Alvaro Sanchez

List of Publications by Year
in descending order

68 papers	2,754 citations	172207 29 h-index	174990 52 g-index
68 all docs	68 docs citations	68 times ranked	1519 citing authors

#	Article	IF	Citations
1	Hysteretic ac losses and susceptibility of thin superconducting disks. Physical Review B, 1994, 50, 9355-9362.	1.1	374
2	Experimental Realization of a Magnetic Cloak. Science, 2012, 335, 1466-1468.	6.0	334
3	Magnetic properties of finite superconducting cylinders. I. Uniform applied field. Physical Review B, 2001, 64, .	1.1	149
4	Antimagnets: controlling magnetic fields with superconductorâ€"metamaterial hybrids. New Journal of Physics, 2011, 13, 093034.	1.2	101
5	Magnetic Energy Harvesting and Concentration at a Distance by Transformation Optics. Physical Review Letters, 2012, 109, 263903.	2.9	91
6	Magnetic properties of finite superconducting cylinders. II. Nonuniform applied field and levitation force. Physical Review B, 2001, 64, .	1.1	73
7	Magnetic properties of arrays of superconducting strips in a perpendicular field. Physical Review B, 2003, 67, .	1.1	71
8	Optimizing levitation force and stability in superconducting levitation with translational symmetry. Applied Physics Letters, 2007, 90, 042503.	1.5	69
9	Theoretical criticalâ€state susceptibility spectra and their application to highâ€Tcsuperconductors. Journal of Applied Physics, 1991, 70, 5463-5477.	1.1	66
10	Critical-current density from magnetization loops of finite high-Tcsuperconductors. Superconductor Science and Technology, 2001, 14, 444-447.	1.8	64
11	Long-Distance Transfer and Routing of Static Magnetic Fields. Physical Review Letters, 2014, 112, 253901.	2.9	59
12	Vertical force, magnetic stiffness and damping for levitating type-II superconductors. Physica C: Superconductivity and Its Applications, 1996, 268, 46-52.	0.6	51
13	Lateral-displacement influence on the levitation force in a superconducting system with translational symmetry. Applied Physics Letters, 2008, 92, 042505.	1.5	50
14	Theoretical analysis of the transport critical-state ac loss in arrays of superconducting rectangular strips. Physical Review B, 2005, 71, .	1.1	47
15	Analytical trajectories of skyrmions in confined geometries: Skyrmionic racetracks and nano-oscillators. Physical Review B, 2016, 94, .	1.1	47
16	A Magnetic Wormhole. Scientific Reports, 2015, 5, 12488.	1.6	46
17	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
18	Enhanced stability by field cooling in superconducting levitation with translational symmetry. Applied Physics Letters, 2007, 91, .	1.5	43

#	Article	IF	Citations
19	Superconductorâ€"ferromagnetic metamaterials for magnetic cloaking and concentration. Superconductor Science and Technology, 2013, 26, 074001.	1.8	43
20	Experimental realization of magnetic energy concentration and transmission at a distance by metamaterials. Applied Physics Letters, 2014, 105, .	1.5	42
21	Magnetic properties of a dc metamaterial consisting of parallel square superconducting thin plates. Applied Physics Letters, 2009, 94, .	1.5	41
22	Self-fields in thin superconducting tapes: Implications for the thickness effect in coated conductors. Applied Physics Letters, 2010, 96, .	1.5	41
23	Magnetic levitation of superconducting bars. Journal of Applied Physics, 2006, 99, 113904.	1.1	40
24	A quasistatic magnetic cloak. New Journal of Physics, 2013, 15, 053019.	1.2	39
25	Magnetic levitation of superconductors in the critical state. Physical Review B, 1998, 58, 963-970.	1.1	38
26	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
27	Controlling vortex chirality and polarity by geometry in magnetic nanodots. Applied Physics Letters, 2014, 104, 012407.	1.5	36
28	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
29	Accelerating, guiding, and compressing skyrmions by defect rails. Nanoscale, 2019, 11, 12589-12594.	2.8	33
30	Transverse demagnetizing factors of long rectangular bars. II. Numerical calculations for arbitrary susceptibility. Journal of Applied Physics, 2002, 91, 5260-5267.	1.1	32
31	Magnetic properties of high-Tcsuperconducting grains. Physical Review B, 1992, 45, 10793-10796.	1.1	26
32	Demagnetizing factors for completely shielded rectangular prisms. Journal of Applied Physics, 2004, 96, 5365-5369.	1.1	26
33	Tunable High-Field Magnetization in Strongly Exchange-Coupled Freestanding Co/CoO Core/Shell Coaxial Nanowires. ACS Applied Materials & Interfaces, 2016, 8, 22477-22483.	4.0	26
34	Theoretical Hints for Optimizing Force and Stability in Actual Maglev Devices. IEEE Transactions on Applied Superconductivity, 2009, 19, 2070-2073.	1.1	23
35	Tailoring Staircase-like Hysteresis Loops in Electrodeposited Trisegmented Magnetic Nanowires: a Strategy toward Minimization of Interwire Interactions. ACS Applied Materials & Interfaces, 2016, 8, 4109-4117.	4.0	23
36	Size-independent residual magnetic moments of colloidal Fe3O4-polystyrene nanospheres detected by ac susceptibility measurements. Journal of Applied Physics, 2008, 104, 093902.	1.1	22

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37	Two-dimensional arrays of superconducting strips as dc magnetic metamaterials. Physical Review B, 2012, 85, .	1.1	22
38	Magnetic Illusion: Transforming a Magnetic Object into Another Object by Negative Permeability. Physical Review Applied, 2018, 9, .	1.5	21
39	Magnetic levitation of thin superconducting disks. Physica C: Superconductivity and Its Applications, 1997, 275, 322-326.	0.6	18
40	Critical-current density analysis of force and stability in maglev systems. Journal of Applied Physics, 2009, 105, .	1.1	18
41	Towards an Optimized Magnet-Superconductor Configuration in Actual Maglev Devices. IEEE Transactions on Applied Superconductivity, 2011, 21, 1469-1472.	1.1	18
42	Particle size determination from magnetization curves in reduced graphene oxide decorated with monodispersed superparamagnetic iron oxide nanoparticles. Journal of Colloid and Interface Science, 2020, 566, 107-119.	5.0	18
43	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
44	Influence of magnetic substrate in the transport critical current of superconducting tapes. Applied Physics Letters, 2010, 97, .	1.5	17
45	Quasistatic Metamaterials: Magnetic Coupling Enhancement by Effective Space Cancellation. Advanced Materials, 2016, 28, 4898-4903.	11.1	17
46	Stiffness and energy losses in cylindrically symmetric superconductor levitating systems. Superconductor Science and Technology, 2002, 15, 1445-1453.	1.8	16
47	Invisible magnetic sensors. Applied Physics Letters, 2018, 112, .	1.5	16
48	Interaction of isolated skyrmions with point and linear defects. Journal of Magnetism and Magnetic Materials, 2018, 465, 709-715.	1.0	16
49	Analytical modeling of the interaction between skyrmions and extended defects. Physical Review B, 2019, 100, .	1.1	16
50	Imprinting skyrmions in thin films by ferromagnetic and superconducting templates. Applied Physics Letters, 2015, 107, .	1.5	14
51	Demagnetizing Factors for a Hollow Sphere. IEEE Magnetics Letters, 2016, 7, 1-4.	0.6	14
52	Shaping magnetic fields with soft ferromagnets: Application to levitation of superconductors. Journal of Applied Physics, 2012, 111, 013921.	1.1	13
53	Magnetic and transport currents in thin film superconductors of arbitrary shape within the London approximation. Journal of Applied Physics, 2013, 113, .	1.1	12
54	Encoding Magnetic States in Monopoleâ€Like Configurations Using Superconducting Dots. Advanced Science, 2016, 3, 1600207.	5.6	12

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55	Negative permeability in magnetostatics and its experimental demonstration. Physical Review B, 2017, 96, .	1.1	12
56	Tunability of the critical-current density in superconductor-ferromagnet hybrids. Applied Physics Letters, 2011, 98, 202506.	1.5	10
57	Depairing Current at High Magnetic Fields in Vortex-Free High-Temperature Superconducting Nanowires. Nano Letters, 2019, 19, 4174-4179.	4.5	10
58	Enhancing the sensitivity of magnetic sensors by 3D metamaterial shells. Scientific Reports, 2017, 7, 44762.	1.6	9
59	Comparison between transport and magnetically induced critical-current density in high-Tc superconductors. Physica C: Superconductivity and Its Applications, 1994, 225, 136-142.	0.6	7
60	Optimization of a superconducting linear levitation system using a soft ferromagnet. Physica C: Superconductivity and Its Applications, 2013, 487, 11-15.	0.6	6
61	Levitation of superconducting microrings for quantum magnetomechanics. Physical Review B, 2021, 103, .	1.1	6
62	Influence of superconductor properties on magnetic levitation force. Physica C: Superconductivity and Its Applications, 1997, 282-287, 2653-2654.	0.6	5
63	Transport critical-current density of superconducting films with hysteretic ferromagnetic dots. AIP Advances, 2012, 2, 022166.	0.6	5
64	Simultaneous magnetic and transport currents in thin film superconductors within the critical-state approximation. Superconductor Science and Technology, 2015, 28, 014003.	1.8	3
65	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
66	Critical-current degradation by surface damage in high-temperature superconductors. Physica C: Superconductivity and Its Applications, 1992, 193, 437-440.	0.6	1
67	Shaping magnetic fields with zero-magnetic-permeability media. Journal of Applied Physics, 2021, 130, .	1.1	1
68	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