Roberto D Zysler

List of Publications by Year
in descending order

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120	4,481	76196	118652
papers	citations	40 h-index	62 g-index

123	123	123	5067
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-temperature weak ferromagnetism in a low-density free-electron gas. Nature, 1999, 397, 412-414.	13.7	417
2	Surface anisotropy effects in NiO nanoparticles. Physical Review B, 2005, 72, .	1.1	179
3	Size dependence of the spin-flop transition in hematite nanoparticles. Physical Review B, 2003, 68, .	1.1	156
4	Surface spin-glass freezing in interacting coreâ€“shell NiO nanoparticles. Nanotechnology, 2008, 19, 185702.	1.3	154
5	Investigation of magnetic properties of interacting Fe2O3 nanoparticles. Journal of Magnetism and Magnetic Materials, 2001, 224, 5-11.	1.0	138
6	Large surface magnetic contribution in amorphous ferromagnetic nanoparticles. Physical Review B, 2002, 65, .	1.1	133
7	Size-Dependent Passivation Shell and Magnetic Properties in Antiferromagnetic/Ferrimagnetic Core/Shell MnO Nanoparticles. Journal of the American Chemical Society, 2010, 132, 9398-9407.	6.6	106
8	Size and anisotropy determination by ferromagnetic resonance in dispersed magnetic nanoparticle systems. Journal of Magnetism and Magnetic Materials, 2003, 262, 235-241.	1.0	95
9	Surface and magnetic interaction effects inMn3O4nanoparticles. Physical Review B, 2004, 70, .	1.1	77
10	Agâ”Fe₃O₄ Dimer Colloidal Nanoparticles: Synthesis and Enhancement of Magnetic Properties. Journal of Physical Chemistry C, 2010, 114, 10148-10152.	1.5	77
11	Bimagnetic CoO Core/CoFe₂O₄ Shell Nanoparticles: Synthesis and Magnetic Properties. Chemistry of Materials, 2012, 24, 512-516.	3.2	77
12	In vitro and in vivo experiments with iron oxide nanoparticles functionalized with DEXTRAN or polyethylene glycol for medical applications: Magnetic targeting. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 860-868.	1.6	77
13	Origin of the large dispersion of magnetic properties in nanostructured oxides: Fe_xO/Fe₃O₄nanoparticles as a case study. Nanoscale, 2015, 7, 3002-3015.	2.8	76
14	Evidence of large surface effects in Coâ€“Niâ€“B amorphous nanoparticles. Journal of Magnetism and Magnetic Materials, 2003, 266, 233-242.	1.0	70
15	Size dependence of the magnetic properties of antiferromagnetic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Cr</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:m Physical Review B, 2008, 78, .	1.1	70
16	Heat generation in agglomerated ferrite nanoparticles in an alternating magnetic field. Journal Physics D: Applied Physics, 2013, 46, 045002.	1.3	68
17	Magnetic properties of ultrafine Î±-Fe2O3 antiferromagnetic particles. Journal of Magnetism and Magnetic Materials, 1994, 133, 71-73.	1.0	67
18	Magnetic interaction evidence in Î±-Fe2O3 nanoparticles by magnetization and MÃ¶ssbauer measurements. Journal of Magnetism and Magnetic Materials, 1999, 204, 29-35.	1.0	64

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19	Effect of interparticle interactions in (Fe0.26Ni0.74)50B50magnetic nanoparticles. Journal of Magnetism and Magnetic Materials, 2000, 221, 37-44.	1.0	63
20	Preparation of iron oxide nanoparticles stabilized with biomolecules: Experimental and mechanistic issues. Acta Biomaterialia, 2013, 9, 4754-4762.	4.1	61
21	Tailoring the size in colloidal iron oxide magnetic nanoparticles. Nanotechnology, 2005, 16, 1474-1476.	1.3	59
22	Surface effects in $mathsf{alpha}$-Fe$mathsf{_{2}}$O$mathsf{_{3}}$ nanoparticles. European Physical Journal B, 2004, 41, 171-175.	0.6	57
23	In Silico before In Vivo: how to Predict the Heating Efficiency of Magnetic Nanoparticles within the Intracellular Space. Scientific Reports, 2016, 6, 38733.	1.6	57
24	Magnetic interactions in hematite small particles obtained by ball milling. Journal of Magnetism and Magnetic Materials, 1999, 205, 234-240.	1.0	56
25	Size effects in bimagnetic CoO/CoFe2O4core/shell nanoparticles. Nanotechnology, 2014, 25, 355704.	1.3	56
26	Superparamagnetic iron-oxide nanoparticles mPEG350â€“ and mPEG2000-coated: cell uptake and biocompatibility evaluation. Nanomedicine: Nanotechnology, Biology, and Medicine, 2016, 12, 909-919.	1.7	50
27	Structure and magnetic properties of thermally treated nanohematite. Journal of Magnetism and Magnetic Materials, 2001, 224, 39-48.	1.0	49
28	Controlling the dominant magnetic relaxation mechanisms for magnetic hyperthermia in bimagnetic coreâ€“shell nanoparticles. Nanoscale, 2019, 11, 3164-3172.	2.8	49
29	Effects of thermal treatments on structural and magnetic properties of acicular Î±-Fe2O3 nanoparticles. Scripta Materialia, 1999, 11, 797-803.	0.5	48
30	Effect of ion doping on CuO magnetism. Journal of Applied Physics, 2000, 87, 4870-4872.	1.1	47
31	Depression of the weak-ferromagnetism of CuO2 planes in Gd2CuO4 through Ce and Th doping. Physica C: Superconductivity and Its Applications, 1989, 160, 341-346.	0.6	44
32	Surface anisotropy and surface-core interaction inCoâ^'Niâ^'BandFeâ^'Niâ^'Bdispersed amorphous nanoparticles. Physical Review B, 2005, 71, .	1.1	44
33	Magnetic and structural properties of pure hematite submitted to mechanical milling in air and ethanol. Physica B: Condensed Matter, 2007, 389, 145-149.	1.3	44
34	Tuning the coercivity and exchange bias by controlling the interface coupling in bimagnetic core/shell nanoparticles. Nanoscale, 2017, 9, 10240-10247.	2.8	44
35	Crystal-field interaction in theGdxEu1â^'xBa2Cu3O7â^'Î´superconductors. Physical Review B, 1988, 38, 257-261.	1.1	43
36	Origin of magnetic anisotropy in ZnO/CoFe2O4 and CoO/CoFe2O4 core/shell nanoparticle systems. Applied Physics Letters, 2012, 101, 252405.	1.5	43

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37	Simple and novel strategies to achieve shape and size control of magnetite nanoparticles intended for biomedical applications. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 504, 320-330.	2.3	42
38	Annealing effects on magnetic properties of acicular hematite nanoparticles. Physica B: Condensed Matter, 2002, 320, 206-209.	1.3	41
39	Surface effects in the magnetic properties of crystalline 3 nm ferrite nanoparticles chemically synthesized. Journal of Applied Physics, 2010, 108, 103919.	1.1	41
40	Surface effect in the magnetic order of antiferromagnetic nanoparticles. Physica B: Condensed Matter, 2006, 384, 277-281.	1.3	40
41	Magnetic Interactions and Energy Barrier Enhancement in Core/Shell Bimagnetic Nanoparticles. Journal of Physical Chemistry C, 2015, 119, 15755-15762.	1.5	40
42	Bifunctional CoFe₂O₄/ZnO Core/Shell Nanoparticles for Magnetic Fluid Hyperthermia with Controlled Optical Response. Journal of Physical Chemistry C, 2018, 122, 3047-3057.	1.5	38
43	Effective anisotropy field variation of magnetite nanoparticles with size reduction. European Physical Journal B, 2008, 64, 211-218.	0.6	37
44	Resolving Material-Specific Structures within Fe₃O₄|Î³-Mn₂O₃ Core|Shell Nanoparticles Using Anomalous Small-Angle X-ray Scattering. ACS Nano, 2013, 7, 921-931.	7.3	36
45	Relaxation time diagram for identifying heat generation mechanisms in magnetic fluid hyperthermia. Journal of Nanoparticle Research, 2014, 16, 1.	0.8	36
46	Improving degradation of real wastewaters with self-heating magnetic nanocatalysts. Journal of Cleaner Production, 2021, 308, 127385.	4.6	36
47	Novel and facile synthesis of magnetic composites by a modified co-precipitation method. Materials Chemistry and Physics, 2011, 130, 624-634.	2.0	35
48	Evolution of the magnetic anisotropy with particle size in antiferromagnetic Cr2O3 nanoparticles. Journal of Applied Physics, 2010, 108, .	1.1	32
49	Evidence for Quantization of Mechanical Rotation of Magnetic Nanoparticles. Physical Review Letters, 2010, 104, 027202.	2.9	31
50	Effects of biological buffer solutions on the peroxidase-like catalytic activity of Fe₃O₄ nanoparticles. Nanoscale, 2019, 11, 18393-18406.	2.8	31
51	Size and surface effects in the magnetic order of CoFe2O4 nanoparticles. Journal of Magnetism and Magnetic Materials, 2015, 377, 44-51.	1.0	29
52	Internal magnetic field inLa2âˆ'xSrxCuO4:Gd observed by electron paramagnetic resonance. Physical Review B, 1993, 47, 8156-8166.	1.1	28
53	Nanoscale magnetic structure and properties of solution-derived self-assembled La0.7Sr0.3MnO3 islands. Journal of Applied Physics, 2012, 111, 024307.	1.1	28
54	Ni- and Zn-doped hematite obtained by combustion of mixed metal oxinates. Physica B: Condensed Matter, 2004, 354, 27-34.	1.3	27

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55	Free-Radical Formation by the Peroxidase-Like Catalytic Activity of MFe₂O₄ (M) Tj ETQq1 1 0.784314 rgBT	1.5	27
56	DifferentGd3+sites associated with magnetic ordering and structural distortions inEu2CuO4:Gd3+observed via electron-paramagnetic-resonance measurements. Physical Review B, 1991, 44, 9467-9479.	1.1	26
57	Effect of thermal fluctuations in FMR experiments in uniaxial magnetic nanoparticles: Blocked vs. superparamagnetic regimes. Journal of Magnetism and Magnetic Materials, 2013, 326, 138-146.	1.0	26
58	Superparamagnetism in AFM Cr2O3 nanoparticles. Journal of Alloys and Compounds, 2010, 495, 520-523.	2.8	25
59	Magnetization and electron paramagnetic resonance of Co clusters embedded in Ag nanoparticles. Journal of Physics Condensed Matter, 1999, 11, 5643-5654.	0.7	24
60	Exchange bias of Co nanoparticles embedded in Cr2O3 and Al2O3 matrices. Journal of Applied Physics, 2009, 106, .	1.1	24
61	Magnetization enhancement at low temperature due to surface ordering in Feâ€“Niâ€“B amorphous nanoparticles. Physica B: Condensed Matter, 2002, 320, 203-205.	1.3	23
62	Chemical synthesis and characterization of amorphous Fe-Ni-B magnetic nanoparticles. Journal of Materials Science, 2001, 36, 2291-2294.	1.7	22
63	Role of Anisotropy, Frequency, and Interactions in Magnetic Hyperthermia Applications: Noninteracting Nanoparticles and Linear Chain Arrangements. Physical Review Applied, 2021, 15, .	1.5	22
64	Changes in the structural and magnetic properties of Ni?substituted hematite prepared from metal oxinates. Physics and Chemistry of Minerals, 2004, 31, 625-632.	0.3	21
65	A new model to describe the crossover from superparamagnetic to blocked magnetic nanoparticles. Journal of Magnetism and Magnetic Materials, 2008, 320, e312-e315.	1.0	20
66	Exchange-coupling in thermal annealed bimagnetic core/shell nanoparticles. Journal of Alloys and Compounds, 2015, 633, 333-337.	2.8	20
67	Exchange bias and surface effects in bimagnetic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mrow><mml:mi>CoO</mml:mi><mml:mtext>â^’</mml:mtext><mml:mi mathvariant="normal">O</mml:mi><mml:mn>4</mml:mn></mml:m. Physical Review B, 2016, 94, .	1.1	20
68	Magnetic nanoparticles for drug targeting: from design to insights into systemic toxicity. Preclinical evaluation of hematological, vascular and neurobehavioral toxicology. Biomaterials Science, 2017, 5, 772-783.	2.6	20
69	MÃ¶ssbauer-effect, magnetic, and neutron-diffraction study ofNaFeP2O7. Physical Review B, 1990, 42, 25-32.	1.1	19
70	A New Quantitative Method to Determine the Uptake of SPIONs in Animal Tissue and Its Application to Determine the Quantity of Nanoparticles in the Liver and Lung of Balb-<I>c</I> Mice Exposed to the SPIONs. Journal of Biomedical Nanotechnology, 2013, 9, 142-145.	0.5	19
71	Low-Dimensional Assemblies of Magnetic MnFe₂O₄ Nanoparticles and Direct In Vitro Measurements of Enhanced Heating Driven by Dipolar Interactions: Implications for Magnetic Hyperthermia. ACS Applied Nano Materials, 2020, 3, 8719-8731.	2.4	19
72	Metropolis algorithm for simulating hysteresis in ferromagnetic nanoparticles. Physica B: Condensed Matter, 2006, 372, 345-349.	1.3	18

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73	Influence of chitosan coating on magnetic nanoparticles in endothelial cells and acute tissue biodistribution. Journal of Biomaterials Science, Polymer Edition, 2016, 27, 1069-1085.	1.9	18
74	Modeling the Magnetic-Hyperthermia Response of Linear Chains of Nanoparticles with Low Anisotropy: A Key to Improving Specific Power Absorption. Physical Review Applied, 2020, 14, .	1.5	17
75	Magnetic relaxation measurements ofÎ±â˜Fe2O3antiferromagnetic particles below 1 K. Physical Review B, 2002, 65, .	1.1	16
76	Interparticle Interactions Effects on the Magnetic Order in Surface of Fe₃O₄ Nanoparticles. Journal of Nanoscience and Nanotechnology, 2008, 8, 5913-5920.	0.9	16
77	Magnetic hardness features and loop shift in nanostructured CuO. Journal of Applied Physics, 2012, 112, .	1.1	16
78	Enhanced defect-mediated ferromagnetism in Cu2O by Co doping. Journal of Magnetism and Magnetic Materials, 2017, 441, 374-386.	1.0	16
79	Effects of Zn Substitution in the Magnetic and Morphological Properties of Fe-Oxide-Based Coreâ€“Shell Nanoparticles Produced in a Single Chemical Synthesis. Journal of Physical Chemistry C, 2019, 123, 1444-1453.	1.5	16
80	Oxygen environment of Fe ions in YBa2Cu3O7+Î´: A MÃ¶ssbauer study. Solid State Communications, 1988, 66, 381-385.	0.9	15
81	Size dependence on the ordering process in colloidal FePt nanoparticles. Journal of Applied Physics, 2007, 101, 023903.	1.1	15
82	Ferromagnetic resonance in amorphous nanoparticles. Physica B: Condensed Matter, 2004, 354, 286-289.	1.3	14
83	Single-step chemical synthesis of ferrite hollow nanospheres. Nanotechnology, 2009, 20, 045606.	1.3	14
84	Functional nanocomposites based on the infusion or in situ generation of nanoparticles into amphiphilic epoxy gels. Journal of Materials Chemistry, 2010, 20, 10135.	6.7	14
85	Crystal-field effects in the electron-spin resonance ofGd3+andEr3+inPr2CuO4. Physical Review B, 1991, 44, 826-829.	1.1	13
86	Thermal stabilization of magnetic nanoparticles embedded in a ferromagnetic matrix. Nanotechnology, 2007, 18, 115714.	1.3	13
87	Tunnel Magnetoresistance in Self-Assemblies of Exchange-Coupled Core/Shell Nanoparticles. Physical Review Applied, 2019, 11, .	1.5	13
88	Adjusting the NÃ©el relaxation time of Fe₃O₄/Zn _x Co_{1â˜x}Fe₂O₄ core/shell nanoparticles for optimal heat generation in magnetic hyperthermia. Nanotechnology, 2021, 32, 065703.	1.3	13
89	Unravelling the Elusive Antiferromagnetic Order in Wurtzite and Zinc Blende CoO Polymorph Nanoparticles. Small, 2018, 14, e1703963.	5.2	12
90	Magnetic properties of the CanFe2Tinâ˜2O3nâ˜1 perovskite related series: An EPR study. Journal of Solid State Chemistry, 1992, 98, 25-32.	1.4	11

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91	Effect of Sn doping on the magnetic and transport properties of LaMnO3+Î´. Physica B: Condensed Matter, 2002, 320, 100-103.	1.3	11
92	Surface and Interparticle Effects in Amorphous Magnetic Nanoparticles. Nanostructure Science and Technology, 2005, , 239-261.	0.1	11
93	Zinc removal by Chlorella sp. biomass and harvesting with low cost magnetic particles. Algal Research, 2018, 33, 266-276.	2.4	11
94	Annealing effects on the magnetization of Coâ€“Niâ€“B amorphous nanoparticles. Physica B: Condensed Matter, 2002, 320, 178-180.	1.3	10
95	Surface and frustration evidence in Coâ€“Niâ€“B nanoparticles by FMR measurements. Journal of Magnetism and Magnetic Materials, 2005, 294, e87-e90.	1.0	10
96	Effect of oxygen non-stoichiometry on the structural and magnetotransport properties of LaMn0.85Cr0.15O3+Î´. Journal of Solid State Chemistry, 2008, 181, 1824-1832.	1.4	10
97	Monte Carlo simulation of Feâ€“Co amorphous nanoparticles magnetization. Physica B: Condensed Matter, 2008, 403, 390-393.	1.3	10
98	dc magnetization measurements in Eu2CuO4:Gd3+. Journal of Applied Physics, 1993, 73, 5680-5682.	1.1	9
99	Field-induced spin reorientation inEu2CuO4:Gd studied by magnetic resonance. Physical Review B, 1993, 48, 16775-16784.	1.1	9
100	Annealing Effects on 5 nm Iron Oxide Nanoparticles. Journal of Nanoscience and Nanotechnology, 2007, 7, 3313-3317.	0.9	9
101	Comment on â€˜Hausmannite Mn3O4nanorods: synthesis, characterization and magnetic propertiesâ€™. Nanotechnology, 2007, 18, 158001.	1.3	9
102	Dynamic study of the internal magnetic order of Mn3O4 nanoparticles. Journal of Nanoparticle Research, 2011, 13, 5653-5659.	0.8	8
103	Exchange bias in ferrite hollow nanoparticles originated by complex internal magnetic structure. Materials Research Express, 2015, 2, 105001.	0.8	8
104	Magnetic Characterization of Co Doped Cu$_{2}$O Layers. IEEE Transactions on Magnetics, 2011, 47, 2640-2642.	1.2	7
105	Magnetic Hyperthermia Experiments with Magnetic Nanoparticles in Clarified Butter Oil and Paraffin: A Thermodynamic Analysis. Journal of Physical Chemistry C, 2020, 124, 27709-27721.	1.5	7
106	Anomalous Magnetization Enhancement and Frustration in the Internal Magnetic Order on (Fe0.69Co0.31)B0.4 Nanoparticles. Applied Sciences (Switzerland), 2012, 2, 315-326.	1.3	6
107	A physiologically based pharmacokinetic model to predict the superparamagnetic iron oxide nanoparticles (SPIONs) accumulation in vivo. European Journal of Nanomedicine, 2017, 9, .	0.6	6
108	Î²-cyclodextrin coating: improving biocompatibility of magnetic nanocomposites for biomedical applications. Journal of Materials Science: Materials in Medicine, 2020, 31, 22.	1.7	6

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109	Dependence of the composition, morphology and magnetic properties with the water and air exposure during the Fe1-yO/Fe3O4 coreâ€“shell nanoparticles synthesis. Journal of Nanoparticle Research, 2021, 23, 1.	0.8	6
110	Next generation of nanozymes: A perspective of the challenges to match biological performance. Journal of Applied Physics, 2021, 130, .	1.1	5
111	Experimental evidence of magnetic anisotropy induction by superconductivity in superlattices. Applied Physics Letters, 2008, 92, 152508.	1.5	3
112	Highly crystalline LiCuXFe1âˆ’XPO4nanoparticles synthesized by high temperature thermal decomposition: a morphological and electrical transport study. Journal Physics D: Applied Physics, 2016, 49, 335302.	1.3	2
113	Reply to â€œComment on â€˜Free-Radical Formation by the Peroxidase-Like Catalytic Activity of MFe₂O₄ (M = Fe, Ni, and Mn) Nanoparticlesâ€™â€• Journal of Physical Chemistry C, 2019, 123, 28511-28512.	1.5	2
114	Magnetic order in amorphous (Fe0.25Nd0.75)0.6B0.4 nanoparticles. Journal of Applied Physics, 2009, 105, 113918.	1.1	1
115	Influence of substrate on the magnetic properties of Ni and permalloy sub-micrometric patterned stripes. Journal Physics D: Applied Physics, 2010, 43, 025001.	1.3	1
116	Interaction between natural magnetite sub-micrometric particles and the Fasciola hepatica egg: The role of the exposed surface area. Experimental Parasitology, 2019, 199, 59-66.	0.5	1
117	Comment on â€œGeneralized Stoner-Wohlfarth Model and the Non-Langevin Magnetism of Single-Domain Particlesâ€• by M.A. Chuev. JETP Letters, 2008, 87, 703-706.	0.4	0
118	TejadaetÂal.Reply:. Physical Review Letters, 2010, 105, .	2.9	0
119	Reactive Oxygen Species in Emulated Martian Conditions and Their Effect on the Viability of the Unicellular Alga Scenedesmus dimorphus. Astrobiology, 2021, 21, 692-705.	1.5	0
120	EPR and Magnetic Properties of the Ca_nFe₂Mn_{n-2}O_{3n-1} Perovskite Related Series. European Physical Journal Special Topics, 1997, 07, C1-355-C1-356.	0.2	0