

# Alejandro G Roca

## List of Publications by Year in descending order

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Version: 2024-02-01

53  
papers

4,016  
citations

201674

27  
h-index

189892

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.	25.6	391
2	Progress in the preparation of magnetic nanoparticles for applications in biomedicine. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 224002.	2.8	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.	2.6	336
4	The influence of surface functionalization on the enhanced internalization of magnetic nanoparticles in cancer cells. <i>Nanotechnology</i> , 2009, 20, 115103.	2.6	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.	3.1	278
6	Surfactant effects in magnetite nanoparticles of controlled size. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 316, e756-e759.	2.3	273
7	Design strategies for shape-controlled magnetic iron oxide nanoparticles. <i>Advanced Drug Delivery Reviews</i> , 2019, 138, 68-104.	13.7	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.	2.8	208
9	Mechanisms of hyperthermia in magnetic nanoparticles. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 312001.	2.8	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.	2.6	131
11	Magnetic nanoparticles with bulklike properties (invited). <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	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.	3.1	93
13	Magnetite nanoparticles with no surface spin canting. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	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.	14.6	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.	5.6	76
16	Surface anisotropy broadening of the energy barrier distribution in magnetic nanoparticles. <i>Nanotechnology</i> , 2008, 19, 475704.	2.6	75
17	Synthesis of Monodispersed Magnetite Particles From Different Organometallic Precursors. <i>IEEE Transactions on Magnetics</i> , 2006, 42, 3025-3029.	2.1	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.	6.7	67

#	ARTICLE	IF	CITATIONS
19	Liver and brain imaging through dimercaptosuccinic acid-coated iron oxide nanoparticles. <i>Nanomedicine</i> , 2010, 5, 397-408.	3.3	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.	2.9	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.	0.4	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.	3.7	43
23	Cytokine adsorption/release on uniform magnetic nanoparticles for localized drug delivery. <i>Journal of Controlled Release</i> , 2008, 130, 168-174.	9.9	38
24	Magnetically separable photocatalytic composite $\hat{1}^3$ -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.	6.1	38
25	A New Method for the Rapid Synthesis of Water Stable Superparamagnetic Nanoparticles. <i>Chemistry - A European Journal</i> , 2008, 14, 9126-9130.	3.3	32
26	Surface functionalization for tailoring the aggregation and magnetic behaviour of silica-coated iron oxide nanostructures. <i>Nanotechnology</i> , 2012, 23, 155603.	2.6	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.	6.7	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.	6.1	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.	0.8	26
30	Atomic-Scale Determination of Cation Inversion in Spinel-Based Oxide Nanoparticles. <i>Nano Letters</i> , 2018, 18, 5854-5861.	9.1	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.	4.0	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.	2.3	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.	3.7	20
34	Magnetically amplified photothermal therapies and multimodal imaging with magneto-plasmonic nanodomains. <i>Applied Materials Today</i> , 2018, 12, 430-440.	4.3	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.	1.9	18

#	ARTICLE	IF	CITATIONS
37	Structural determination of Bi-doped magnetite multifunctional nanoparticles for contrast imaging. Physical Chemistry Chemical Physics, 2014, 16, 18301.	2.8	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. Small, 2018, 14, e1800804.	10.0	15
39	Effects of coating on magnetic properties in iron oxide nanoparticles. Journal of Physics: Conference Series, 2010, 200, 072012.	0.4	12
40	Unravelling the Elusive Antiferromagnetic Order in Wurtzite and Zinc Blende CoO Polymorph Nanoparticles. Small, 2018, 14, e1703963.	10.0	12
41	Investigation of a Mesoporous Silicon Based Ferromagnetic Nanocomposite. Nanoscale Research Letters, 2010, 5, 374-378.	5.7	10
42	Magnetite nanoparticles embedded in biodegradable porous silicon. Journal of Magnetism and Magnetic Materials, 2010, 322, 1343-1346.	2.3	10
43	Effect of Frequency and Field Amplitude in Magnetic Hyperthermia. IEEE Transactions on Magnetics, 2012, 48, 4054-4057.	2.1	8
44	Zinc blende and wurtzite CoO polymorph nanoparticles: Rational synthesis and commensurate and incommensurate magnetic order. Applied Materials Today, 2019, 16, 322-331.	4.3	8
45	Direct Evidence of a Graded Magnetic Interface in Bimagnetic Core/Shell Nanoparticles Using Electron Magnetic Circular Dichroism (EMCD). Nano Letters, 2021, 21, 6923-6930.	9.1	8
46	Magnetic behaviour of a magnetite/silicon nanocomposite. Journal of Nanoparticle Research, 2011, 13, 5685-5690.	1.9	7
47	An Analysis of Minor Hysteresis Loops of Nanoparticles for Hyperthermia. IEEE Transactions on Magnetics, 2011, 47, 2878-2881.	2.1	6
48	INFLUENCE OF AGGREGATE COATING ON RELAXATIONS IN THE SYSTEMS OF IRON OXIDE NANOPARTICLES. Nano, 2012, 07, 1250004.	1.0	6
49	Reproducibility and Scalability of Magnetic Nanoheater Synthesis. Nanomaterials, 2021, 11, 2059.	4.1	6
50	Biomedical Applications of Magnetic Nanoparticles. , 2007, , 1-7.		2
51	A Porous Silicon/Iron Oxide Nanocomposite with Superparamagnetic and Ferromagnetic Behavior. ECS Transactions, 2010, 33, 95-99.	0.5	1
52	Correlative Transmission Electron Microscopy of Highly Perfect Fe <sub>3</sub> O <sub>4</sub> Nanocubes. Microscopy and Microanalysis, 2017, 23, 1692-1693.	0.4	0
53	Synthesis and Applications of Anisotropic Magnetic Iron Oxide Nanoparticles. , 2021, , 65-89.		0