

# Alejandro G Roca

## List of Publications by Year in descending order

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Version: 2024-02-01

53  
papers

4,016  
citations

201385

27  
h-index

189595

50  
g-index

53  
all docs

53  
docs citations

53  
times ranked

6209  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Applications of exchange coupled bi-magnetic hard/soft and soft/hard magnetic core/shell nanoparticles. <i>Physics Reports</i> , 2015, 553, 1-32.  | 10.3 | 391       |
| 2  | Progress in the preparation of magnetic nanoparticles for applications in biomedicine. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 224002.   | 1.3  | 342       |
| 3  | Structural and magnetic properties of uniform magnetite nanoparticles prepared by high temperature decomposition of organic precursors. <i>Nanotechnology</i> , 2006, 17, 2783-2788.                         | 1.3  | 336       |
| 4  | The influence of surface functionalization on the enhanced internalization of magnetic nanoparticles in cancer cells. <i>Nanotechnology</i> , 2009, 20, 115103.  | 1.3  | 299       |
| 5  | Effect of Nature and Particle Size on Properties of Uniform Magnetite and Maghemite Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2007, 111, 18577-18584.  | 1.5  | 278       |
| 6  | Surfactant effects in magnetite nanoparticles of controlled size. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 316, e756-e759.   | 1.0  | 273       |
| 7  | Design strategies for shape-controlled magnetic iron oxide nanoparticles. <i>Advanced Drug Delivery Reviews</i> , 2019, 138, 68-104.   | 6.6  | 217       |
| 8  | Uniform and water stable magnetite nanoparticles with diameters around the monodomain–multidomain limit. <i>Journal Physics D: Applied Physics</i> , 2008, 41, 134003.                                       | 1.3  | 208       |
| 9  | Mechanisms of hyperthermia in magnetic nanoparticles. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 312001.  | 1.3  | 197       |
| 10 | Effect of Nanoparticle and Aggregate Size on the Relaxometric Properties of MR Contrast Agents Based on High Quality Magnetite Nanoparticles. <i>Journal of Physical Chemistry B</i> , 2009, 113, 7033-7039. | 1.2  | 131       |
| 11 | Magnetic nanoparticles with bulklike properties (invited). <i>Journal of Applied Physics</i> , 2011, 109, .  | 1.1  | 105       |
| 12 | Fe K-Edge X-ray Absorption Spectroscopy Study of Nanosized Nominal Magnetite. <i>Journal of Physical Chemistry C</i> , 2014, 118, 1332-1346.   | 1.5  | 93        |
| 13 | Magnetite nanoparticles with no surface spin canting. <i>Journal of Applied Physics</i> , 2009, 105, .   | 1.1  | 87        |
| 14 | Precise Size Control of the Growth of Fe <sub>3</sub> O <sub>4</sub> Nanocubes over a Wide Size Range Using a Rationally Designed One-Pot Synthesis. <i>ACS Nano</i> , 2019, 13, 7716-7728.                  | 7.3  | 79        |
| 15 | Origin of the large dispersion of magnetic properties in nanostructured oxides: Fe <sub>x</sub> O/Fe <sub>3</sub> O <sub>4</sub> nanoparticles as a case study. <i>Nanoscale</i> , 2015, 7, 3002-3015.       | 2.8  | 76        |
| 16 | Surface anisotropy broadening of the energy barrier distribution in magnetic nanoparticles. <i>Nanotechnology</i> , 2008, 19, 475704.  | 1.3  | 75        |
| 17 | Synthesis of Monodispersed Magnetite Particles From Different Organometallic Precursors. <i>IEEE Transactions on Magnetics</i> , 2006, 42, 3025-3029.  | 1.2  | 70        |
| 18 | Seeded Growth Synthesis of Au–Fe <sub>3</sub> O <sub>4</sub> Heterostructured Nanocrystals: Rational Design and Mechanistic Insights. <i>Chemistry of Materials</i> , 2017, 29, 4022-4035.                   | 3.2  | 67        |

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|----|--|-----|-----------|
| 19 | Liver and brain imaging through dimercaptosuccinic acid-coated iron oxide nanoparticles. <i>Nanomedicine</i> , 2010, 5, 397-408.   | 1.7 | 64        |
| 20 | Magnetic Study of Fe <sub>3</sub> O <sub>4</sub> Nanoparticles Incorporated within Mesoporous Silicon. <i>Journal of the Electrochemical Society</i> , 2010, 157, K145.  | 1.3 | 50        |
| 21 | Magnetic properties and energy absorption of CoFe <sub>2</sub> O <sub>4</sub> nanoparticles for magnetic hyperthermia. <i>Journal of Physics: Conference Series</i> , 2010, 200, 072101.   | 0.3 | 46        |
| 22 | Synthesis of Magnetic Nanocrystals by Thermal Decomposition in Glycol Media: Effect of Process Variables and Mechanistic Study. <i>Industrial &amp; Engineering Chemistry Research</i> , 2012, 51, 8348-8357.  | 1.8 | 43        |
| 23 | Cytokine adsorption/release on uniform magnetic nanoparticles for localized drug delivery. <i>Journal of Controlled Release</i> , 2008, 130, 168-174.  | 4.8 | 38        |
| 24 | Magnetically separable photocatalytic composite $\gamma$ -Fe <sub>2</sub> O <sub>3</sub> @TiO <sub>2</sub> synthesized by heterogeneous precipitation. <i>Applied Surface Science</i> , 2011, 257, 4844-4848.  | 3.1 | 38        |
| 25 | A New Method for the Rapid Synthesis of Water Stable Superparamagnetic Nanoparticles. <i>Chemistry - A European Journal</i> , 2008, 14, 9126-9130.   | 1.7 | 32        |
| 26 | Surface functionalization for tailoring the aggregation and magnetic behaviour of silica-coated iron oxide nanostructures. <i>Nanotechnology</i> , 2012, 23, 155603.   | 1.3 | 32        |
| 27 | Galvanic Replacement onto Complex Metal-Oxide Nanoparticles: Impact of Water or Other Oxidizers in the Formation of either Fully Dense Onion-like or Multicomponent Hollow MnO <sub>x</sub> /FeO <sub>x</sub> Structures. <i>Chemistry of Materials</i> , 2016, 28, 8025-8031. | 3.2 | 28        |
| 28 | Application of nanoparticle tracking analysis for characterising the fate of engineered nanoparticles in sediment-water systems. <i>Journal of Environmental Sciences</i> , 2018, 64, 62-71.   | 3.2 | 28        |
| 29 | A new method for the aqueous functionalization of superparamagnetic Fe <sub>2</sub> O <sub>3</sub> nanoparticles. <i>Contrast Media and Molecular Imaging</i> , 2008, 3, 215-222.  | 0.4 | 26        |
| 30 | Atomic-Scale Determination of Cation Inversion in Spinel-Based Oxide Nanoparticles. <i>Nano Letters</i> , 2018, 18, 5854-5861.   | 4.5 | 24        |
| 31 | The endocytic penetration mechanism of iron oxide magnetic nanoparticles with positively charged cover: A morphological approach. <i>International Journal of Molecular Medicine</i> , 2010, 26, 533-9.  | 1.8 | 20        |
| 32 | Relaxation phenomena in ensembles of CoFe <sub>2</sub> O <sub>4</sub> nanoparticles. <i>Journal of Magnetism and Magnetic Materials</i> , 2012, 324, 1182-1188.  | 1.0 | 20        |
| 33 | Key Parameters for Scaling up the Synthesis of Magnetite Nanoparticles in Organic Media: Stirring Rate and Growth Kinetic. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 17841-17847.   | 1.8 | 20        |
| 34 | Magnetically amplified photothermal therapies and multimodal imaging with magneto-plasmonic nanodomains. <i>Applied Materials Today</i> , 2018, 12, 430-440.   | 2.3 | 20        |
| 35 | Relaxation times of colloidal iron platinum in polymer matrixes. <i>Journal of Materials Chemistry</i> , 2009, 19, 6381.   | 6.7 | 19        |
| 36 | Ex vivo assessment of polyol coated-iron oxide nanoparticles for MRI diagnosis applications: toxicological and MRI contrast enhancement effects. <i>Journal of Nanoparticle Research</i> , 2014, 16, 1.  | 0.8 | 18        |

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|----|--|-----|-----------|
| 37 | Structural determination of Bi-doped magnetite multifunctional nanoparticles for contrast imaging. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 18301.   | 1.3 | 15        |
| 38 | Combining X-ray Whole Powder Pattern Modeling, Rietveld and Pair Distribution Function Analyses as a Novel Bulk Approach to Study Interfaces in Heteronanostructures: Oxidation Front in FeO/Fe <sub>3</sub> O <sub>4</sub> Core/Shell Nanoparticles as a Case Study. <i>Small</i> , 2018, 14, e1800804. | 5.2 | 15        |
| 39 | Effects of coating on magnetic properties in iron oxide nanoparticles. <i>Journal of Physics: Conference Series</i> , 2010, 200, 072012.   | 0.3 | 12        |
| 40 | Unravelling the Elusive Antiferromagnetic Order in Wurtzite and Zinc Blende CoO Polymorph Nanoparticles. <i>Small</i> , 2018, 14, e1703963.  | 5.2 | 12        |
| 41 | Investigation of a Mesoporous Silicon Based Ferromagnetic Nanocomposite. <i>Nanoscale Research Letters</i> , 2010, 5, 374-378.   | 3.1 | 10        |
| 42 | Magnetite nanoparticles embedded in biodegradable porous silicon. <i>Journal of Magnetism and Magnetic Materials</i> , 2010, 322, 1343-1346.   | 1.0 | 10        |
| 43 | Effect of Frequency and Field Amplitude in Magnetic Hyperthermia. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 4054-4057.   | 1.2 | 8         |
| 44 | Zinc blende and wurtzite CoO polymorph nanoparticles: Rational synthesis and commensurate and incommensurate magnetic order. <i>Applied Materials Today</i> , 2019, 16, 322-331.   | 2.3 | 8         |
| 45 | Direct Evidence of a Graded Magnetic Interface in Bimagnetic Core/Shell Nanoparticles Using Electron Magnetic Circular Dichroism (EMCD). <i>Nano Letters</i> , 2021, 21, 6923-6930.  | 4.5 | 8         |
| 46 | Magnetic behaviour of a magnetite/silicon nanocomposite. <i>Journal of Nanoparticle Research</i> , 2011, 13, 5685-5690.  | 0.8 | 7         |
| 47 | An Analysis of Minor Hysteresis Loops of Nanoparticles for Hyperthermia. <i>IEEE Transactions on Magnetics</i> , 2011, 47, 2878-2881.  | 1.2 | 6         |
| 48 | INFLUENCE OF AGGREGATE COATING ON RELAXATIONS IN THE SYSTEMS OF IRON OXIDE NANOPARTICLES. <i>Nano</i> , 2012, 07, 1250004.   | 0.5 | 6         |
| 49 | Reproducibility and Scalability of Magnetic Nanoheater Synthesis. <i>Nanomaterials</i> , 2021, 11, 2059.   | 1.9 | 6         |
| 50 | Biomedical Applications of Magnetic Nanoparticles. , 2007, , 1-7.  |     | 2         |
| 51 | A Porous Silicon/Iron Oxide Nanocomposite with Superparamagnetic and Ferromagnetic Behavior. <i>ECS Transactions</i> , 2010, 33, 95-99.  | 0.3 | 1         |
| 52 | Correlative Transmission Electron Microscopy of Highly Perfect Fe <sub>3</sub> O <sub>4</sub> Nanocubes. <i>Microscopy and Microanalysis</i> , 2017, 23, 1692-1693.  | 0.2 | 0         |
| 53 | Synthesis and Applications of Anisotropic Magnetic Iron Oxide Nanoparticles. , 2021, , 65-89.  |     | 0         |