

Enrique Del Barco

List of Publications by Year in descending order

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54
papers

2,609
citations

257450

24
h-index

182427

51
g-index

57
all docs

57
docs citations

57
times ranked

2791
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetic qubits as hardware for quantum computers. <i>Nanotechnology</i> , 2001, 12, 181-186.	2.6	280
2	Spin-transfer-induced precessional magnetization reversal. <i>Applied Physics Letters</i> , 2004, 84, 3897-3899.	3.3	244
3	Molecular diodes with rectification ratios exceeding 105 driven by electrostatic interactions. <i>Nature Nanotechnology</i> , 2017, 12, 797-803.	31.5	224
4	Controlling the direction of rectification in a molecular diode. <i>Nature Communications</i> , 2015, 6, 6324.	12.8	197
5	Subterahertz spin pumping from an insulating antiferromagnet. <i>Science</i> , 2020, 368, 160-165.	12.6	175
6	Magnetic Quantum Tunneling in the Single-Molecule Magnet Mn ₁₂ -Acetate. <i>Journal of Low Temperature Physics</i> , 2005, 140, 119-174.	1.4	131
7	Magnetic quantum tunneling: insights from simple molecule-based magnets. <i>Dalton Transactions</i> , 2010, 39, 4693.	3.3	129
8	Electric-field-driven dual-functional molecular switches in tunnel junctions. <i>Nature Materials</i> , 2020, 19, 843-848.	27.5	124
9	Transition from direct to inverted charge transport Marcus regions in molecular junctions via molecular orbital gating. <i>Nature Nanotechnology</i> , 2018, 13, 322-329.	31.5	98
10	Quantum interference of tunnel trajectories between states of different spin length in a dimeric molecular nanomagnet. <i>Nature Physics</i> , 2008, 4, 277-281.	16.7	77
11	Symmetry of Magnetic Quantum Tunneling in Single Molecule Magnet Mn ₁₂ -Acetate. <i>Physical Review Letters</i> , 2003, 91, 047203.	7.8	76
12	Quantum Superposition of High Spin States in the Single Molecule Magnet Ni ₄ . <i>Physical Review Letters</i> , 2004, 93, 157202.	7.8	74
13	A Single-Level Tunnel Model to Account for Electrical Transport through Single Molecule- and Self-Assembled Monolayer-based Junctions. <i>Scientific Reports</i> , 2016, 6, 26517.	3.3	70
14	Fabrication of nanogapped single-electron transistors for transport studies of individual single-molecule magnets. <i>Journal of Applied Physics</i> , 2007, 101, 09E102.	2.5	60
15	Manifestation of Spin Selection Rules on the Quantum Tunneling of Magnetization in a Single-Molecule Magnet. <i>Physical Review Letters</i> , 2009, 103, 017202.	7.8	53
16	Nanomodulation of Molecular Nanomagnets. <i>Inorganic Chemistry</i> , 2009, 48, 3480-3492.	4.0	49
17	Dynamic spin injection into chemical vapor deposited graphene. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	43
18	Electrostatic control over temperature-dependent tunnelling across a single-molecule junction. <i>Nature Communications</i> , 2016, 7, 11595.	12.8	35

#	ARTICLE	IF	CITATIONS
19	Nanoscale constrictions in superconducting coplanar waveguide resonators. Applied Physics Letters, 2014, 105, .	3.3	31
20	Tunneling splittings in Mn ¹² -acetate single crystals. Europhysics Letters, 2002, 60, 768-774.	2.0	30
21	Ferromagnetic Ordering and Simultaneous Fast Magnetization Tunneling in a Ni ⁴ Single-Molecule Magnet. Inorganic Chemistry, 2010, 49, 5780-5782.	4.0	27
22	Quantum tunneling of magnetization in trigonal single-molecule magnets. Physical Review B, 2012, 85, .	3.2	26
23	Molecular spintronics. Journal of Applied Physics, 2019, 125, .	2.5	26
24	Asymmetric Berry-Phase Interference Patterns in a Single-Molecule Magnet. Physical Review Letters, 2011, 106, 227201.	7.8	25
25	Quadratic transverse anisotropy term due to dislocations in Mn ₁₂ acetate crystals directly observed by EPR spectroscopy. Physical Review B, 2002, 65, .	3.2	22
26	Temperature dependent charge transport across tunnel junctions of single-molecules and self-assembled monolayers: a comparative study. Dalton Transactions, 2016, 45, 17153-17159.	3.3	22
27	Design principles of dual-functional molecular switches in solid-state tunnel junctions. Applied Physics Letters, 2020, 117, .	3.3	20
28	Distribution of internal transverse magnetic fields in a Mn ₁₂ -based single molecule magnet. Physical Review B, 2004, 69, .	3.2	19
29	Magnetic field dependent transport through a Mn ⁴ single-molecule magnet. Journal of Applied Physics, 2011, 109, .	2.5	17
30	A single atom change turns insulating saturated wires into molecular conductors. Nature Communications, 2021, 12, 3432.	12.8	16
31	Bias-Dependent Direct and Inverted Marcus Charge Transport Affecting Rectification in a Redox-Active Molecular Junction. Advanced Science, 2021, 8, e2100055.	11.2	14
32	Tunneling and inversion symmetry in single-molecule magnets: The case of the Mn ₁₂ molecule. Physical Review B, 2010, 82, .	3.2	13
33	Tunable crossover between one- and three-dimensional magnetic dynamics in Mn ₁₂ molecule. Physical Review B, 2016, 93, .	3.2	13
34	Control of the inhomogeneity degree by magnetic dilution in crystals of antiferromagnetic molecular rings. Physical Review B, 2008, 78, .	3.2	12
35	Three-Leaf Quantum Interference Clovers in a Trigonal Single-Molecule Magnet. Physical Review Letters, 2014, 113, 087201.	7.8	12
36	Dynamical spin injection at a quasi-one-dimensional ferromagnet-graphene interface. Applied Physics Letters, 2015, 106, .	3.3	12

#	ARTICLE	IF	CITATIONS
37	Stable Universal 1â€•and 2â€•Input Singleâ€•Molecule Logic Gates. <i>Advanced Materials</i> , 2022, 34, e2202135.	21.0	10
38	Comment on "Influence of the Dzyaloshinskii-Moriya Exchange Interaction on Quantum Phase Interference of Spins". <i>Physical Review Letters</i> , 2009, 103, 059701; author reply 059702.	7.8	9
39	Spin Pumping in Permalloy/Graphene and Permalloy/Graphite Interfaces. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 3147-3150.	2.1	9
40	Low temperature hysteretic behavior of the interpenetrating 3-D network structured [Ru ₂ (O ₂ CMe) ₄] ₃ [Fe(CN) ₆] magnet. <i>Polyhedron</i> , 2013, 64, 73-76.	2.2	9
41	Single-crystal EPR spectroscopy of a Co(II) single-chain magnet. <i>Polyhedron</i> , 2013, 66, 218-221.	2.2	9
42	Extreme Field Sensitivity of Magnetic Tunneling in Fe-Doped LiMn_3O_7 . <i>Physical Review Letters</i> , 2018, 120, 147202.	7.8	9
43	Relieving frustration: The case of antiferromagnetic Mn molecular triangles. <i>Physical Review B</i> , 2011, 84, .	3.2	8
44	A Microscopic and Spectroscopic View of Quantum Tunneling of Magnetization. <i>Nanoscience and Technology</i> , 2014, , 77-110.	1.5	8
45	Nematic superconductivity in the topological semimetal $\text{Ca}_2\text{S}_2\text{O}_7$. <i>Physical Review B</i> , 2022, 105, .	3.2	8
46	Magnetic and microwave studies of high-spin states of single-molecule magnet Ni ₄ . <i>Polyhedron</i> , 2005, 24, 2695-2700.	2.2	7
47	Effects of uniaxial pressure on the quantum tunneling of magnetization in a high-symmetry Mn ₁₂ single-molecule magnet. <i>Physical Review B</i> , 2017, 95, .	3.2	7
48	On-chip integration of high-frequency electron paramagnetic resonance spectroscopy and Hall-effect magnetometry. <i>Review of Scientific Instruments</i> , 2008, 79, 074703.	1.3	6
49	Moderate positive spin Hall angle in uranium. <i>Applied Physics Letters</i> , 2015, 107, 232403.	3.3	6
50	How to distinguish between interacting and noninteracting molecules in tunnel junctions. <i>Nanoscale</i> , 2018, 10, 3904-3910.	5.6	4
51	Sub-Kelvin (100 mK) time resolved electron paramagnetic resonance spectroscopy for studies of quantum dynamics of low-dimensional spin systems at low frequencies and magnetic fields. <i>Review of Scientific Instruments</i> , 2019, 90, 085106.	1.3	2
52	Diffusion profiles and magnetic properties of Mn-implanted silicon after thermal annealing. <i>Journal of Materials Science: Materials in Electronics</i> , 2008, 19, 263-268.	2.2	0
53	Structures And Magnetization Of Defect-Associated Sites In Silicon. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	0
54	Anomalous field sweep rate dependence of the tunnel relaxation in single-molecule magnet Mn ⁴⁺ "Bet". <i>Polyhedron</i> , 2013, 66, 179-182.	2.2	0