Sabino Veintemillas-Verdaguer

List of Publications by Year
in descending order

113 papers	7,444 citations	76326 40 h-index	53230 85 g-index
118 all docs	118 docs citations	118 times ranked	9716 citing authors

#	ARTICLE	IF	CITATIONS
1	The preparation of magnetic nanoparticles for applications in biomedicine. Journal Physics D: Applied Physics, 2003, 36, R182-R197.	2.8	1,673
2	Surface and Internal Spin Canting in Î³-Fe2O3 Nanoparticles. Chemistry of Materials, 1999, 11, 3058-3064.	6.7	606
3	Progress in the preparation of magnetic nanoparticles for applications in biomedicine. Journal Physics D: Applied Physics, 2009, 42, 224002.	2.8	342
4	The influence of surface functionalization on the enhanced internalization of magnetic nanoparticles in cancer cells. Nanotechnology, 2009, 20, 115103.	2.6	299
5	Advances in magnetic nanoparticles for biotechnology applications. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 28-34.	2.3	233
6	Design strategies for shape-controlled magnetic iron oxide nanoparticles. Advanced Drug Delivery Reviews, 2019, 138, 68-104.	13.7	217
7	The Iron Oxides Strike Back: From Biomedical Applications to Energy Storage Devices and Photoelectrochemical Water Splitting. Advanced Materials, 2011, 23, 5243-5249.	21.0	211
8	Surface characterisation of dextran-coated iron oxide nanoparticles prepared by laser pyrolysis and coprecipitation. Journal of Magnetism and Magnetic Materials, 2005, 293, 20-27.	2.3	162
9	Effect of Nanoparticle and Aggregate Size on the Relaxometric Properties of MR Contrast Agents Based on High Quality Magnetite Nanoparticles. Journal of Physical Chemistry B, 2009, 113, 7033-7039.	2.6	131
10	Continuous production of Î³-Fe2O3 ultrafine powders by laser pyrolysis. Materials Letters, 1998, 35, 227-231.	2.6	127
11	Fe-based nanoparticulate metallic alloys as contrast agents for magnetic resonance imaging. Biomaterials, 2005, 26, 5695-5703.	11.4	115
12	Contrast agents for MRI based on iron oxide nanoparticles prepared by laser pyrolysis. Journal of Magnetism and Magnetic Materials, 2003, 266, 102-109.	2.3	105
13	Biodistribution and pharmacokinetics of uniform magnetite nanoparticles chemically modified with polyethylene glycol. Nanoscale, 2013, 5, 11400.	5.6	97
14	Synthesis methods to prepare single- and multi-core iron oxide nanoparticles for biomedical applications. Dalton Transactions, 2015, 44, 2943-2952.	3.3	96
15	Calorimetric Study of Maghemite Nanoparticles Synthesized by Laser-Induced Pyrolysis. Chemistry of Materials, 2008, 20, 591-598.	6.7	94
16	Comparative study of ferrofluids based on dextran-coated iron oxide and metal nanoparticles for contrast agents in magnetic resonance imaging. Nanotechnology, 2004, 15, S154-S159.	2.6	88
17	Ultrasmall Iron Oxide Nanoparticles for Biomedical Applications: Improving the Colloidal and Magnetic Properties. Langmuir, 2012, 28, 178-185.	3.5	88
18	Synthesis of Pyrimidines and Triazines in Ice: Implications for the Prebiotic Chemistry of Nucleobases. Chemistry - A European Journal, 2009, 15, 4411-4418.	3.3	83

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19	Magnetic Capsules for NMR Imaging: Effect of Magnetic Nanoparticles Spatial Distribution and Aggregation. Journal of Physical Chemistry C, 2011, 115, 6257-6264.	3.1	83
20	Homochirality as a Consequence of Thermodynamic Equilibrium?. Chemistry - A European Journal, 2006, 12, 7776-7781.	3.3	82
21	Formation Mechanism of Maghemite Nanoflowers Synthesized by a Polyol-Mediated Process. ACS Omega, 2017, 2, 7172-7184.	3.5	82
22	Short-chain PEG molecules strongly bound to magnetic nanoparticle for MRI long circulating agents. Acta Biomaterialia, 2013, 9, 6421-6430.	8.3	79
23	Whither Magnetic Hyperthermia? A Tentative Roadmap. Materials, 2021, 14, 706.	2.9	76
24	Colloidal Flowerâ€Shaped Iron Oxide Nanoparticles: Synthesis Strategies and Coatings. Particle and Particle Systems Characterization, 2017, 34, 1700094.	2.3	71
25	chapter 5 Synthesis, Properties and Biomedical Applications of Magnetic Nanoparticles. Handbook of Magnetic Materials, 2006, 16, 403-482.	0.6	67
26	Effects of phase transfer ligands on monodisperse iron oxide magnetic nanoparticles. Journal of Colloid and Interface Science, 2015, 437, 147-155.	9.4	66
27	Thermal history dependence of the crystal structure of Co fine particles. Physical Review B, 2005, 71, .	3.2	65
28	Spin frustration in maghemite nanoparticles. Solid State Communications, 2001, 118, 437-440.	1.9	64
29	Liver and brain imaging through dimercaptosuccinic acid-coated iron oxide nanoparticles. Nanomedicine, 2010, 5, 397-408.	3.3	64
30	Coreâ€“Shell Ironâ€“Iron Oxide Nanoparticles Synthesized by Laser-Induced Pyrolysis. Small, 2006, 2, 1476-1483.	10.0	62
31	PEG-copolymer-coated iron oxide nanoparticles that avoid the reticuloendothelial system and act as kidney MRI contrast agents. Nanoscale, 2018, 10, 14153-14164.	5.6	59
32	Colloidal dispersions of maghemite nanoparticles produced by laser pyrolysis with application as NMR contrast agents. Journal Physics D: Applied Physics, 2004, 37, 2054-2059.	2.8	54
33	Relationship between physico-chemical properties of magnetic fluids and their heating capacity. International Journal of Hyperthermia, 2013, 29, 768-776.	2.5	53
34	Large scale production of biocompatible magnetite nanocrystals with high saturation magnetization values through green aqueous synthesis. Journal of Materials Chemistry B, 2013, 1, 5995.	5.8	51
35	Effect of the process conditions on the structural and magnetic properties of Î³-Fe2O3 nanoparticles produced by laser pyrolysis. Scripta Materialia, 2002, 47, 589-593.	5.2	49
36	Metastability in Supersaturated Solution and Transition towards Chirality in the Crystallization of NaClO‹sub›3‹/sub›. Angewandte Chemie - International Edition, 2011, 50, 2359-2363.	13.8	49

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37	Particle Interactions in Liquid Magnetic Colloids by Zero Field Cooled Measurements: Effects on Heating Efficiency. Journal of Physical Chemistry C, 2015, 119, 11022-11030.	3.1	49
38	Chemical aspects of the effect of impurities in crystal growth. Progress in Crystal Growth and Characterization of Materials, 1996, 32, 75-109.	4.0	47
39	Spontaneous Transition toward Chirality in the NaClO₃ Crystallization in Boiling Solutions. Crystal Growth and Design, 2009, 9, 4802-4806.	3.0	43
40	Prebiotic Microreactors: A Synthesis of Purines and Dihydroxy Compounds in Aqueous Aerosol. Origins of Life and Evolution of Biospheres, 2007, 37, 123-142.	1.9	42
41	Degradation of magnetic nanoparticles mimicking lysosomal conditions followed by AC susceptibility. Biomedizinische Technik, 2015, 60, 417-25.	0.8	41
42	Ac magnetic susceptibility study of in vivo nanoparticle biodistribution. Journal Physics D: Applied Physics, 2011, 44, 255002.	2.8	40
43	Bulk metastable cobalt in fcc crystal structure. Journal of Alloys and Compounds, 2013, 580, 187-190.	5.5	39
44	Cytokine adsorption/release on uniform magnetic nanoparticles for localized drug delivery. Journal of Controlled Release, 2008, 130, 168-174.	9.9	38
45	SAXS analysis of single- and multi-core iron oxide magnetic nanoparticles. Journal of Applied Crystallography, 2017, 50, 481-488.	4.5	36
46	The Viedma Deracemization of Racemic Conglomerate Mixtures as a Paradigm of Spontaneous Mirror Symmetry Breaking in Aggregation and Polymerization. ChemPhysChem, 2013, 14, 3982-3993.	2.1	35
47	Cu-Doped Extremely Small Iron Oxide Nanoparticles with Large Longitudinal Relaxivity: One-Pot Synthesis and in Vivo Targeted Molecular Imaging. ACS Omega, 2019, 4, 2719-2727.	3.5	35
48	Selective Magnetic Nanoheating: Combining Iron Oxide Nanoparticles for Multi-Hot-Spot Induction and Sequential Regulation. Nano Letters, 2021, 21, 7213-7220.	9.1	34
49	Comparative analysis of the 1H NMR relaxation enhancement produced by iron oxide and core-shell ironâ€“iron oxide nanoparticles. Magnetic Resonance Imaging, 2007, 25, 1437-1441.	1.8	32
50	Continuous production of inorganic magnetic nanocomposites for biomedical applications by laser pyrolysis. Journal of Magnetism and Magnetic Materials, 2007, 311, 120-124.	2.3	32
51	Effect of the oxidation conditions on the maghemites produced by laser pyrolysis. Applied Organometallic Chemistry, 2001, 15, 365-372.	3.5	31
52	Continuous production of water dispersible carbonâ€“iron nanocomposites by laser pyrolysis: Application as MRI contrasts. Journal of Colloid and Interface Science, 2007, 313, 511-518.	9.4	31
53	The Effects of Ferrous and other Ions on the Abiotic Formation of Biomolecules using Aqueous Aerosols and Spark Discharges. Origins of Life and Evolution of Biospheres, 2007, 37, 507-521.	1.9	31
54	Growth habit and surface morphology of L-arginine phosphate monohydrate single crystals. Journal of Crystal Growth, 1995, 155, 135-143.	1.5	30

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55	CH4/N2/H2-spark hydrophobic tholins: A systematic approach to the characterisation of tholins. Part II. Icarus, 2009, 204, 672-680.	2.5	30
56	The effect of stirring on sodium chlorate crystallization under symmetry breaking conditions. Journal of Crystal Growth, 2007, 303, 562-567.	1.5	29
57	Continuous production of magnetic iron oxide nanocrystals by oxidative precipitation. Chemical Engineering Journal, 2020, 393, 124593.	12.7	29
58	CH4/N2/H2 spark hydrophilic tholins: A systematic approach to the characterization of tholins. Icarus, 2008, 198, 232-241.	2.5	27
59	Thermal Wet Decomposition of Prussian Blue: Implications for Prebiotic Chemistry. Chemistry and Biodiversity, 2009, 6, 1309-1322.	2.1	27
60	Metastability in drowning-out crystallisation: precipitation of highly soluble sulphates. Journal of Crystal Growth, 2001, 222, 317-327.	1.5	26
61	Key Parameters on the Microwave Assisted Synthesis of Magnetic Nanoparticles for MRI Contrast Agents. Contrast Media and Molecular Imaging, 2017, 2017, 1-13.	0.8	26
62	Laser pyrolysis preparation of SiO2-coated magnetic nanoparticles for biomedical applications. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 272-275.	2.3	25
63	Core/Shell Magnetite/Bismuth Oxide Nanocrystals with Tunable Size, Colloidal, and Magnetic Properties. Chemistry of Materials, 2012, 24, 319-324.	6.7	25
64	Combined Influence of Reagent Concentrations and Agar Hydrogel Strength on the Formation of Biomimetic Hydrogelâ€“Calcite Composites. Crystal Growth and Design, 2018, 18, 1401-1414.	3.0	25
65	Surface microtopographic study of KDP crystals grown at the boiling point. Journal of Crystal Growth, 1986, 78, 144-154.	1.5	23
66	Contributions to the application of the transferability principle and the multipolar modeling of HÂatoms: electron-density study ofL-histidinium dihydrogen orthophosphate orthophosphoric acid. I. Acta Crystallographica Section A: Foundations and Advances, 2006, 62, 365-378.	0.3	23
67	Magnetic nanoparticles prepared by laser pyrolysis. IEEE Transactions on Magnetics, 2002, 38, 2616-2618.	2.1	22
68	Improving the reliability of the iron concentration quantification for iron oxide nanoparticle suspensions: a two-institutions study. Analytical and Bioanalytical Chemistry, 2019, 411, 1895-1903.	3.7	22
69	Total-reflection X-ray fluorescence: An alternative tool for the analysis of magnetic ferrofluids. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2008, 63, 1387-1394.	2.9	20
70	The endocytic penetration mechanism of iron oxide magnetic nanoparticles with positively charged cover: A morphological approach. International Journal of Molecular Medicine, 2010, 26, 533-9.	4.0	20
71	A thermodynamical approach to tetramethylsilane (TMS) pyrolysis; application to SiC coatings obtained by MOCVD. Journal of Crystal Growth, 1993, 128, 349-353.	1.5	19
72	Asymmetric Chiral Growth of Micron-Size<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>NaClO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>Crystals in Water Aerosols. Physical Review Letters, 2008, 100, 146102.	7.8	19

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73	Counterion and solvent effects on the size of magnetite nanocrystals obtained by oxidative precipitation. Journal of Materials Chemistry C, 2016, 4, 9482-9488.	5.5	19
74	Synthesis of Polycyclic Aromatic Hydrocarbons and Acetylene Polymers in Ice: A Prebiotic Scenario. Chemistry and Biodiversity, 2008, 5, 2729-2739.	2.1	17
75	Improving magnetic properties of ultrasmall magnetic nanoparticles by biocompatible coatings. Journal of Applied Physics, 2015, 117, 064311.	2.5	17
76	Bismuth labeling for the CT assessment of local administration of magnetic nanoparticles. Nanotechnology, 2015, 26, 135101.	2.6	17
77	Engineering Iron Oxide Nanocatalysts by a Microwave-Assisted Polyol Method for the Magnetically Induced Degradation of Organic Pollutants. Nanomaterials, 2021, 11, 1052.	4.1	17
78	On the formation of dislocation etch pits on L-arginine phosphate monohydrate single crystals. Journal of Crystal Growth, 1995, 154, 364-369.	1.5	16
79	Hydrothermal alteration of aragonitic biocarbonates: assessment of micro- and nanostructural dissolutionâ€“reprecipitation and constraints of diagenetic overprint from quantitative statistical grain-area analysis. Biogeosciences, 2018, 15, 7451-7484.	3.3	16
80	Unravelling an amine-regulated crystallization crossover to prove single/multicore effects on the biomedical and environmental catalytic activity of magnetic iron oxide colloids. Journal of Colloid and Interface Science, 2022, 608, 1585-1597.	9.4	16
81	Structural determination of Bi-doped magnetite multifunctional nanoparticles for contrast imaging. Physical Chemistry Chemical Physics, 2014, 16, 18301.	2.8	15
82	Conversion of biogenic aragonite into hydroxyapatite scaffolds in boiling solutions. CrystEngComm, 2017, 19, 110-116.	2.6	15
83	Synthesis of Feâ€“Si nanoparticles by cw CO2 laser assisted pyrolysis from gaseous precursors. Applied Surface Science, 2002, 186, 562-567.	6.1	14
84	Comments on a Possible Transition to Solidâ€Phase Homochirality. Chemistry - A European Journal, 2007, 13, 10303-10305.	3.3	14
85	Detailed magnetic monitoring of the enhanced magnetism of ferrihydrite along its progressive transformation into hematite. Journal of Geophysical Research: Solid Earth, 2016, 121, 4118-4129.	3.4	14
86	Crystal growth from boiling solutions. Progress in Crystal Growth and Characterization, 1988, 17, 1-40.	0.8	13
87	Some observations of growth hillocks and growth layers on potassium hydrogen tartrate crystals. Crystal Research and Technology, 1994, 29, 639-645.	1.3	11
88	Modeling of the laser pyrolysis process by means of the aerosol theory: Case of iron nanoparticles. Journal of Applied Physics, 2010, 107, 014906.	2.5	11
89	Magnetic nanocrystals for biomedical applications. Progress in Crystal Growth and Characterization of Materials, 2014, 60, 80-86.	4.0	11
90	Effect of the Sodium Polyacrylate on the Magnetite Nanoparticles Produced by Green Chemistry Routes: Applicability in Forward Osmosis. Nanomaterials, 2018, 8, 470.	4.1	11

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91	KDP (KH2PO4) growth from boiling solutions. Ferroelectrics, 1984, 56, 41-44.	0.6	10
92	Criteria for growing crystals from boiling solutions. Journal of Crystal Growth, 1987, 83, 367-375.	1.5	10
93	Size sorting of ultrasmall magnetic nanoparticles and their aggregates behaviour. Materials Research Bulletin, 2013, 48, 4294-4300.	5.2	10
94	Achiralâ€toâ€Chiral Transition in Benzil Solidification: Analogies with Racemic Conglomerates Systems Showing Deracemization. Chirality, 2013, 25, 393-399.	2.6	10
95	Doped-Iron Oxide Nanocrystals Synthesized by One-Step Aqueous Route for Multi-Imaging Purposes. Journal of Physical Chemistry C, 2019, 123, 7356-7365.	3.1	9
96	Crystal growth of potassium hydrogen tartrate from aqueous solution. Journal of Crystal Growth, 1990, 99, 211-216.	1.5	7
97	Decoration of growth and dissolution steps on the surfaces of L-arginine phosphate monohydrate crystals. Journal of Crystal Growth, 1994, 140, 447-450.	1.5	6
98	On the effect of carbonate on barite growth at elevated temperatures. American Mineralogist, 2013, 98, 1235-1240.	1.9	6
99	Biomineral Reactivity: The Kinetics of the Replacement Reaction of Biological Aragonite to Apatite. Minerals (Basel, Switzerland), 2018, 8, 315.	2.0	6
100	Reproducibility and Scalability of Magnetic Nanoheater Synthesis. Nanomaterials, 2021, 11, 2059.	4.1	6
101	Size Dependent Allotropic Transition of Co Fine Particles. Journal of Nanoscience and Nanotechnology, 2009, 9, 4472-4477.	0.9	5
102	One step production of magnetic nanoparticle films by laser pyrolysis inside a chemical vapour deposition reactor. Thin Solid Films, 2011, 519, 7677-7682.	1.8	5
103	Solubility and activity coefficients of lead chloride in potassium nitrate solutions at 25 Â°C and at boiling. Calculation of the supersaturation. Canadian Journal of Chemistry, 1993, 71, 1259-1264.	1.1	4
104	Dipyramidal habit of flux-grown cobalt-tin doped barium ferrite. Journal of Crystal Growth, 1992, 121, 247-249.	1.5	3
105	Iron Oxide Materials Produced by Laser Pyrolysis. AIP Conference Proceedings, 2010, , .	0.4	3
106	Fighting cancer with magnetic nanoparticles and immunotherapy. , 2012, , .		3
107	Temperature dependence of the magnetic interactions taking place in monodisperse magnetite nanoparticles having different morphologies. AIP Advances, 2021, 11, .	1.3	3
108	Lead chloride crystal growth from boiling solutions. Journal of Crystal Growth, 1993, 128, 1282-1287.	1.5	2

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109	Reproducibility of the Synthesis of Iron Oxide Nanoparticles Produced by Laser Pyrolysis. , 2010, , .		2
110	Enantioselective Crystallization of Sodium Chlorate in the Presence of Racemic Hydrophobic Amino Acids and Static Magnetic Fields. Challenges, 2014, 5, 175-192.	1.7	2
111	Slow magnetic relaxation in well crystallized, monodispersed, octahedral and spherical magnetite nanoparticles. AIP Advances, 2019, 9, 125143.	1.3	2
112	Behavior of TiO₂ Thin Film in a Nanocapacitor. Journal of Nanoscience and Nanotechnology, 2008, 8, 1234-1237.	0.9	1
113	Analysis of the NMR Relaxation Enhancement by Core/shell Fe/iron Oxide Nanoparticles. , 2006, , .		0