

Alvaro Sanchez

List of Publications by Year in descending order

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68
papers

2,754
citations

172207

29
h-index

174990

52
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68
all docs

68
docs citations

68
times ranked

1519
citing authors

#	ARTICLE	IF	CITATIONS
1	Levitation of superconducting microrings for quantum magnetomechanics. <i>Physical Review B</i> , 2021, 103, .	1.1	6
2	Shaping magnetic fields with zero-magnetic-permeability media. <i>Journal of Applied Physics</i> , 2021, 130, .	1.1	1
3	Particle size determination from magnetization curves in reduced graphene oxide decorated with monodispersed superparamagnetic iron oxide nanoparticles. <i>Journal of Colloid and Interface Science</i> , 2020, 566, 107-119.	5.0	18
4	Analytical modeling of the interaction between skyrmions and extended defects. <i>Physical Review B</i> , 2019, 100, .	1.1	16
5	Accelerating, guiding, and compressing skyrmions by defect rails. <i>Nanoscale</i> , 2019, 11, 12589-12594.	2.8	33
6	Depairing Current at High Magnetic Fields in Vortex-Free High-Temperature Superconducting Nanowires. <i>Nano Letters</i> , 2019, 19, 4174-4179.	4.5	10
7	Invisible magnetic sensors. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	16
8	Magnetic Illusion: Transforming a Magnetic Object into Another Object by Negative Permeability. <i>Physical Review Applied</i> , 2018, 9, .	1.5	21
9	Interaction of isolated skyrmions with point and linear defects. <i>Journal of Magnetism and Magnetic Materials</i> , 2018, 465, 709-715.	1.0	16
10	Enhancing the sensitivity of magnetic sensors by 3D metamaterial shells. <i>Scientific Reports</i> , 2017, 7, 44762.	1.6	9
11	Negative permeability in magnetostatics and its experimental demonstration. <i>Physical Review B</i> , 2017, 96, .	1.1	12
12	Encoding Magnetic States in Monopole-Like Configurations Using Superconducting Dots. <i>Advanced Science</i> , 2016, 3, 1600207.	5.6	12
13	Tunable High-Field Magnetization in Strongly Exchange-Coupled Freestanding Co/CoO Core/Shell Coaxial Nanowires. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 22477-22483.	4.0	26
14	Analytical trajectories of skyrmions in confined geometries: Skyrmionic racetracks and nano-oscillators. <i>Physical Review B</i> , 2016, 94, .	1.1	47
15	Quasistatic Metamaterials: Magnetic Coupling Enhancement by Effective Space Cancellation. <i>Advanced Materials</i> , 2016, 28, 4898-4903.	11.1	17
16	Tailoring Staircase-like Hysteresis Loops in Electrodeposited Trisegmented Magnetic Nanowires: a Strategy toward Minimization of Interwire Interactions. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 4109-4117.	4.0	23
17	Demagnetizing Factors for a Hollow Sphere. <i>IEEE Magnetics Letters</i> , 2016, 7, 1-4.	0.6	14
18	A Magnetic Wormhole. <i>Scientific Reports</i> , 2015, 5, 12488.	1.6	46

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19	Imprinting skyrmions in thin films by ferromagnetic and superconducting templates. Applied Physics Letters, 2015, 107, .	1.5	14
20	Corrections to "Macroscopic Modeling of Magnetization and Levitation of Hard Type-II Superconductors: The Critical-State Model" [Feb 13 Article ID 8201023]. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-1.	1.1	0
21	Simultaneous magnetic and transport currents in thin film superconductors within the critical-state approximation. Superconductor Science and Technology, 2015, 28, 014003.	1.8	3
22	Experimental realization of magnetic energy concentration and transmission at a distance by metamaterials. Applied Physics Letters, 2014, 105, .	1.5	42
23	Controlling vortex chirality and polarity by geometry in magnetic nanodots. Applied Physics Letters, 2014, 104, 012407.	1.5	36
24	Long-Distance Transfer and Routing of Static Magnetic Fields. Physical Review Letters, 2014, 112, 253901.	2.9	59
25	Optimization of a superconducting linear levitation system using a soft ferromagnet. Physica C: Superconductivity and Its Applications, 2013, 487, 11-15.	0.6	6
26	Superconductorâ€“ferromagnetic metamaterials for magnetic cloaking and concentration. Superconductor Science and Technology, 2013, 26, 074001.	1.8	43
27	Magnetic and transport currents in thin film superconductors of arbitrary shape within the London approximation. Journal of Applied Physics, 2013, 113, .	1.1	12
28	A quasistatic magnetic cloak. New Journal of Physics, 2013, 15, 053019.	1.2	39
29	Shaping magnetic fields with soft ferromagnets: Application to levitation of superconductors. Journal of Applied Physics, 2012, 111, 013921.	1.1	13
30	Magnetic Energy Harvesting and Concentration at a Distance by Transformation Optics. Physical Review Letters, 2012, 109, 263903.	2.9	91
31	Transport critical-current density of superconducting films with hysteretic ferromagnetic dots. AIP Advances, 2012, 2, 022166.	0.6	5
32	Two-dimensional arrays of superconducting strips as dc magnetic metamaterials. Physical Review B, 2012, 85, .	1.1	22
33	Experimental Realization of a Magnetic Cloak. Science, 2012, 335, 1466-1468.	6.0	334
34	Experimental and Theoretical Levitation Forces in a Superconducting Bearing for a Real-Scale Maglev System. IEEE Transactions on Applied Superconductivity, 2011, 21, 3532-3540.	1.1	44
35	Towards an Optimized Magnet-Superconductor Configuration in Actual Maglev Devices. IEEE Transactions on Applied Superconductivity, 2011, 21, 1469-1472.	1.1	18
36	Magnet Guideways for Superconducting Maglevs: Comparison Between Halbach-Type and Conventional Arrangements of Permanent Magnets. Journal of Low Temperature Physics, 2011, 162, 62-71.	0.6	38

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37	Tunability of the critical-current density in superconductor-ferromagnet hybrids. Applied Physics Letters, 2011, 98, 202506.	1.5	10
38	Antimagnets: controlling magnetic fields with superconductor–metamaterial hybrids. New Journal of Physics, 2011, 13, 093034.	1.2	101
39	Influence of magnetic substrate in the transport critical current of superconducting tapes. Applied Physics Letters, 2010, 97, .	1.5	17
40	Self-fields in thin superconducting tapes: Implications for the thickness effect in coated conductors. Applied Physics Letters, 2010, 96, .	1.5	41
41	Critical-current density analysis of force and stability in maglev systems. Journal of Applied Physics, 2009, 105, .	1.1	18
42	Magnetic properties of a dc metamaterial consisting of parallel square superconducting thin plates. Applied Physics Letters, 2009, 94, .	1.5	41
43	Theoretical Hints for Optimizing Force and Stability in Actual Maglev Devices. IEEE Transactions on Applied Superconductivity, 2009, 19, 2070-2073.	1.1	23
44	A theoretical study of the influence of superconductor and magnet dimensions on the levitation force and stability of maglev systems. Superconductor Science and Technology, 2008, 21, 125008.	1.8	34
45	Size-independent residual magnetic moments of colloidal Fe ₃ O ₄ -polystyrene nanospheres detected by ac susceptibility measurements. Journal of Applied Physics, 2008, 104, 093902.	1.1	22
46	Lateral-displacement influence on the levitation force in a superconducting system with translational symmetry. Applied Physics Letters, 2008, 92, 042505.	1.5	50
47	Enhanced stability by field cooling in superconducting levitation with translational symmetry. Applied Physics Letters, 2007, 91, .	1.5	43
48	Optimizing levitation force and stability in superconducting levitation with translational symmetry. Applied Physics Letters, 2007, 90, 042503.	1.5	69
49	Magnetic levitation of superconducting bars. Journal of Applied Physics, 2006, 99, 113904.	1.1	40
50	Theoretical analysis of the transport critical-state ac loss in arrays of superconducting rectangular strips. Physical Review B, 2005, 71, .	1.1	47
51	Demagnetizing factors for completely shielded rectangular prisms. Journal of Applied Physics, 2004, 96, 5365-5369.	1.1	26
52	Magnetic properties of arrays of superconducting strips in a perpendicular field. Physical Review B, 2003, 67, .	1.1	71
53	Transverse demagnetizing factors of long rectangular bars. II. Numerical calculations for arbitrary susceptibility. Journal of Applied Physics, 2002, 91, 5260-5267.	1.1	32
54	Stiffness and energy losses in cylindrically symmetric superconductor levitating systems. Superconductor Science and Technology, 2002, 15, 1445-1453.	1.8	16

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55	Magnetic properties of finite superconducting cylinders. I. Uniform applied field. Physical Review B, 2001, 64, .	1.1	149
56	Magnetic properties of finite superconducting cylinders. II. Nonuniform applied field and levitation force. Physical Review B, 2001, 64, .	1.1	73
57	Levitation force between a superconductor and a permanent magnet with cylindrical symmetry. Physica C: Superconductivity and Its Applications, 2001, 364-365, 360-362.	0.6	17
58	Critical-current density from magnetization loops of finite high-T _c superconductors. Superconductor Science and Technology, 2001, 14, 444-447.	1.8	64
59	Hysteresis loop and its relation to the critical current of finite superconducting cylinders. Physica C: Superconductivity and Its Applications, 2000, 341-348, 1441-1442.	0.6	2
60	Magnetic levitation of superconductors in the critical state. Physical Review B, 1998, 58, 963-970.	1.1	38
61	Magnetic levitation of thin superconducting disks. Physica C: Superconductivity and Its Applications, 1997, 275, 322-326.	0.6	18
62	Influence of superconductor properties on magnetic levitation force. Physica C: Superconductivity and Its Applications, 1997, 282-287, 2653-2654.	0.6	5
63	Vertical force, magnetic stiffness and damping for levitating type-II superconductors. Physica C: Superconductivity and Its Applications, 1996, 268, 46-52.	0.6	51
64	Comparison between transport and magnetically induced critical-current density in high-T _c superconductors. Physica C: Superconductivity and Its Applications, 1994, 225, 136-142.	0.6	7
65	Hysteretic ac losses and susceptibility of thin superconducting disks. Physical Review B, 1994, 50, 9355-9362.	1.1	374
66	Magnetic properties of high-T _c superconducting grains. Physical Review B, 1992, 45, 10793-10796.	1.1	26
67	Critical-current degradation by surface damage in high-temperature superconductors. Physica C: Superconductivity and Its Applications, 1992, 193, 437-440.	0.6	1
68	Theoretical critical-state susceptibility spectra and their application to high-T _c superconductors. Journal of Applied Physics, 1991, 70, 5463-5477.	1.1	66