# Sabino Veintemillas-Verdaguer

List of Publications by Year
in descending order



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|---|---|---|---|
| 113 papers | 7,444 citations | 76196 40 h-index | 53109 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. | 1.3 | 1,673 |
| 2 | Surface and Internal Spin Canting in Î³-Fe2O3 Nanoparticles. Chemistry of Materials, 1999, 11, 3058-3064. | 3.2 | 606 |
| 3 | Progress in the preparation of magnetic nanoparticles for applications in biomedicine. Journal Physics D: Applied Physics, 2009, 42, 224002. | 1.3 | 342 |
| 4 | The influence of surface functionalization on the enhanced internalization of magnetic nanoparticles in cancer cells. Nanotechnology, 2009, 20, 115103. | 1.3 | 299 |
| 5 | Advances in magnetic nanoparticles for biotechnology applications. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 28-34. | 1.0 | 233 |
| 6 | Design strategies for shape-controlled magnetic iron oxide nanoparticles. Advanced Drug Delivery Reviews, 2019, 138, 68-104. | 6.6 | 217 |
| 7 | The Iron Oxides Strike Back: From Biomedical Applications to Energy Storage Devices and Photoelectrochemical Water Splitting. Advanced Materials, 2011, 23, 5243-5249. | 11.1 | 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. | 1.0 | 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. | 1.2 | 131 |
| 10 | Continuous production of Î³-Fe2O3 ultrafine powders by laser pyrolysis. Materials Letters, 1998, 35, 227-231. | 1.3 | 127 |
| 11 | Fe-based nanoparticulate metallic alloys as contrast agents for magnetic resonance imaging. Biomaterials, 2005, 26, 5695-5703. | 5.7 | 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. | 1.0 | 105 |
| 13 | Biodistribution and pharmacokinetics of uniform magnetite nanoparticles chemically modified with polyethylene glycol. Nanoscale, 2013, 5, 11400. | 2.8 | 97 |
| 14 | Synthesis methods to prepare single- and multi-core iron oxide nanoparticles for biomedical applications. Dalton Transactions, 2015, 44, 2943-2952. | 1.6 | 96 |
| 15 | Calorimetric Study of Maghemite Nanoparticles Synthesized by Laser-Induced Pyrolysis. Chemistry of Materials, 2008, 20, 591-598. | 3.2 | 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. | 1.3 | 88 |
| 17 | Ultrasmall Iron Oxide Nanoparticles for Biomedical Applications: Improving the Colloidal and Magnetic Properties. Langmuir, 2012, 28, 178-185. | 1.6 | 88 |
| 18 | Synthesis of Pyrimidines and Triazines in Ice: Implications for the Prebiotic Chemistry of Nucleobases. Chemistry - A European Journal, 2009, 15, 4411-4418. | 1.7 | 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. | 1.5 | 83 |
| 20 | Homochirality as a Consequence of Thermodynamic Equilibrium?. Chemistry - A European Journal, 2006, 12, 7776-7781. | 1.7 | 82 |
| 21 | Formation Mechanism of Maghemite Nanoflowers Synthesized by a Polyol-Mediated Process. ACS Omega, 2017, 2, 7172-7184. | 1.6 | 82 |
| 22 | Short-chain PEG molecules strongly bound to magnetic nanoparticle for MRI long circulating agents. Acta Biomaterialia, 2013, 9, 6421-6430. | 4.1 | 79 |
| 23 | Whither Magnetic Hyperthermia? A Tentative Roadmap. Materials, 2021, 14, 706. | 1.3 | 76 |
| 24 | Colloidal Flowerâ€Shaped Iron Oxide Nanoparticles: Synthesis Strategies and Coatings. Particle and Particle Systems Characterization, 2017, 34, 1700094. | 1.2 | 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. | 5.0 | 66 |
| 27 | Thermal history dependence of the crystal structure of Co fine particles. Physical Review B, 2005, 71, . | 1.1 | 65 |
| 28 | Spin frustration in maghemite nanoparticles. Solid State Communications, 2001, 118, 437-440. | 0.9 | 64 |
| 29 | Liver and brain imaging through dimercaptosuccinic acid-coated iron oxide nanoparticles. Nanomedicine, 2010, 5, 397-408. | 1.7 | 64 |
| 30 | Coreâ€“Shell Ironâ€“Iron Oxide Nanoparticles Synthesized by Laser-Induced Pyrolysis. Small, 2006, 2, 1476-1483. | 5.2 | 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. | 2.8 | 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. | 1.3 | 54 |
| 33 | Relationship between physico-chemical properties of magnetic fluids and their heating capacity. International Journal of Hyperthermia, 2013, 29, 768-776. | 1.1 | 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. | 2.9 | 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. | 2.6 | 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. | 7.2 | 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. | 1.5 | 49 |
| 38 | Chemical aspects of the effect of impurities in crystal growth. Progress in Crystal Growth and Characterization of Materials, 1996, 32, 75-109. | 1.8 | 47 |
| 39 | Spontaneous Transition toward Chirality in the NaClO<sub>3</sub> Crystallization in Boiling Solutions. Crystal Growth and Design, 2009, 9, 4802-4806. | 1.4 | 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. | 0.8 | 42 |
| 41 | Degradation of magnetic nanoparticles mimicking lysosomal conditions followed by AC susceptibility. Biomedizinische Technik, 2015, 60, 417-25. | 0.9 | 41 |
| 42 | Ac magnetic susceptibility study of in vivo nanoparticle biodistribution. Journal Physics D: Applied Physics, 2011, 44, 255002. | 1.3 | 40 |
| 43 | Bulk metastable cobalt in fcc crystal structure. Journal of Alloys and Compounds, 2013, 580, 187-190. | 2.8 | 39 |
| 44 | Cytokine adsorption/release on uniform magnetic nanoparticles for localized drug delivery. Journal of Controlled Release, 2008, 130, 168-174. | 4.8 | 38 |
| 45 | SAXS analysis of single- and multi-core iron oxide magnetic nanoparticles. Journal of Applied Crystallography, 2017, 50, 481-488. | 1.9 | 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. | 1.0 | 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. | 1.6 | 35 |
| 48 | Selective Magnetic Nanoheating: Combining Iron Oxide Nanoparticles for Multi-Hot-Spot Induction and Sequential Regulation. Nano Letters, 2021, 21, 7213-7220. | 4.5 | 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. | 1.0 | 32 |
| 50 | Continuous production of inorganic magnetic nanocomposites for biomedical applications by laser pyrolysis. Journal of Magnetism and Magnetic Materials, 2007, 311, 120-124. | 1.0 | 32 |
| 51 | Effect of the oxidation conditions on the maghemites produced by laser pyrolysis. Applied Organometallic Chemistry, 2001, 15, 365-372. | 1.7 | 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. | 5.0 | 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. | 0.8 | 31 |
| 54 | Growth habit and surface morphology of L-arginine phosphate monohydrate single crystals. Journal of Crystal Growth, 1995, 155, 135-143. | 0.7 | 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. | 1.1 | 30 |
| 56 | The effect of stirring on sodium chlorate crystallization under symmetry breaking conditions. Journal of Crystal Growth, 2007, 303, 562-567. | 0.7 | 29 |
| 57 | Continuous production of magnetic iron oxide nanocrystals by oxidative precipitation. Chemical Engineering Journal, 2020, 393, 124593. | 6.6 | 29 |
| 58 | CH4/N2/H2 spark hydrophilic tholins: A systematic approach to the characterization of tholins. Icarus, 2008, 198, 232-241. | 1.1 | 27 |
| 59 | Thermal Wet Decomposition of Prussian Blue: Implications for Prebiotic Chemistry. Chemistry and Biodiversity, 2009, 6, 1309-1322. | 1.0 | 27 |
| 60 | Metastability in drowning-out crystallisation: precipitation of highly soluble sulphates. Journal of Crystal Growth, 2001, 222, 317-327. | 0.7 | 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. | 0.4 | 26 |
| 62 | Laser pyrolysis preparation of SiO2-coated magnetic nanoparticles for biomedical applications. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 272-275. | 1.0 | 25 |
| 63 | Core/Shell Magnetite/Bismuth Oxide Nanocrystals with Tunable Size, Colloidal, and Magnetic Properties. Chemistry of Materials, 2012, 24, 319-324. | 3.2 | 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. | 1.4 | 25 |
| 65 | Surface microtopographic study of KDP crystals grown at the boiling point. Journal of Crystal Growth, 1986, 78, 144-154. | 0.7 | 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. | 1.2 | 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. | 1.9 | 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. | 1.5 | 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. | 1.8 | 20 |
| 71 | A thermodynamical approach to tetramethylsilane (TMS) pyrolysis; application to SiC coatings obtained by MOCVD. Journal of Crystal Growth, 1993, 128, 349-353. | 0.7 | 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. | 2.9 | 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. | 2.7 | 19 |
| 74 | Synthesis of Polycyclic Aromatic Hydrocarbons and Acetylene Polymers in Ice: A Prebiotic Scenario. Chemistry and Biodiversity, 2008, 5, 2729-2739. | 1.0 | 17 |
| 75 | Improving magnetic properties of ultrasmall magnetic nanoparticles by biocompatible coatings. Journal of Applied Physics, 2015, 117, 064311. | 1.1 | 17 |
| 76 | Bismuth labeling for the CT assessment of local administration of magnetic nanoparticles. Nanotechnology, 2015, 26, 135101. | 1.3 | 17 |
| 77 | Engineering Iron Oxide Nanocatalysts by a Microwave-Assisted Polyol Method for the Magnetically Induced Degradation of Organic Pollutants. Nanomaterials, 2021, 11, 1052. | 1.9 | 17 |
| 78 | On the formation of dislocation etch pits on L-arginine phosphate monohydrate single crystals. Journal of Crystal Growth, 1995, 154, 364-369. | 0.7 | 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. | 1.3 | 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. | 5.0 | 16 |
| 81 | Structural determination of Bi-doped magnetite multifunctional nanoparticles for contrast imaging. Physical Chemistry Chemical Physics, 2014, 16, 18301. | 1.3 | 15 |
| 82 | Conversion of biogenic aragonite into hydroxyapatite scaffolds in boiling solutions. CrystEngComm, 2017, 19, 110-116. | 1.3 | 15 |
| 83 | Synthesis of Feâ€“Si nanoparticles by cw CO2 laser assisted pyrolysis from gaseous precursors. Applied Surface Science, 2002, 186, 562-567. | 3.1 | 14 |
| 84 | Comments on a Possible Transition to Solidâ€Phase Homochirality. Chemistry - A European Journal, 2007, 13, 10303-10305. | 1.7 | 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. | 1.4 | 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. | 0.6 | 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. | 1.1 | 11 |
| 89 | Magnetic nanocrystals for biomedical applications. Progress in Crystal Growth and Characterization of Materials, 2014, 60, 80-86. | 1.8 | 11 |
| 90 | Effect of the Sodium Polyacrylate on the Magnetite Nanoparticles Produced by Green Chemistry Routes: Applicability in Forward Osmosis. Nanomaterials, 2018, 8, 470. | 1.9 | 11 |

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| 91 | KDP (KH2PO4) growth from boiling solutions. Ferroelectrics, 1984, 56, 41-44. | 0.3 | 10 |
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| 93 | Size sorting of ultrasmall magnetic nanoparticles and their aggregates behaviour. Materials Research Bulletin, 2013, 48, 4294-4300. | 2.7 | 10 |
| 94 | Achiralâ€toâ€Chiral Transition in Benzil Solidification: Analogies with Racemic Conglomerates Systems Showing Deracemization. Chirality, 2013, 25, 393-399. | 1.3 | 10 |
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| 97 | Decoration of growth and dissolution steps on the surfaces of L-arginine phosphate monohydrate crystals. Journal of Crystal Growth, 1994, 140, 447-450. | 0.7 | 6 |
| 98 | On the effect of carbonate on barite growth at elevated temperatures. American Mineralogist, 2013, 98, 1235-1240. | 0.9 | 6 |
| 99 | Biomineral Reactivity: The Kinetics of the Replacement Reaction of Biological Aragonite to Apatite. Minerals (Basel, Switzerland), 2018, 8, 315. | 0.8 | 6 |
| 100 | Reproducibility and Scalability of Magnetic Nanoheater Synthesis. Nanomaterials, 2021, 11, 2059. | 1.9 | 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. | 0.8 | 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. | 0.6 | 4 |
| 104 | Dipyramidal habit of flux-grown cobalt-tin doped barium ferrite. Journal of Crystal Growth, 1992, 121, 247-249. | 0.7 | 3 |
| 105 | Iron Oxide Materials Produced by Laser Pyrolysis. AIP Conference Proceedings, 2010, , . | 0.3 | 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, . | 0.6 | 3 |
| 108 | Lead chloride crystal growth from boiling solutions. Journal of Crystal Growth, 1993, 128, 1282-1287. | 0.7 | 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. | 0.9 | 2 |
| 111 | Slow magnetic relaxation in well crystallized, monodispersed, octahedral and spherical magnetite nanoparticles. AIP Advances, 2019, 9, 125143. | 0.6 | 2 |
| 112 | Behavior of TiO<sub>2</sub> 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 |