

Nicolas Reyren

List of Publications by Year in descending order

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73
papers

12,332
citations

101543

36
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91884

69
g-index

81
all docs

81
docs citations

81
times ranked

9917
citing authors

#	ARTICLE	IF	CITATIONS
1	Superconducting Interfaces Between Insulating Oxides. Science, 2007, 317, 1196-1199.	12.6	2,374
2	Magnetic skyrmions: advances in physics and potential applications. Nature Reviews Materials, 2017, 2, .	48.7	1,456
3	Electric field control of the LaAlO ₃ /SrTiO ₃ interface ground state. Nature, 2008, 456, 624-627.	27.8	1,068
4	Additive interfacial chiral interaction in multilayers for stabilization of small individual skyrmions at room temperature. Nature Nanotechnology, 2016, 11, 444-448.	31.5	919
5	Tunable Rashba Spin-Orbit Interaction at Oxide Interfaces. Physical Review Letters, 2010, 104, 126803.	7.8	785
6	Emergent phenomena induced by spin-orbit coupling at surfaces and interfaces. Nature, 2016, 539, 509-517.	27.8	692
7	Two-dimensional electron gas with universal subbands at the surface of SrTiO ₃ . Nature, 2011, 469, 189-193.	27.8	634
8	Spin Pumping and Inverse Spin Hall Effect in Platinum: The Essential Role of Spin-Memory Loss at Metallic Interfaces. Physical Review Letters, 2014, 112, 106602.	7.8	519
9	Room-temperature stabilization of antiferromagnetic skyrmions in synthetic antiferromagnets. Nature Materials, 2020, 19, 34-42.	27.5	297
10	Room-Temperature Current-Induced Generation and Motion of sub-100 nm Skyrmions. Nano Letters, 2017, 17, 2703-2712.	9.1	291
11	Spin to Charge Conversion at Room Temperature by Spin Pumping into a New Type of Topological Insulator: LaAlO_3/Sn Films. Physical Review Letters, 2016, 116, 096602.	7.8	288
12	The 2020 skyrmionics roadmap. Journal Physics D: Applied Physics, 2020, 53, 363001.	2.8	245
13	Two-Dimensional Quantum Oscillations of the Conductance at $\text{LaAlO}_3/\text{SrTiO}_3$ Interface. Physical Review Letters, 2010, 105, 236802.	7.8	227
14	Electrical detection of single magnetic skyrmions in metallic multilayers at room temperature. Nature Nanotechnology, 2018, 13, 233-237.	31.5	204
15	Electron-Phonon Interaction and Charge Carrier Mass Enhancement in SrTiO_3 . Physical Review Letters, 2008, 100, 226403.	7.8	174
16	Hybrid chiral domain walls and skyrmions in magnetic multilayers. Science Advances, 2018, 4, eaat0415.	10.3	172
17	A skyrmion-based spin-torque nano-oscillator. New Journal of Physics, 2016, 18, 075011.	2.9	170
18	Electrostriction at the $\text{LaAlO}_3/\text{SrTiO}_3$ Interface. Physical Review Letters, 2011, 107, 056102.	7.8	158

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19	Anisotropy of the superconducting transport properties of the LaAlO ₃ /SrTiO ₃ interface. Applied Physics Letters, 2009, 94, .	3.3	110
20	Influence of the growth conditions on the LaAlO ₃ /SrTiO ₃ interface electronic properties. Europhysics Letters, 2010, 91, 17004.	2.0	103
21	Superconductivity at the LaAlO ₃ /SrTiO ₃ interface. Journal of Physics Condensed Matter, 2009, 21, 164213.	1.8	86
22	Experimental evidences of a large extrinsic spin Hall effect in AuW alloy. Applied Physics Letters, 2014, 104, .	3.3	84
23	Orbital symmetry reconstruction and strong mass renormalization in the two-dimensional electron gas at the surface of KTaO ₃ . Physical Review B, 2012, 86, .	3.2	82
24	Field-effect control of superconductivity and Rashba spin-orbit coupling in top-gated LaAlO ₃ /SrTiO ₃ devices. Scientific Reports, 2015, 5, 12751.	3.3	82
25	Gate-Controlled Spin Injection at LaAlO ₃ /SrTiO ₃ interface. Physical Review Letters, 2012, 108, 186802.	3.3	81
26	Limit of the electrostatic doping in two-dimensional electron gases of LaXO ₃ (X = Al, Ti)/SrTiO ₃ . Scientific Reports, 2014, 4, 6788.	3.3	79
27	Chirality in Magnetic Multilayers Probed by the Symmetry and the Amplitude of Dichroism in X-Ray Resonant Magnetic Scattering. Physical Review Letters, 2018, 120, 037202.	7.8	59
28	Suppression of the critical thickness threshold for conductivity at the LaAlO ₃ /SrTiO ₃ interface. Nature Communications, 2014, 5, 4291.	12.8	57
29	Perpendicular magnetization reversal in Pt/[Co/Ni] ₃ /Al multilayers via the spin Hall effect of Pt. Applied Physics Letters, 2016, 108, .	3.3	56
30	Imaging non-collinear antiferromagnetic textures via single spin relaxometry. Nature Communications, 2021, 12, 767.	12.8	49
31	Electric-Field-Effect Modulation of the Transition Temperature, Mobile Carrier Density, and In-Plane Penetration Depth of NdBa ₂ Cu ₃ O _{7-δ} Thin Films. Physical Review Letters, 2007, 98, 057002.	7.8	47
32	Electron Scattering at Dislocations in LaAlO ₃ . Physical Review Letters, 2009, 102, 046809.	3.2	44
33	Electrostatically-tuned superconductor-metal-insulator quantum transition at the LaAlO ₃ /SrTiO ₃ interface. Physical Review B, 2009, 79, .	3.2	44
34	Seebeck effect in the conducting LaAlO ₃ /SrTiO ₃ interface. Physical Review B, 2010, 81, .	3.2	43
35	Dzyaloshinskii-Moriya interaction at disordered interfaces from <i>ab initio</i> theory: Robustness against intermixing and tunability through dusting. Applied Physics Letters, 2018, 113, .	3.3	42
36	Observation of Large Unidirectional Rashba Magnetoresistance in Ge(111). Physical Review Letters, 2020, 124, 027201.	7.8	42

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37	Disruptive effect of Dzyaloshinskii-Moriya interaction on the magnetic memory cell performance. Applied Physics Letters, 2016, 108, .	3.3	38
38	A transmission electron microscope study of Néel skyrmion magnetic textures in multilayer thin film systems with large interfacial chiral interaction. Scientific Reports, 2018, 8, 5703.	3.3	38
39	Dzyaloshinskii-Moriya anisotropy in nanomagnets with in-plane magnetization. Physical Review B, 2016, 93, .	3.2	34
40	Modeling the Shape of Axisymmetric Skyrmions in Magnetic Multilayers. Physical Review Applied, 2018, 10, .	3.8	31
41	Angular-resolved photoemission electron spectroscopy and transport studies of the elemental topological insulator \pm -Sn. Physical Review B, 2018, 98, .	3.2	28
42	Controlled Individual Skyrmion Nucleation at Artificial Defects Formed by Ion Irradiation. Small, 2020, 16, e1907450.	10.0	27
43	Spin transport in <i>p</i> -type germanium. Journal of Physics Condensed Matter, 2016, 28, 165801.	1.8	25
44	Diodes with breakdown voltages enhanced by the metal-insulator transition of LaAlO ₃ /SrTiO ₃ interfaces. Applied Physics Letters, 2010, 96, 183504.	3.3	21
45	Quantitative imaging of hybrid chiral spin textures in magnetic multilayer systems by Lorentz microscopy. Physical Review B, 2019, 100, .	3.2	21
46	Thermoelectric Signature of Individual Skyrmions. Physical Review Letters, 2021, 126, 077202.	7.8	18
47	Tailored Flux Pinning in Superconductor-Ferromagnet Multilayers with Engineered Magnetic Domain Morphology From Stripes to Skyrmions. Physical Review Applied, 2020, 13, .	3.8	17
48	A perpendicular graphene/ferromagnet electrode for spintronics. Applied Physics Letters, 2020, 116, .	3.3	17
49	Large Rashba unidirectional magnetoresistance in the Fe/Ge(111) interface states. Physical Review B, 2021, 103, .	3.2	15
50	Anomalous Hall effect in $3d$ multilayers mediated by interface scattering and nonlocal spin conductivity. Physical Review B, 2020, 102, .	3.2	14
51	Evaluation of spin diffusion length of AuW alloys using spin absorption experiments in the limit of large spin-orbit interactions. Physical Review B, 2015, 92, .	3.2	13
52	Ultrafast Spin-Charge Conversion at SnBi ₂ Te ₄ /Co Topological Insulator Interfaces Probed by Terahertz Emission Spectroscopy. Advanced Optical Materials, 2022, 10, .	7.3	13
53	Top-gated field-effect LaAlO ₃ /SrTiO ₃ devices made by ion-irradiation. Applied Physics Letters, 2016, 108, 052602.	3.3	12
54	Modified magnetic anisotropy at LaCoO ₃ /La _{0.7} Sr _{0.3} MnO ₃ interfaces. APL Materials, 2017, 5, .	5.1	12

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55	Electronic Subband Reconfiguration in a d_{0n} -Perovskite Induced by Strain-Driven Structural Transformations. <i>Physical Review Letters</i> , 2012, 109, 226601.	7.8	11
56	Towards electrical spin injection into LaAlO_3 $\hat{=}$ SrTiO_3 . <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2012, 370, 4958-4971.	3.4	11
57	Interfacial potential gradient modulates Dzyaloshinskii-Moriya interaction in Pt/Co/metal multilayers. <i>Physical Review Materials</i> , 2022, 6, .	2.4	11
58	Magnetization switching and deterministic nucleation in Co/Ni multilayered disks induced by spin-orbit torques. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	10
59	Spatial extent of the Dzyaloshinskii-Moriya interaction at metallic interfaces. <i>Physical Review Materials</i> , 2022, 6, .	2.4	10
60	Spin-dependent transport characterization in metallic lateral spin valves using one-dimensional and three-dimensional modeling. <i>Physical Review B</i> , 2019, 99, .	3.2	7
61	Topological surface states in epitaxial Bi_2Te_3		

#	ARTICLE	IF	CITATIONS
73	Transport Properties of TMO Interfaces. Springer Series in Materials Science, 2018, , 37-53.	0.6	0