

Jaime SÃ¡nchez-Barriga

List of Publications by Year in descending order

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107
papers

5,527
citations

94433

37
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82547

72
g-index

111
all docs

111
docs citations

111
times ranked

6784
citing authors

#	ARTICLE	IF	CITATIONS
1	Prediction and observation of an antiferromagnetic topological insulator. Nature, 2019, 576, 416-422.	27.8	701
2	Electronic and Magnetic Properties of Quasifreestanding Graphene on Ni. Physical Review Letters, 2008, 101, 157601.	7.8	596
3	Hedgehog spin texture and Berry's phase tuning in a magnetic topological insulator. Nature Physics, 2012, 8, 616-622.	16.7	353
4	Large magnetic gap at the Dirac point in Bi ₂ Te ₃ /MnBi ₂ Te ₄ heterostructures. Nature, 2019, 576, 423-428.	27.8	189
5	Tolerance of Topological Surface States towards Magnetic Moments: Fe on Bi ₂ Se ₃ . Physical Review Letters, 2012, 108, 256810.	7.8	181
6	Tailoring the nature and strength of electron-phonon interactions in the SrTiO ₃ (001) 2D electron liquid. Nature Materials, 2016, 15, 835-839.	27.5	171
7	Ir(111) Surface State with Giant Rashba Splitting Persists under Graphene in Air. Physical Review Letters, 2012, 108, 066804.	7.8	157
8	Giant Rashba Type Spin Splitting in Ferroelectric GeTe(111). Advanced Materials, 2016, 28, 560-565.	21.0	155
9	Is There a Rashba Effect in Graphene on Bi ₃ Te ₃ Ferromagnets?. Physical Review Letters, 2009, 102, 057602.	7.8	131
10	Negligible Surface Reactivity of Topological Insulators Bi ₂ Se ₃ and Bi ₂ Te ₃ towards Oxygen and Water. ACS Nano, 2013, 7, 5181-5191.	14.6	118
11	Observation of quantum-tunnelling-modulated spin texture in ultrathin topological insulator Bi ₂ Se ₃ films. Nature Communications, 2014, 5, 3841.	12.8	112
12	Strength of Correlation Effects in the Electronic Structure of Iron. Physical Review Letters, 2009, 103, 267203.	7.8	107
13	Nonmagnetic band gap at the Dirac point of the magnetic topological insulator (Bi _{1-x} Mnx) ₂ Se ₃ . Nature Communications, 2016, 7, 10559.	12.8	102
14	Anisotropic two-dimensional electron gas at SrTiO ₃ (110). Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3933-3937.	7.1	99
15	Probing topological surface bands on Bi ₂ Te ₃ by spin-polarized photoemission spectroscopy. Physical Review Letters, 2013, 110, 216801.	3.2	78
16	Reversal of the Circular Dichroism in Angle-Resolved Photoemission from Bi ₂ Te ₃ . Physical Review Letters, 2013, 110, 216801.	7.8	77
17	Photoemission of Bi ₂ Te ₃ under Circularly Polarized Light: Probe of Spin Polarization or Means for Spin Manipulation?. Physical Review X, 2014, 4, .	8.9	76
18	Samarium hexaboride is a trivial surface conductor. Nature Communications, 2018, 9, 517.	12.8	76

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19	Interplay between the magnetic anisotropy contributions of cobalt nanowires. <i>Physical Review B</i> , 2009, 80, .	3.2	72
20	Growth, Structure, and Electronic Properties of Epitaxial Bismuth Telluride Topological Insulator Films on BaF ₂ (111) Substrates. <i>Crystal Growth and Design</i> , 2013, 13, 3365-3373.	3.0	70
21	Mn-Rich MnSb ₂ Te ₄ : A Topological Insulator with Magnetic Gap Closing at High Curie Temperatures of 45–50 K. <i>Advanced Materials</i> , 2021, 33, e2102935.	21.0	70
22	Quantum Cavity for Spin due to Spin-Orbit Interaction at a Metal Boundary. <i>Physical Review Letters</i> , 2008, 101, 256601.	7.8	63
23	Band Renormalization of Blue Phosphorus on Au(111). <i>Nano Letters</i> , 2018, 18, 6672-6678.	9.1	63
24	Ultrafast spin-polarization control of Dirac fermions in topological insulators. <i>Physical Review B</i> , 2016, 93, .	3.2	61
25	Effects of spin-dependent quasiparticle renormalization in Fe, Co, and Ni photoemission spectra: An experimental and theoretical study. <i>Physical Review B</i> , 2012, 85, .	3.2	60
26	Intact Dirac Cones at Broken Sublattice Symmetry: Photoemission Study of Graphene on Ni and Co. <i>Physical Review X</i> , 2012, 2, .	8.9	57
27	2D layered transport properties from topological insulator Bi ₂ Se ₃ single crystals and micro flakes. <i>Scientific Reports</i> , 2016, 6, 27483.	3.3	55
28	Tunable Fermi level and hedgehog spin texture in gapped graphene. <i>Nature Communications</i> , 2015, 6, 7610.	12.8	48
29	Spin mapping of surface and bulk Rashba states in ferroelectric \pm -GeTe(111) films. <i>Physical Review B</i> , 2016, 94, .	3.2	46
30	Far-Infrared and Raman Spectroscopy Investigation of Phonon Modes in Amorphous and Crystalline Epitaxial GeTe-Sb ₂ Te ₃ Alloys. <i>Scientific Reports</i> , 2016, 6, 28560.	3.3	45
31	Deposition of topological insulator Sb ₂ Te ₃ films by an MOCVD process. <i>Journal of Materials Chemistry A</i> , 2014, 2, 8215.	10.3	44
32	Surface Fermi arc connectivity in the type-II Weyl semimetal candidate WTe_2 . <i>Physical Review B</i> , 2016, 94, .	3.2	44
33	Giant Rashba Splitting in Pb _{1-x} Sn _x Te (111) Topological Crystalline Insulator Films Controlled by Bi Doping in the Bulk. <i>Advanced Materials</i> , 2017, 29, 1604185.	21.0	44
34	Negative Longitudinal Magnetoresistance from the Anomalous N=0 Landau Level in Topological Materials. <i>Physical Review Letters</i> , 2017, 119, 106602.	7.8	42
35	Highly spin-polarized Dirac fermions at the graphene/Co interface. <i>Physical Review B</i> , 2015, 91, .	3.2	41
36	Subpicosecond spin dynamics of excited states in the topological insulator Bi_2Te_3 . <i>Physical Review B</i> , 2017, 95, .	2.2	41

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37	Quantitative determination of spin-dependent quasiparticle lifetimes and electronic correlations in hcp cobalt. <i>Physical Review B</i> , 2010, 82, .	3.2	40
38	Spin splitting of Dirac fermions in aligned and rotated graphene on Ir(111). <i>Physical Review B</i> , 2013, 87, .	3.2	38
39	Chemical vapour deposition of graphene on Ni(111) and Co(0001) and intercalation with Au to study Dirac-cone formation and Rashba splitting. <i>Diamond and Related Materials</i> , 2010, 19, 734-741.	3.9	36
40	Structural change upon annealing of amorphous GeSbTe grown on Si(111). <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	35
41	Electronic and spin structure of the topological insulator Bi ₂ Te ₃ . <i>Physical Review B</i> , 2014, 89, .	3.2	35
42	Anisotropic effect of warping on the lifetime broadening of topological surface states in angle-resolved photoemission from Bi ₂ Te ₃ . <i>Physical Review B</i> , 2014, 90, .	3.2	34
43	Continuous wafer-scale graphene on cubic-SiC(001). <i>Nano Research</i> , 2013, 6, 562-570.	10.4	31
44	Topological quantum phase transition from mirror to time reversal symmetry protected topological insulator. <i>Nature Communications</i> , 2017, 8, 968.	12.8	31
45	Cubic Rashba Effect in the Surface Spin Structure of Rare-Earth Ternary Materials. <i>Physical Review Letters</i> , 2020, 124, 237202.	7.8	30
46	Minigap isotropy and broken chirality in graphene with periodic corrugation enhanced by cluster superlattices. <i>Physical Review B</i> , 2012, 85, .	3.2	29
47	Evidence for topological band inversion of the phase change material Ge ₂ Sb ₂ Te ₅ . <i>Applied Physics Letters</i> , 2013, 103, .	3.3	28
48	Magneto-electrolysis of Co nanowire arrays grown in a track-etched polycarbonate membrane. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 312, 99-106.	2.3	27
49	Absence of giant spin splitting in the two-dimensional electron liquid at the surface of SrTiO ₃ . <i>Physical Review B</i> , 2016, 93, .	3.2	27
50	Rapid Surface Oxidation of Sb ₂ Te ₃ as Indication for a Universal Trend in the Chemical Reactivity of Tetradymite Topological Insulators. <i>Chemistry of Materials</i> , 2016, 28, 8916-8923.	6.7	27
51	Atomic structure of Bi ₂ Te ₃ surfaces probed by photoelectron diffraction and holography. <i>Physical Review B</i> , 2015, 91, .	3.2	26
52	Emergence of Fermi arcs due to magnetic splitting in an antiferromagnet. <i>Nature</i> , 2022, 603, 610-615.	27.8	25
53	Rashba splitting of 100 meV in Au-intercalated graphene on SiC. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	24
54	Magnetization-dependent Rashba splitting of quantum well states at the Co/W interface. <i>Physical Review B</i> , 2015, 91, .	3.2	23

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55	Laser-induced persistent photovoltage on the surface of a ternary topological insulator at room temperature. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	23
56	Spin splitting of Dirac fermions in graphene on Ni intercalated with alloy of Bi and Au. <i>Carbon</i> , 2015, 93, 984-996.	10.3	22
57	Transport Gap Opening and High On-Off Current Ratio in Trilayer Graphene with Self-Aligned Nanodomain Boundaries. <i>ACS Nano</i> , 2015, 9, 8967-8975.	14.6	21
58	Nanostructural origin of giant Rashba effect in intercalated graphene. <i>2D Materials</i> , 2017, 4, 035010.	4.4	21
59	Tilted Dirac cone on W(110) protected by mirror symmetry. <i>Physical Review B</i> , 2017, 95, .	3.2	19
60	Intact Dirac cone of Bi ₂ Te ₃ covered with a monolayer Fe. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013, 7, 139-141.	2.4	18
61	Induced Rashba splitting of electronic states in monolayers of Au, Cu on a W(110) substrate. <i>New Journal of Physics</i> , 2013, 15, 095005.	2.9	17
62	High-temperature quantum oscillations of the Hall resistance in bulk Bi ₂ Se ₃ . <i>Scientific Reports</i> , 2018, 8, 485.	3.3	17
63	Absence of a giant Rashba effect in the valence band of lead halide perovskites. <i>Physical Review B</i> , 2020, 102, .	3.2	17
64	The graphene/Au/Ni interface and its application in the construction of a graphene spin filter. <i>Nanotechnology</i> , 2013, 24, 295201.	2.6	16
65	Mapping the band structure of GeSbTe phase change alloys around the Fermi level. <i>Communications Physics</i> , 2018, 1, .	5.3	16
66	Anomalous behavior of the electronic structure of $(\text{Tj ETQq}0 0 0 \text{rgBT} / \text{Overlock} 10 \text{Tf} 50 307 \text{Td})$ (xmlns:mml="http://www.w3.org/1998/Math/MathML") across the quantum phase transition from topological to triv. <i>Physical Review B</i> , 2018, 98, .	3.2	16
67	Can surface reactivity of mixed crystals be predicted from their counterparts? A case study of (Bi ^{1-x} Sb ^x) ₂ Te ₃ topological insulators. <i>Journal of Materials Chemistry C</i> , 2018, 6, 8941-8949.	5.5	15
68	Atomic and Electronic Structure of a Multidomain GeTe Crystal. <i>ACS Nano</i> , 2020, 14, 16576-16589.	14.6	15
69	Rotated domain network in graphene on cubic-SiC(001). <i>Nanotechnology</i> , 2014, 25, 135605.	2.6	14
70	Ferrimagnetic DyCo_5 for Bits in Heat-Assisted Magnetic Recording. <i>Physical Review Applied</i> , 2016, 5, .	3.8	14
71	Impact of stoichiometry and disorder on the electronic structure of the $\text{PbBi}_{1-x}\text{Sb}_x$ topological insulator. <i>Physical Review B</i> , 2017, 96, .	3.22	14
72	Giant Magnetic Band Gap in the Rashba-Split Surface State of Vanadium-Doped BiTeI: A Combined Photoemission and Ab Initio Study. <i>Scientific Reports</i> , 2017, 7, 3353.	3.3	14

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73	Contrast Reversal in Scanning Tunneling Microscopy and Its Implications for the Topological Classification of Sb_2Te_3 . <i>Advanced Materials</i> , 2020, 32, e1906725.	21.0	14
74	Fully spin-polarized bulk states in ferroelectric GeTe. <i>Physical Review Research</i> , 2020, 2, .	3.6	13
75	Observation of antiphase coherent phonons in the warped Dirac cone of Bi_2Te_3 . <i>Physical Review B</i> , 2016, 94, .		
76	Impact of ultrafast transport on the high-energy states of a photoexcited topological insulator. <i>Physical Review B</i> , 2018, 98, .	3.2	12
77	Ferrimagnetic Heterostructures for Applications in Magnetic Recording. , 2018, , 267-331.		12
78	Structure Inversion Asymmetry and Rashba Effect in Quantum Confined Topological Crystalline Insulator Heterostructures. <i>Advanced Functional Materials</i> , 2021, 31, 2008885.	14.9	12
79	Spin-resolved photoemission and <i>ab initio</i> theory of graphene/SiC. <i>Physical Review B</i> , 2013, 88, .	3.2	11
80	Effect of structural modulation and thickness of a graphene overlayer on the binding energy of the Rashba-type surface state of Ir(111). <i>New Journal of Physics</i> , 2013, 15, 115009.	2.9	11
81	Angle-resolved and core-level photoemission study of interfacing the topological insulator Bi_2Te_3 with Bi_2Se_3 . <i>Physical Review B</i> , 2015, 92, .	3.2	11
82	Disentangling bulk from surface contributions in the electronic structure of black phosphorus. <i>Physical Review B</i> , 2016, 93, .	3.2	11
83	Is There a Polaron Signature in Angle-Resolved Photoemission of CsPbBr_3 ? <i>Physical Review Letters</i> , 2022, 128, 176405.	7.8	11
84	Suppression of electron scattering resonances in graphene by quantum dots. <i>Applied Physics Letters</i> , 2017, 111, 161605.	3.3	9
85	Time-resolved magnetization dynamics of cross-tie domain walls in permalloy microstructures. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 496001.	1.8	8
86	Observation of hidden atomic order at the interface between Fe and topological insulator Bi_2Te_3 . <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 30520-30532.	2.8	8
87	Magnetostatic coupling of 90° domain walls in $\text{Fe}_{19}\text{Ni}_{81}/\text{Cu}/\text{Co}$ trilayers. <i>New Journal of Physics</i> , 2011, 13, 033015.	2.9	7
88	Generalized GW+Boltzmann Approach for the Description of Ultrafast Electron Dynamics in Topological Insulators. <i>Materials</i> , 2017, 10, 810.	2.9	7
89	Mechanistic Studies of Gas Reactions with Multicomponent Solids: What Can We Learn By Combining NAP XPS and Atomic Resolution STEM/EDX?. <i>Journal of Physical Chemistry C</i> , 2019, 123, 26201-26210.	3.1	6
90	Magnetization relaxation and search for the magnetic gap in bulk-insulating V-doped $(\text{Bi}, \text{Sb})_2\text{Te}_3$. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	6

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91	Fermi surface tomography. Nature Communications, 2022, 13, .	12.8	6
92	Strong Spin Dependence of Correlation Effects in Ni Due to Stoner Excitations. Physical Review Letters, 2018, 121, 267201.	7.8	5
93	Surface electronic structure of the wide band gap topological insulator $\text{PbBi}_{2.4}\text{Sb}_{0.6}\text{Te}_2$. Physical Review B, 2019, 100, .	12.4	5
94	Robust behavior and spin-texture stability of the topological surface state in Bi_2Se_3 upon deposition of gold. Npj Quantum Materials, 2022, 7, .	5.2	5
95	Hidden spin-orbital texture at the $\overline{\Gamma}$ -located valence band maximum of a transition metal dichalcogenide semiconductor. Nature Communications, 2022, 13, .	12.8	5
96	A new sample holder for laser-excited pump-probe magnetic measurements on a Focus photoelectron emission microscope. Review of Scientific Instruments, 2008, 79, 033702.	1.3	4
97	Observation of a giant mass enhancement in the ultrafast electron dynamics of a topological semimetal. Communications Physics, 2021, 4, .	5.3	4
98	Electrical Transport Properties of Vanadium-Doped $\text{Bi}_{2-x}\text{Te}_{2.4-x}\text{Se}_{0.6x}$. Physica Status Solidi (B): Basic Research, 2021, 258, 2000088.	1.5	3
99	Ultrafast Thermalization Pathways of Excited Bulk and Surface States in the Ferroelectric Rashba Semiconductor GeTe. Advanced Materials, 2022, 34, e2200323.	21.0	3
100	Angle-Resolved Photoemission of Topological Matter: Examples from Magnetism, Electron Correlation, and Phase Transitions. Physica Status Solidi (B): Basic Research, 2021, 258, 2000371.	1.5	2
101	Magneto-optical reflection spectroscopy on graphene/Co in the soft x-ray range. Journal of Physics: Conference Series, 2017, 903, 012025.	0.4	1
102	Origin of the band gap in Bi-intercalated graphene on Ir(111). 2D Materials, 2021, 8, 035007.	4.4	1
103	Effective mass enhancement and ultrafast electron dynamics of Au(111) surface state coupled to a quantum well. Physical Review Research, 2020, 2, .	3.6	1
104	On the problem of Dirac cones in fullerenes on gold. Nanoscale, 2022, 14, 9124-9133.	5.6	1
105	Phasenübergang durch chemische Substitution. Nachrichten Aus Der Chemie, 2018, 66, 1057-1061.	0.0	0
106	Impact of ordering on the reactivity of mixed crystals of topological insulators with anion substitution: $\text{Bi}_2\text{Se}_2\text{Te}_2$ and $\text{Sb}_2\text{Se}_2\text{Te}_2$. Applied Surface Science, 2021, 541, 148490.	6.1	0
107	Absence of giant Rashba effect in the valence band of CsPbBr_3 . , 0, , .		0