</i> , 2005, 72, .	1.1	39
31	Protein-nanoparticle interaction in bioconjugated silver nanoparticles: A transmission electron microscopy and surface enhanced Raman spectroscopy study. <i>Applied Surface Science</i> , 2016, 389, 17-24.	3.1	39
32	Long Lived Acoustic Vibrational Modes of an Embedded Nanoparticle. <i>Physical Review Letters</i> , 2004, 93, 055506.	2.9	37
33	The mass load effect on the resonant acoustic frequencies of colloidal semiconductor nanoplatelets. <i>Nanoscale</i> , 2016, 8, 13251-13256.	2.8	37
34	Raman scattering by electron-hole excitations in silver nanocrystals. <i>Physical Review B</i> , 2001, 63, .	1.1	33
35	Effect of physical aging on the low-frequency vibrational density of states of a glassy polymer. <i>Europhysics Letters</i> , 2003, 63, 778-784.	0.7	33
36	Anisotropic and polarization effects in Raman scattering in porous silicon. <i>Thin Solid Films</i> , 1995, 255, 139-142.	0.8	31

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37	One step continuous hydrothermal synthesis of very fine stabilized superparamagnetic nanoparticles of magnetite. <i>Chemical Communications</i> , 2011, 47, 11706.	2.2	31
38	Cu-Doped ZnO Nanoparticles for Non-Enzymatic Glucose Sensing. <i>Molecules</i> , 2021, 26, 929.	1.7	31
39	Acoustic modes in metallic nanoparticles: Atomistic versus elasticity modeling. <i>Physical Review B</i> , 2009, 80, .	1.1	28
40	Iron oxide-based nanostructured ceramics with tailored magnetic and mechanical properties: development of mechanically robust, bulk superparamagnetic materials. <i>Nanoscale Advances</i> , 2019, 1, 3139-3150.	2.2	28
41	Preparation and characterisation of Si nanocrystallites embedded in a silica matrix. <i>Journal of Materials Chemistry</i> , 1999, 9, 187-191.	6.7	26
42	One-Step Microstructuring of TiO ₂ and Ag-TiO ₂ Films by Continuous Wave Laser Processing in the UV and Visible Ranges. <i>Journal of Physical Chemistry C</i> , 2012, 116, 26857-26864.	1.5	26
43	A comparative study of methanol carbonation on unsupported SnO ₂ and ZrO ₂ . <i>Catalysis Today</i> , 2009, 147, 62-67.	2.2	25
44	Comment on "Estimate of the vibrational frequencies of spherical virus particles". <i>Physical Review E</i> , 2004, 69, 023901.	0.8	24
45	Pulsed laser deposition of cobalt ferrite in a reactive O ₂ :N ₂ atmosphere: effect of the deposition pressure and temperature. <i>Thin Solid Films</i> , 2005, 471, 40-47.	0.8	24
46	Far-Infrared Absorption by Acoustic Phonons in Titanium Dioxide Nanopowders. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2006, 1, 92-98.	0.1	24
47	High-order vibration modes of bimetallic Ag-Au nanoparticles embedded in glass. <i>Physical Review B</i> , 2009, 79, .	1.1	23
48	Thermal effects on the growth by metal organic chemical vapour deposition of TiO ₂ thin films on (100) GaAs substrates. <i>Surface and Coatings Technology</i> , 2002, 151-152, 36-41.	2.2	22
49	Inelastic light, neutron, and X-ray scattering related to the heterogeneous elasticity of glasses. <i>Journal of Non-Crystalline Solids</i> , 2002, 307-310, 103-108.	1.5	21
50	Acoustic vibrations of embedded spherical nanoparticles. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2005, 26, 417-421.	1.3	21
51	Efficient photo-thermal activation of gold nanoparticle-doped polymer plasmonic switches. <i>Optics Express</i> , 2012, 20, 27636.	1.7	21
52	Vibrations of weakly coupled nanoparticles. <i>Physical Review B</i> , 2010, 81, .	1.1	20
53	From silver nanolentils to nanocolumns: surface plasmon "polaritons and confined acoustic vibrations. <i>Applied Physics A: Materials Science and Processing</i> , 2007, 89, 369-372.	1.1	18
54	Experimental investigation of the grain size dependence of the hydrolysis of LiH powder. <i>Powder Technology</i> , 2011, 208, 318-323.	2.1	17

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55	Effect of aging on the Boson peak and relaxation processes in a glassy polymer. Journal of Non-Crystalline Solids, 2002, 307-310, 109-113.	1.5	16
56	Comment on "Infrared and Raman selection rules for elastic vibrations of spherical nanoparticles". Physical Review B, 2006, 74, .	1.1	16
57	Inelastic neutron scattering due to acoustic vibrations confined in nanoparticles: Theory and experiment. Physical Review B, 2008, 78, .	1.1	15
58	Simple model for the vibrations of embedded elastically cubic nanocrystals. Physical Review B, 2010, 82, .	1.1	15
59	Quasi-Free Nanoparticle Vibrations in a Highly Compressed ZrO ₂ Nanopowder. Journal of Physical Chemistry C, 2012, 116, 22043-22050.	1.5	15
60	A multi-step mechanism and integrity of titanate nanoribbons. Dalton Transactions, 2015, 44, 1150-1160.	1.6	15
61	Resonance and composition effects on the Raman scattering from silver-gold alloy clusters. European Physical Journal D, 2001, 16, 197-200.	0.6	14
62	Surface enhanced Raman scattering of silver sensitized cobalt nanoparticles in metal-dielectric nanocomposites. Nanotechnology, 2008, 19, 375701.	1.3	13
63	Number of observable features in the acoustic Raman spectra of nanocrystals. Physical Review B, 2012, 85, .	1.1	13
64	Poisson ratio and excess low-frequency vibrational states in glasses. Journal of Chemical Physics, 2013, 139, 064506.	1.2	13
65	Acoustic Vibrations of Core-Shell Nanospheres: Probing the Mechanical Contact at the Metal-Dielectric Interface. Journal of Physical Chemistry C, 2018, 122, 9127-9133.	1.5	13
66	Observation of propagating acoustic vibrational modes in glasses by Raman scattering. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1999, 79, 2051-2056.	0.6	12
67	Continuum elastic sphere vibrations as a model for low lying optical modes in icosahedral quasicrystals. Journal of Physics Condensed Matter, 2005, 17, 3559-3565.	0.7	12
68	Growth and size distribution of Au nanoparticles in annealed Au/TiO ₂ thin films. Thin Solid Films, 2014, 553, 138-143.	0.8	12
69	Damping by bulk and shear viscosity for confined acoustic phonons of a spherical virus in water. Journal of Physics: Conference Series, 2007, 92, 012036.	0.3	11
70	Comparative analysis of optical properties of gold and silver clusters embedded in an alumina matrix. Scripta Materialia, 1999, 12, 307-310.	0.5	10
71	THz nanocrystal acoustic vibrations from ZrO ₂ 3D supercrystals. Journal of Materials Chemistry C, 2013, 1, 8108.	2.7	10
72	Optical and Acoustic Vibrations Confined in Anatase TiO ₂ Nanoparticles under High-Pressure. Journal of Physical Chemistry C, 2014, 118, 10495-10501.	1.5	10

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73	Contact laws between nanoparticles: the elasticity of a nanopowder. <i>Nanoscale</i> , 2018, 10, 2154-2161.	2.8	10
74	Nanostructure and low-frequency vibrations in plasticized poly(methyl methacrylate). <i>Europhysics Letters</i> , 1998, 44, 747-752.	0.7	9
75	Environmental effects on the natural vibrations of nanoplatelets: a high pressure study. <i>Nanoscale</i> , 2017, 9, 6551-6557.	2.8	9
76	Inelastic Light Scattering by Long Narrow Gold Nanocrystals: When Size, Shape, Crystallinity, and Assembly Matter. <i>ACS Nano</i> , 2020, 14, 4395-4404.	7.3	9
77	Ligand-dependent nano-mechanical properties of CdSe nanoplatelets: calibrating nanobalances for ligand affinity monitoring. <i>Nanoscale</i> , 2021, 13, 8639-8647.	2.8	9
78	Origin of the resonant optical Kerr nonlinearity in Cd(S, Se)-doped glasses and related topics. <i>Applied Physics B: Lasers and Optics</i> , 1995, 61, 17-26.	1.1	8
79	Very fast relaxation in polycarbonate glass. <i>European Physical Journal B</i> , 2000, 17, 661-666.	0.6	8
80	Acoustic Vibrations of Monoclinic Zirconia Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2011, 115, 14571-14575.	1.5	8
81	Raman characterization of $Pb_{2-x}Na_xNb_{5-x}Fe_xO_{15}$ and $Pb_{0.5}(5-x)LaxNb_{5-x}Fe_xO_{15}$ ($0 \leq x \leq 1$) solid solutions. <i>Physica B: Condensed Matter</i> , 2011, 406, 4257-4260.	1.3	8
82	Growth of glass-embedded Cu nanoparticles: A low-frequency Raman scattering study. <i>Physical Review B</i> , 2012, 85, .	1.1	7
83	Inelastic Light Scattering Contribution to the Study of the Onset of Sintering of a Nanopowder. <i>Journal of Physical Chemistry C</i> , 2017, 121, 2487-2494.	1.5	7
84	Vibrations of single-crystal gold nanorods and nanowires. <i>Physical Review B</i> , 2018, 97, .	1.1	7
85	Simultaneous microphotoluminescence and micro-Raman scattering in porous silicon. <i>Thin Solid Films</i> , 1995, 255, 188-190.	0.8	6
86	Structural properties and recombination processes in hydrogenated polymorphous silicon. <i>EPJ Applied Physics</i> , 2003, 22, 171-178.	0.3	6
87	Bridgman growth of paratellurite single crystals. <i>Journal of Crystal Growth</i> , 2004, 270, 77-84.	0.7	6
88	Free Vibrations of Anisotropic Nano-Objects with Rounded or Sharp Corners. <i>Nanomaterials</i> , 2021, 11, 1838.	1.9	6
89	Plasmon-phonon coupling and resonant raman scattering of silver clusters. <i>European Physical Journal D</i> , 1999, 9, 585-589.	0.6	5
90	High precision numerical estimates of acoustic phonon frequencies of nonspherical nanoparticles. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006, 3, 3935-3938.	0.8	5

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91	Polarizability calculation of vibrating nanoparticles for intensity of low wavenumber Raman scattering. <i>Journal of Raman Spectroscopy</i> , 2007, 38, 770-779.	1.2	5
92	Dielectric Properties and Raman Spectroscopy in Ca-Substituted $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$; Ferroelectric Ceramics. <i>Advanced Materials Research</i> , 0, 324, 298-301.	0.3	5
93	Functionalized Fe_3O_4 nanoparticles: influence of ligand addition sequence and pH during their continuous hydrothermal synthesis. <i>RSC Advances</i> , 2015, 5, 78614-78624.	1.7	5
94	Revisiting Pressure-Induced Transitions in Mesoporous Anatase TiO_2 . <i>Journal of Physical Chemistry C</i> , 2019, 123, 23488-23496.	1.5	5
95	Low-energy vibrational density of states of plasticized poly(methyl methacrylate). , 0, .		5
96	Versatile and robust synthesis process for the fine control of the chemical composition and core-crystallinity of spherical core-shell Au@Ag nanoparticles. <i>Nanotechnology</i> , 2021, 32, 095604.	1.3	5
97	Resonant low-frequency Raman scattering in CdS-doped glasses. <i>Journal of Crystal Growth</i> , 1998, 184-185, 370-373.	0.7	4
98	The connection between elastic scattering cross sections and acoustic vibrations of an embedded nanoparticle. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2004, 1, 2634-2637.	0.8	4
99	Nanostructures in glasses probed by low-frequency raman scattering. <i>Phase Transitions</i> , 1997, 63, 147-158.	0.6	3
100	Low-energy vibrational density of states of plasticized poly(methyl methacrylate). <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 2002, 82, 533-539.	0.6	3
101	Optical Properties of Sputtered Silver Granular Films. <i>Materials Science Forum</i> , 2005, 480-481, 287-292.	0.3	3
102	Phase transitions and dielectric properties of $(1-x)\text{KNbO}_3-x\text{K}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$ ceramics synthesized by a stirred hydrothermal process. <i>Current Applied Physics</i> , 2015, 15, 1370-1376.	1.1	3
103	Resonant low-frequency Raman scattering in CdS-doped glasses. <i>Journal of Crystal Growth</i> , 1998, 184-185, 370-373.	0.7	3
104	Fast relaxational motions in polycarbonate glass. <i>Physica B: Condensed Matter</i> , 2000, 276-278, 435-436.	1.3	2
105	Properties of silicon films deposited under argon dilution. <i>Materials Research Society Symposia Proceedings</i> , 2001, 664, 2311.	0.1	2
106	Direct Writing on Copper Ion Doped Silica Films by Electrogeneration of Metallic Microstructures. <i>Journal of Physical Chemistry C</i> , 2017, 121, 1129-1139.	1.5	2
107	Study of Single Gold Nanocrystals by Inelastic Light Scattering Spectroscopy. <i>Journal of Physical Chemistry C</i> , 0, , .	1.5	2
108	The anisotropy of poly(acrylic acid) in composites with liquid crystalline cellulose derivatives as seen by low-frequency Raman spectroscopy. <i>Polymer</i> , 2000, 41, 751-755.	1.8	1

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109	Phonons in Hybrid Lamellar Supercrystals. Journal of Physical Chemistry C, 2017, 121, 1990-1996.	1.5	1
110	Raman scattering in silicon nanostructures. , 1995, , 247-253.		1
111	Effects of resonance on low-frequency raman scattering from semiconductor nanocrystals. Radiation Effects and Defects in Solids, 1995, 137, 45-50.	0.4	0
112	Millimeter wave absorption by confined acoustic modes in CdSe/CdTe core-shell quantum dots. Journal of Physics: Conference Series, 2007, 92, 012039.	0.3	0
113	Acousto-plasmonic coupling in engineered metal nanocomposites. , 2010, , .		0
114	Low-Frequency Raman Scattering by Acoustic Vibrations of Anisotropic Nanoparticles. , 2010, , .		0
115	Acousto-Plasmonic Hot Spots: Driving Enhanced Raman Scattering in Metallic Nanoparticles. , 2010, , .		0
116	Vibrations basses fr�quences dans des nanomat�riaux �tudi�s par spectroscopie Raman. European Physical Journal Special Topics, 2000, 10, Pr8-71.	0.2	0
117	Mechanosynthesis of carbonate and lithium co-substituted hydroxyfluorapatite. Materials Research Bulletin, 2022, 150, 111750.	2.7	0