

# Alain Sacuto

## List of Publications by Year in descending order

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106  
papers

3,428  
citations

159585

30  
h-index

149698

56  
g-index

108  
all docs

108  
docs citations

108  
times ranked

3696  
citing authors

#	ARTICLE	IF	CITATIONS
1	Crafting the magnonic and spintronic response of BiFeO <sub>3</sub> films by epitaxial strain. Nature Materials, 2013, 12, 641-646.	27.5	311
2	Two energy scales and two distinct quasiparticle dynamics in the superconducting state of underdoped cuprates. Nature Physics, 2006, 2, 537-543.	16.7	301
3	Electric-field control of spin waves at room temperature in multiferroic BiFeO <sub>3</sub> . Nature Materials, 2010, 9, 975-979.	27.5	227
4	Possible Observation of Cycloidal Electromagnons in $\text{BiFeO}_3$ . Physical Review Letters, 2008, 101, 037601.	7.8	191
5	Amplitude Higgs mode in the $\text{BiFeO}_3$ . Physical Review B, 2014, 89, .	11.0	157
6	Charge-induced nematicity in FeSe. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9177-9181.	7.1	83
7	Polar phonons and spin excitations coupling in multiferroic $\text{BiFeO}_3$ . Physical Review B, 2009, 79, .	3.2	82
8	Collapse of the Normal-State Pseudogap at a Lifshitz Transition in the $\text{BiFeO}_3$ . Physical Review Letters, 2015, 114, 147001.	7.8	82
9	Cu-Ag core-shell nanoparticles: A direct correlation between micro-Raman and electron microscopy. Physical Review B, 2006, 73, .	3.2	80
10	Doping dependence of the lattice dynamics in $\text{BaBiO}_3$ . Physical Review B, 2009, 80, .	3.2	77
11	Strain and Magnetic Field Induced Spin-Structure Transitions in Multiferroic $\text{BiFeO}_3$ . Advanced Materials, 2017, 29, 1602327.	21.0	76
12	Raman-Scattering Measurements and Theory of the Energy-Momentum Spectrum for Underdoped $\text{Bi}_2\text{Sr}_2\text{CaCuO}_8+x$ Superconductors: Evidence of anisotropic Wave Structure for the Pseudogap. Physical Review Letters, 2013, 111, 107001.	7.8	64
13	Intimate link between charge density wave, pseudogap and superconducting energy scales in cuprates. Nature Physics, 2019, 15, 771-775.	16.7	64
14	Heteroepitaxy of GaSe layered semiconductor compound on Si(111) $7 \times 7$ substrate: a Van der Waals epitaxy?. Journal of Crystal Growth, 1994, 135, 1-10.	1.5	57
15	Pressure-Induced Collapse of the Charge Density Wave and Higgs Mode Visibility in $\text{BiFeO}_3$ . Physical Review Letters, 2019, 122, 127001.	7.8	55
16	Higgs-mode radiance and charge-density-wave order in $\text{BiFeO}_3$ . Physical Review B, 2018, 97, .	8.0	51
17	Breakpoint in the evolution of the gap through the cuprate phase diagram. Physical Review B, 2008, 77, .	3.2	43

#	ARTICLE	IF	CITATIONS
19	Raman scattering study of spin-density wave order and electron-phonon coupling in $\text{Ba}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$ . Physical Review Letters, 2015, 115, 267204.	3.2	43
20	Nematic fluctuations in the cuprate superconductor $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ . Nature Communications, 2019, 10, 5209.	12.8	42
21	Intrinsic Low Temperature Paramagnetism in B-DNA. Physical Review Letters, 2005, 94, 248102.	7.8	41
22	Driving Spin Excitations by Hydrostatic Pressure in $\text{BiFeO}_3$ . Physical Review Letters, 2015, 115, 267204.	7.8	41
23	Temperature Dependence of the Gap Size near the Brillouin-Zone Nodes of $\text{HgBa}_2\text{CaCu}_2\text{O}_{6+\delta}$ . Physical Review Letters, 2008, 101, 097003.	7.8	40
24	Magnetolectric excitations in multiferroic $\text{TbMnO}_3$ . Physical Review B, 2010, 81, .	3.2	39
25	Nodes of the superconducting gap probed by electronic Raman scattering in $\text{HgBa}_2\text{CaCu}_2\text{O}_{6+\delta}$ single crystals. Europhysics Letters, 1997, 39, 207-212.	2.0	38
26	Evidence for Two Distinct Energy Scales in the Raman Spectra of $\text{YBa}_2(\text{Cu}_{1-x}\text{Ni}_x)\text{O}_{6.95}$ . Physical Review Letters, 2002, 88, 177401.	7.8	37
27	Electronic Raman scattering in $\text{HgBa}_2\text{Ca}_2\text{Cu}_3\text{O}_8$ single crystals: Analysis of the superconducting state. Physical Review B, 1998, 58, 11721-11733.	3.2	34
28	Iodine insertion in pentacene thin films investigated by infrared and Raman spectroscopy. Physical Review B, 2004, 70, .	3.2	33
29	Quantitative Raman measurement of the evolution of the Cooper-pair density with doping in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ . Physical Review B, 2009, 80, .	3.2	31
30	Vertical temperature boundary of the pseudogap under the superconducting dome in the phase diagram of $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ . Physical Review B, 2017, 96, .	3.2	31
31	Electronic Raman scattering on the underdoped $\text{HgBa}_2\text{Ca}_2\text{Cu}_3\text{O}_8$ high- $T_c$ superconductor: The symmetry of the order parameter. Physical Review B, 2000, 61, 7122-7129.	3.2	30
32	Interplay between the pseudogap and superconductivity in underdoped $\text{HgBa}_2\text{CuO}_4$ single crystals. Physical Review B, 2005, 71, .	3.2	29
33	New insights into the phase diagram of the copper oxide superconductors from electronic Raman scattering. Reports on Progress in Physics, 2013, 76, 022502.	20.1	29
34	Symmetry of the Excitations in the Hidden Order State of $\text{URu}_2\text{Si}_2$ . Physical Review Letters, 2014, 113, 266405.	7.8	29
35	Impact of the spin-density-wave order on the superconducting gap of $\text{BaFe}_2\text{As}_2$ . Physical Review B, 2010, 82, .	3.2	28
36	Temperature dependence and resonance effects in Raman scattering of phonons in $\text{NdFeAsO}_x$ crystals. Physical Review B, 2008, 78, .	3.2	27

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37	Loss of antinodal coherence with a single $d$ -wave superconducting gap leads to two energy scales for underdoped cuprate superconductors. <i>Physical Review B</i> , 2010, 82, .	3.2	26
38	High-Crystalline Single- and Double-Walled Carbon Nanotube Mats Grown by Chemical Vapor Deposition. <i>Journal of Physical Chemistry C</i> , 2007, 111, 15154-15159.	3.1	25
39	Magnetic Field Induced Dehybridization of the Electromagnons in Multiferroic $TbMnO_3$ . <i>Physical Review Letters</i> , 2011, 107, 027202.	7.8	24
40	Lattice and spin excitations in multiferroic $h$ - $YMnO_3$ . <i>Physical Review B</i> , 2014, 89, .	3.2	24
41	Normal-modes study of $HgBa_2Ca_2Cu_3O_{8+\delta}$ single crystals by a micro-Raman analysis. <i>Physica C: Superconductivity and Its Applications</i> , 1996, 259, 209-217.	1.2	23
42	Possible interplay between a two phonon mode and high energy magnetic excitations in $BiFeO_3$ . <i>European Physical Journal B</i> , 2009, 67, 209-212.	1.5	23
43	Investigation of the relationship between $T_c$ and the superconducting gap under magnetic and nonmagnetic impurity substitutions in $YbMnO_3$ . <i>Physical Review B</i> , 2012, 86, .	3.2	21
44	Electromagnon and phonon excitations in multiferroic $TbMnO_3$ . <i>Physical Review B</i> , 2012, 86, .	3.2	21
45	Gate-Dependent Electronic Raman Scattering in Graphene. <i>Physical Review Letters</i> , 2016, 116, 066805.	7.8	21
46	Piezoelectric measurements on $BiFeO_3$ single crystal by Raman scattering. <i>Journal of Magnetism and Magnetic Materials</i> , 2009, 321, 1699-1701.	2.3	20
47	Electronic Raman scattering in copper oxide superconductors: Understanding the phase diagram. <i>Comptes Rendus Physique</i> , 2011, 12, 480-501.	0.9	19
48	Collapse of Critical Nematic Fluctuations in $FeSe$ under Pressure. <i>Physical Review Letters</i> , 2018, 121, 077001.	7.8	19
49	A magnetic phase diagram for nanoscale epitaxial $BiFeO_3$ films. <i>Applied Physics Reviews</i> , 2019, 6, .	11.3	19
50	Lattice dynamics of the heavy-fermion compound $URu_2Si_2$ . <i>Physical Review B</i> , 2015, 91, .	3.2	18
51	Two distinct electronic contributions in the fully symmetric Raman response of high- $T_c$ cuprates. <i>Physical Review B</i> , 2005, 71, .	3.2	17
52	Unconventional High-Energy-State Contribution to the Cooper Pairing in the Underdoped Copper-Oxide Superconductor $HgBa_2CuO_{x-y}$ . <i>Physical Review Letters</i> , 2016, 116, 197001.	7.8	17
53	Resonant Raman scattering in mercurate single crystals. <i>Physica C: Superconductivity and Its Applications</i> , 2004, 408-410, 785-788.	1.2	16
54	Lattice and spin excitations in multiferroic $h$ - $YbMnO_3$ . <i>Physical Review B</i> , 2012, 86, .	3.2	16

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55	Nakamae et al. Reply: Physical Review Letters, 2006, 96, .	7.8	15
56	Switchable two-dimensional electron gas based on ferroelectric Ca: $\text{SrTiO}_3$ Physical Review Materials, 2020, 4, .	2.4	15
57	Charge transfer in $\text{YBa}_2\text{Cu}_3\text{O}_{6-x}$ doped with fluorine: Infrared reflectance and Raman scattering studies. Physical Review B, 1995, 52, 7619-7628.	3.2	14
58	Lattice-shifted nematic quantum critical point in $\text{FeSe}_{1-x}\text{S}_x$ . Npj Quantum Materials, 2021, 6, .	5.2	13
59	Crystal Growth and Characterization of $\text{HgBa}_2\text{Ca}_2\text{Cu}_3\text{O}_{8+\delta}$ Superconductors with the Highest Critical Temperature at Ambient Pressure. Inorganic Chemistry, 2017, 56, 9396-9399.	4.0	12
60	Raman and ARPES combined study on the connection between the existence of the pseudogap and the topology of the Fermi surface in $\text{Bi}_2\text{O}_8$ Physical Review B, 2018, 97, .	2.2	12
61	Universal relationship between the energy scales of the pseudogap phase, the superconducting state, and the charge-density-wave order in copper oxide superconductors. Physical Review B, 2020, 101, .	3.2	12
62	Raman spectra of $\text{Nd}_{1.85}\text{Ce}_{0.15}\text{CuO}_4$ . Solid State Communications, 1991, 78, 99-101.	1.9	11
63	Use of RBS and Raman spectroscopy to study oxygen mobility in $\text{YBaCuO}$ thin films by $^{18}\text{O}$ tracing experiments. Nuclear Instruments & Methods in Physics Research B, 1992, 64, 179-183.	1.4	11
64	Study of oxygen content and of disorder in $\text{YBaCuO}$ thin films with enlarged c-axis lattice parameter. Journal of Alloys and Compounds, 1993, 195, 675-678.	5.5	11
65	Three energy scales in the superconducting state of hole-doped cuprates detected by electronic Raman scattering. Physical Review B, 2015, 92, .	3.2	11
66	$\hat{\Gamma}$ -collective mode as $A_1$ resonance in cuprate superconductors. Physical Review B, 2016, 93, .	3.2	11
67	Colossal electromagnon excitation in the non-cycloidal phase of $\text{TbMnO}_3$ under pressure. Npj Quantum Materials, 2018, 3, .	5.2	10
68	Raman scattering on $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ single crystals with variable oxygen content. Journal of Alloys and Compounds, 1993, 195, 359-362.	5.5	9
69	Pseudogap in Cuprates by Electronic Raman Scattering. Journal of Physics: Conference Series, 2013, 449, 012011.	0.4	9
70	Influence of flexoelectricity on the spin cycloid in (110)-oriented $\text{BiFeO}_3$ films. Physical Review Materials, 2019, 3, .	2.4	9
71	An electronic Raman scattering study on $\text{YBa}_2\text{Cu}_3\text{O}_7$ in the superconducting state. Journal of Physics Condensed Matter, 1994, 6, 1057-1064.	1.8	8
72	Temperature-induced change in the Fermi surface topology in the spin density wave phase of $\text{Sr}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$	3.2	8

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73	Crystal growth and doping control of $\text{HgBa}_2\text{CuO}_4+\hat{\Gamma}$ , the model compound for high-T superconductors. <i>Materials Research Bulletin</i> , 2019, 118, 110479.	5.2	7
74	Elastic properties assessment in the multiferroic $\text{BiFeO}_3$ by pump and probe method. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	7
75	Interplay between the $A_{1g}$ electronic Raman scattering peak and the neutron magnetic resonance. <i>Journal of Physics and Chemistry of Solids</i> , 2006, 67, 503-508.	4.0	6
76	Coupling between quasiparticles and a bosonic mode in the normal state of $\text{HgBa}_2\text{CuO}_4 + \hat{\Gamma}$ . <i>Europhysics Letters</i> , 2006, 73, 594-600.	2.0	6
77	Cu-O chains contribution to the electronic Raman scattering of a $\text{YBa}_2\text{Cu}_3\text{O}_7$ single crystal. <i>Solid State Communications</i> , 1993, 85, 589-592.	1.9	5
78	Nakamae et al. Reply. <i>Physical Review Letters</i> , 2005, 95, .	7.8	5
79	Confocal Raman and TEM measurements at the same area on nanoparticles. <i>Microelectronic Engineering</i> , 2007, 84, 419-423.	2.4	5
80	Raman scattering study of the lattice dynamic of $\text{URu}_2\text{Si}_2$ and sample's preparation. <i>Journal of the Korean Physical Society</i> , 2013, 62, 1427-1430.	0.7	5
81	Magnetic transitions in $\text{CaMn}_7\text{O}_{12}$ : Raman observation of spin-phonon couplings. <i>Physical Review B</i> , 2019, 99, .	3.2	5
82	Impact of the surface phase transition on magnon and phonon excitations in $\text{BiFeO}_3$ nanoparticles. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	5
83	Probing chiral electronic excitations in bilayer graphene by Raman scattering. <i>Physical Review Materials</i> , 2019, 3, .	2.4	5
84	Combination of IBA techniques and Raman spectroscopy to study defects in $^{18}\text{O}$ labelled $\text{YBaCuO}$ thin films. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 1994, 85, 462-467.	1.4	4
85	Raman scattering on oxide phases related to the mercurate high-Tc superconductors. <i>Physica C: Superconductivity and Its Applications</i> , 2000, 341-348, 2253-2254.	1.2	4
86	Raman active high energy excitations in $\text{URu}_2\text{Si}_2$ . <i>Physica B: Condensed Matter</i> , 2017, 506, 19-22.	2.7	4
87	Role of the rare earth in lattice and magnetic coupling in multiferroic $\text{h}_x\text{R}_2\text{M}_2\text{O}_{12}$ . <i>Physical Review B</i> , 2017, 95, .	2.2	4
88	Anisotropic Kondo pseudogap in $\text{URu}_2\text{Si}_2$ . <i>Physical Review B</i> , 2020, 101, .	2.2	4
89	Reproducible nanostructuring of the superconducting $\hat{\Gamma}^2$ - $(\text{BEDT-TTF})_2\text{Cu}(\text{NCS})_2$ phase. <i>Synthetic Metals</i> , 2020, 261, 116310.	3.9	4
90	Selective $^{18}\text{O}$ labelling in a-axis oriented $\text{YBaCuO}$ thin films. <i>Journal of Alloys and Compounds</i> , 1993, 195, 137-140.	5.5	3



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91	Exploration of Hg-based cuprate superconductors by Raman spectroscopy under hydrostatic pressure. Physical Review B, 2021, 103, .	3.2	3
92	Free carriers density enhancement in the CuO <sub>2</sub> planes of the YBa <sub>2</sub> Cu <sub>3</sub> O <sub>6</sub> F <sub>y</sub> compounds at the insulator/metal transition: A Raman scattering analysis. Physica C: Superconductivity and Its Applications, 1994, 235-240, 1293-1294.	1.2	2
93	Current induced optical birefringence in superconducting YBaCuO (123) and BiSrCaCuO (2212) thin films. Physica C: Superconductivity and Its Applications, 1994, 235-240, 2099-2100.	1.2	2
94	Straightforward identification of the a and b crystalline axes in single crystal by a polarizing microscope set-up. Superconductor Science and Technology, 1996, 9, 483-487.	3.5	2
95	Dichotomy in quasiparticles dynamics of underdoped cuprates in the superconducting state. Physica C: Superconductivity and Its Applications, 2007, 460-462, 358-361.	1.2	2
96	Possible observation of the signature of the bad metal phase and its crossover to a Fermi liquid in (BEDT-TTF) <sub>2</sub> Cu(NCS) <sub>2</sub> bulk and nanoparticles by Raman scattering. Journal of Physics Condensed Matter, 2021, 33, 125403.	1.8	2
97	Elastic and magnetoelastic properties of TbMnO <sub>3</sub> single crystal by nanosecond time resolved acoustics and first-principles calculations. Journal of Physics Condensed Matter, 2021, 33, 495402.	1.8	2
98	Elasto-Raman scattering: Arsenic optical phonon as a probe of nematicity in Ba <sub>1-x</sub> Bi <sub>x</sub> Fe <sub>2</sub> As <sub>2</sub> . Physical Review B, 2022, 105, .	5.2	2
99	Symmetry of the superconducting gap in HgBa <sub>2</sub> CaCu <sub>2</sub> O <sub>6</sub> + $\delta$ single crystals from electronic Raman scattering. Physica C: Superconductivity and Its Applications, 1997, 282-287, 1013-1014.	1.2	1
100	Experimental evidences for a strong coupling between electrons and the apical oxygen phonon of HgBa <sub>2</sub> CuO <sub>4</sub> + $\delta$ . Physica C: Superconductivity and Its Applications, 2007, 460-462, 380-381.	1.2	1
101	Nodal and antinodal gaps in the superconducting state of cuprates. Journal of Physics and Chemistry of Solids, 2008, 69, 3049-3051.	4.0	1
102	Determination of the a and b crystalline axes in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> single crystal by a polarizing light set up. Physica C: Superconductivity and Its Applications, 1997, 282-287, 471-472.	1.2	0
103	Electronic raman scattering on under-doped mercurate high-T <sub>c</sub> superconductors: the symmetry of the order parameter. Physica C: Superconductivity and Its Applications, 2000, 341-348, 1667-1668.	1.2	0
104	Amplitude mode of charge density wave in TTF[Ni(dmit) <sub>2</sub> ] <sub>2</sub> observed by electronic Raman scattering. Physical Review B, 2021, 103, .	3.2	0
105	Analysis of the Superconducting Gap by Electronic Raman Scattering in HgBa <sub>2</sub> Ca <sub>2</sub> Cu <sub>3</sub> O <sub>8</sub> + $\delta$ Single Crystals. , 2002, , 291-308.		0
106	La supraconductivité à haute température dans les oxydes de cuivre : o <sup>1</sup> en est-on ? , 2021, , 4-17.	0.1	0