

Nicolas Reyren

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Ultrafast Spin-charge Conversion at SnBi ₂ Te ₄ /Co Topological Insulator Interfaces Probed by Terahertz Emission Spectroscopy. <i>Advanced Optical Materials</i> , 2022, 10, .	7.3	13
2	Spatial extent of the Dzyaloshinskii-Moriya interaction at metallic interfaces. <i>Physical Review Materials</i> , 2022, 6, .	2.4	10
3	Ultrafast time-evolution of chiral Néel magnetic domain walls probed by circular dichroism in x-ray resonant magnetic scattering. <i>Nature Communications</i> , 2022, 13, 1412.	12.8	7
4	Interfacial potential gradient modulates Dzyaloshinskii-Moriya interaction in Pt/Co/metal multilayers. <i>Physical Review Materials</i> , 2022, 6, .	2.4	11
5	Topological surface states in epitaxial $\langle \text{mml:math} \rangle$		

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19	Tailored Flux Pinning in Superconductor-Ferromagnet Multilayers with Engineered Magnetic Domain Morphology From Stripes to Skyrmions. <i>Physical Review Applied</i> , 2020, 13, .	3.8	17
20	A perpendicular graphene/ferromagnet electrode for spintronics. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	17
21	The 2020 skyrmionics roadmap. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 363001.	2.8	245
22	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
23	Quantitative imaging of hybrid chiral spin textures in magnetic multilayer systems by Lorentz microscopy. <i>Physical Review B</i> , 2019, 100, .	3.2	21
24	Electrical detection of single magnetic skyrmions in metallic multilayers at room temperature. <i>Nature Nanotechnology</i> , 2018, 13, 233-237.	31.5	204
25	Chirality in Magnetic Multilayers Probed by the Symmetry and the Amplitude of Dichroism in X-Ray Resonant Magnetic Scattering. <i>Physical Review Letters</i> , 2018, 120, 037202.	7.8	59
26	A transmission electron microscope study of Néel skyrmion magnetic textures in multilayer thin film systems with large interfacial chiral interaction. <i>Scientific Reports</i> , 2018, 8, 5703.	3.3	38
27	Modeling the Shape of Axisymmetric Skyrmions in Magnetic Multilayers. <i>Physical Review Applied</i> , 2018, 10, .	3.8	31
28	Angular-resolved photoemission electron spectroscopy and transport studies of the elemental topological insulator Bi_2Se_3 . <i>Physical Review B</i> , 2018, 98, .	3.2	28
29	Dzyaloshinskii-Moriya interaction at disordered interfaces from <i>ab initio</i> theory: Robustness against intermixing and tunability through dusting. <i>Applied Physics Letters</i> , 2018, 113, .	3.3	42
30	Hybrid chiral domain walls and skyrmions in magnetic multilayers. <i>Science Advances</i> , 2018, 4, eaat0415.	10.3	172
31	Transport Properties of TMO Interfaces. <i>Springer Series in Materials Science</i> , 2018, , 37-53.	0.6	0
32	Magnetic skyrmions: advances in physics and potential applications. <i>Nature Reviews Materials</i> , 2017, 2, .	48.7	1,456
33	Room-Temperature Current-Induced Generation and Motion of sub-100 nm Skyrmions. <i>Nano Letters</i> , 2017, 17, 2703-2712.	9.1	291
34	Modified magnetic anisotropy at LaCoO ₃ /La _{0.7} Sr _{0.3} MnO ₃ interfaces. <i>APL Materials</i> , 2017, 5, .	5.1	12
35	Skyrmions in magnetic multilayers: chirality, electrical detection and current-induced motion. , 2017, , .		1
36	Disruptive effect of Dzyaloshinskii-Moriya interaction on the magnetic memory cell performance. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	38

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37	Perpendicular magnetization reversal in Pt/[Co/Ni]3/Al multilayers <i>via</i> the spin Hall effect of Pt. Applied Physics Letters, 2016, 108, .	3.3	56
38	Top-gated field-effect LaAlO ₃ /SrTiO ₃ devices made by ion-irradiation. Applied Physics Letters, 2016, 108, 052602.	3.3	12
39	Emergent phenomena induced by spin-orbit coupling at surfaces and interfaces. Nature, 2016, 539, 509-517.	27.8	692
40	Dzyaloshinskii-Moriya anisotropy in nanomagnets with in-plane magnetization. Physical Review B, 2016, 93, .	3.2	34
41	Spin to Charge Conversion at Room Temperature by Spin Pumping into a New Type of Topological Insulator: \pm -Sn Films. Physical Review Letters, 2016, 116, 096602.	7.8	288
42	A skyrmion-based spin-torque nano-oscillator. New Journal of Physics, 2016, 18, 075011.	2.9	170
43	Spin Hall effect in 5d Au: W transition metal alloys (Conference Presentation). , 2016, , .		0
44	Additive interfacial chiral interaction in multilayers for stabilization of small individual skyrmions at room temperature. Nature Nanotechnology, 2016, 11, 444-448.	31.5	919
45	Spin transport in p-type germanium. Journal of Physics Condensed Matter, 2016, 28, 165801.	1.8	25
46	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
47	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
48	Effects of Dzyaloshinskii-Moriya interaction on the spin transfer magnetization switching in magnetic tunnel junctions. , 2015, , .		0
49	Skyrmions at room temperature in magnetic multilayers. , 2015, , .		4
50	Spin pumping and inverse spin Hall effect in platinum and other 5d metals: the essential role of spin-memory loss and spin-current discontinuities at interfaces. Proceedings of SPIE, 2014, , .	0.8	3
51	Experimental evidences of a large extrinsic spin Hall effect in AuW alloy. Applied Physics Letters, 2014, 104, .	3.3	84
52	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
53	Suppression of the critical thickness threshold for conductivity at the LaAlO ₃ /SrTiO ₃ interface. Nature Communications, 2014, 5, 4291.	12.8	57
54	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

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55	Gate-Controlled Spin Injection at $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Physical Review Letters, 2012, 108, 186802.		
56	Electronic Subband Reconfiguration in a LaAlO_3 -Perovskite Induced by Strain-Driven Structural Transformations. Physical Review Letters, 2012, 109, 226601.	7.8	11
57	Towards electrical spin injection into $\text{LaAlO}_3/\text{SrTiO}_3$. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 4958-4971.	3.4	11
58	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
59	Electrostriction at the $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Physical Review Letters, 2011, 107, 056102.		
60	Two-dimensional electron gas with universal subbands at the surface of SrTiO_3 . Nature, 2011, 469, 189-193.	27.8	634
61	Influence of the growth conditions on the $\text{LaAlO}_3/\text{SrTiO}_3$ interface electronic properties. Europhysics Letters, 2010, 91, 17004.	2.0	103
62	Two-Dimensional Quantum Oscillations of the Conductance at $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Physical Review Letters, 2010, 105, 236802.	7.8	227
63	Diodes with breakdown voltages enhanced by the metal-insulator transition of $\text{LaAlO}_3/\text{SrTiO}_3$ interfaces. Applied Physics Letters, 2010, 96, 183504.	3.3	21
64	Tunable Rashba Spin-Orbit Interaction at Oxide Interfaces. Physical Review Letters, 2010, 104, 126803.	7.8	785
65	Seebeck effect in the conducting $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Physical Review B, 2010, 81, .	3.2	43
66	Anisotropy of the superconducting transport properties of the $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Applied Physics Letters, 2009, 94, .	3.3	110
67	Electron Scattering at Dislocations in $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Physical Review Letters, 2009, 102, 046809.		
68	Electrostatically-tuned superconductor-metal-insulator quantum transition at the $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Physical Review B, 2009, 79, .	3.2	44
69	Superconductivity at the $\text{LaAlO}_3/\text{SrTiO}_3$ interface. Journal of Physics Condensed Matter, 2009, 21, 164213.	1.8	86
70	Electric field control of the $\text{LaAlO}_3/\text{SrTiO}_3$ interface ground state. Nature, 2008, 456, 624-627.	27.8	1,068
71	Electron-Phonon Interaction and Charge Carrier Mass Enhancement in SrTiO_3 . Physical Review Letters, 2008, 100, 226403.	7.8	174
72	Electric-Field-Effect Modulation of the Transition Temperature, Mobile Carrier Density, and In-Plane Penetration Depth of $\text{NdBa}_2\text{Cu}_3\text{O}_7$ Thin Films. Physical Review Letters, 2007, 98, 057002.	7.8	47

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73	Superconducting Interfaces Between Insulating Oxides. Science, 2007, 317, 1196-1199.	12.6	2,374