Marcelo M Mariscal

List of Publications by Year
in descending order

69 papers	1,461 citations	304368 22 h-index	360668 35 g-index
69 all docs	69 docs citations	69 times ranked	2275 citing authors

#	Article	IF	Citations
1	Real-time imaging of adatom-promoted graphene growth on nickel. Science, 2018, 359, 1243-1246.	6.0	128
2	Ultrasmooth, Highly Spherical Monocrystalline Gold Particles for Precision Plasmonics. ACS Nano, 2013, 7, 11064-11070.	7.3	125
3	Collision as a way of forming bimetallic nanoclusters of various structures and chemical compositions. Journal of Chemical Physics, 2005, 123, 184505.	1.2	87
4	Analysis of electron beam damage of exfoliated MoS2 sheets and quantitative HAADF-STEM imaging. Ultramicroscopy, 2014, 146, 33-38.	0.8	63
5	Proton binding at clay surfaces in water. Applied Clay Science, 2003, 24, 3-9.	2.6	56
6	Thermal Properties of Co/Au Nanoalloys and Comparison of Different Computer Simulation Techniques. Journal of Physical Chemistry C, 2012, 116, 17210-17218.	1.5	52
7	The Coâ€“Au interface in bimetallic nanoparticles: a high resolution STEM study. Nanoscale, 2010, 2, 2647.	2.8	46
8	Trimetallic nanostructures: the case of AgPdâ€“Pt multiply twinned nanoparticles. Nanoscale, 2013, 5, 12456.	2.8	44
9	On the atomic structure of thiol-protected gold nanoparticles: a combined experimental and theoretical study. Physical Chemistry Chemical Physics, 2010, 12, 11785.	1.3	40
10	Generation of palladium clusters on Au(111) electrodes: Experiments and simulations. Applied Physics Letters, 2002, 81, 2635-2637.	1.5	39
11	Development of a semiempirical potential for simulations of thiolâ€“gold interfaces. Application to thiol-protected gold nanoparticles. Physical Chemistry Chemical Physics, 2011, 13, 6500.	1.3	30
12	On the generation of metal clusters with the electrochemical scanning tunneling microscope. Surface Science, 2005, 597, 133-155.	0.8	28
13	Thermodynamic considerations and computer simulations on the formation of core-shell nanoparticles under electrochemical conditions. Physical Chemistry Chemical Physics, 2008, 10, 3561.	1.3	28
14	A synthesis route of gold nanoparticles without using a reducing agent. Applied Physics Letters, 2010, 96, .	1.5	27
15	Monolayer protected gold nanoparticles: the effect of the headgroupâ€“Au interaction. Physical Chemistry Chemical Physics, 2014, 16, 15979.	1.3	27
16	Graphene on nickel (100) micrograins: Modulating the interface interaction by extended moirÃ© superstructures. Carbon, 2018, 130, 441-447.	5.4	27
17	Underpotential deposition on free nanoparticles: Its meaning and measurement. Electrochemistry Communications, 2012, 16, 1-5.	2.3	26
18	Effects of oxidation on the plasmonic properties of aluminum nanoclusters. Nanoscale, 2017, 9, 17471-17480.	2.8	26

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19	Growth mechanism of nanoparticles: theoretical calculations and experimental results. CrystEngComm, 2012, 14, 544-549.	1.3	25
20	Structure and composition of Au/Co magneto-plasmonic nanoparticles. MRS Communications, 2013, 3, 177-183.	0.8	25
21	The basis for the formation of stable metal clusters on an electrode surface. Nanotechnology, 2003, 14, 1009-1013.	1.3	23
22	Theoretical studies of preparation of coreâ€“shell nanoparticles by electrochemical metal deposition. Electrochimica Acta, 2010, 55, 8244-8251.	2.6	23
23	Nanoalloying in real time. A high resolution STEM and computer simulation study. Nanoscale, 2011, 3, 5013.	2.8	22
24	A combined experimental and theoretical study of the generation of palladium clusters on Au(111) with a scanning tunnelling microscope. Electrochimica Acta, 2003, 48, 1287-1294.	2.6	21
25	A new simulation model for electrochemical metal deposition. Chemical Physics, 2006, 320, 149-154.	0.9	21
26	Ultra-small rhenium clusters supported on graphene. Physical Chemistry Chemical Physics, 2015, 17, 7898-7906.	1.3	21
27	Influence of Capping on the Atomistic Arrangement in Palladium Nanoparticles at Room Temperature. Journal of Physical Chemistry C, 2014, 118, 24641-24647.	1.5	20
28	Properties of rotating nanoalloys formed by cluster collision: A computer simulation study. Journal of Chemical Physics, 2011, 134, 094701.	1.2	19
29	Synthesis, characterization, and growth simulations of Cuâ€“Pt bimetallic nanoclusters. Beilstein Journal of Nanotechnology, 2014, 5, 1371-1379.	1.5	19
30	Computer simulation of the effective double layer occurring on a catalyst surface under electro-chemical promotion conditions. Journal of Applied Electrochemistry, 2008, 38, 1065-1073.	1.5	17
31	Atomistic computer simulations on the generation of bimetallic nanoparticles. Faraday Discussions, 2008, 138, 89-104.	1.6	16
32	On the occurrence of stable and supersaturated metastable states in metallic core-shell nanoparticles. Physical Chemistry Chemical Physics, 2010, 12, 4580.	1.3	16
33	On the selective decoration of facets in metallic nanoparticles. Journal of Materials Research, 2012, 27, 1777-1786.	1.2	15
34	Configurational Behavior and Conductance of Alkanedithiol Molecular Wires from Accelerated Dynamics Simulations. Journal of Chemical Theory and Computation, 2012, 8, 4539-4545.	2.3	15
35	Gold clusters showing pentagonal atomic arrays revealed by aberration-corrected scanning transmission electron microscopy. Chemical Communications, 2010, 46, 8758.	2.2	14
36	Anchoring sites to the STM tip can explain multiple peaks in single molecule conductance histograms. Physical Chemistry Chemical Physics, 2013, 15, 1526-1531.	1.3	13

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37	Goldâ€“palladium core@shell nanoalloys: experiments and simulations. Physical Chemistry Chemical Physics, 2015, 17, 28060-28067.	1.3	13
38	The structure of electrodeposits â€“ a computer simulation study. Applied Physics A: Materials Science and Processing, 2007, 87, 385-389.	1.1	12
39	On the structural and mechanical properties of Fe-filled carbon nanotubesâ€”a computer simulation approach. Nanotechnology, 2009, 20, 165705.	1.3	12
40	Thermodynamic stability of electrochemically decorated Auâ€“Pd core@shell nanoparticles. Electrochimica Acta, 2012, 76, 424-429.	2.6	12
41	Immobilization of Au nanoparticles on graphite tunnels through nanocapillarity. RSC Advances, 2016, 6, 77195-77200.	1.7	12
42	Structure Determination of Superatom Metallic Clusters Using Rapid Scanning Electron Diffraction. Journal of Physical Chemistry C, 2016, 120, 1902-1908.	1.5	12
43	The van der Waals Interactions of nâ€Alkanethiolâ€Covered Surfaces: From Planar to Curved Surfaces. Angewandte Chemie - International Edition, 2017, 56, 16526-16530.	7.2	12
44	Effects of tip structure on the generation of metal clusters by an STM tip: a way to control the orientation of nanocrystallites?. Nanotechnology, 2005, 16, 974-980.	1.3	11
45	The role of ad-atoms in the coalescence of alkanethiol-passivated gold nanoparticles. Electrochimica Acta, 2013, 101, 301-307.	2.6	11
46	Stochastic model for spontaneous formation of molecular wires. Electrochimica Acta, 2009, 54, 2977-2982.	2.6	10
47	Electrochemical area of graphene-supported metal nanoparticles from an atomistic approach. Journal of Applied Electrochemistry, 2020, 50, 421-429.	1.5	10
48	Mechanical stability of zinc oxide nanowires under tensile loading: is wurtzite stable at the nanoscale?. RSC Advances, 2015, 5, 43563-43570.	1.7	9
49	Soft or Hard? Investigating the Deformation Mechanisms of Auâ€“Pd and Pd Nanocubes under Compression: An Experimental and Molecular Dynamics Study. Journal of Physical Chemistry C, 2021, 125, 25298-25306.	1.5	9
50	Structural order in ultrathin films of the monolayer protected clusters based upon 4 nm gold nanocrystals: an experimental and theoretical study. Physical Chemistry Chemical Physics, 2014, 16, 18098-18104.	1.3	8
51	Effect of Nafion content and hydration level on the electrochemical area of a Pt nanocatalyst in the triple-phase boundary. Physical Chemistry Chemical Physics, 2021, 23, 27543-27551.	1.3	7
52	Atomic-level characterization and cilostazol affinity of poly(lactic acid) nanoparticles conjugated with differentially charged hydrophilic molecules. Beilstein Journal of Nanotechnology, 2018, 9, 1328-1338.	1.5	6
53	The behavior of single-molecule junctions predicted by atomistic simulations. Electrochemistry Communications, 2009, 11, 987-989.	2.3	5
54	Computer simulation of reversible electrochemical catalyst promoter dosing. Electrochimica Acta, 2010, 55, 8673-8679.	2.6	5

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55	The unexpected effect of vacancies and wrinkling on the electronic properties of MoS₂ layers. Physical Chemistry Chemical Physics, 2019, 21, 24731-24739.	1.3	5
56	Mechanistic Framework for the Formation of Different Sulfur Species by Electron Irradiation of n-Dodecanethiol Self-Assembled Monolayers on Au(111) and Au(100). Journal of Physical Chemistry C, 2020, 124, 22591-22600.	1.5	5
57	Computer simulation of electrochemical nanostructuring induced by supersaturation conditions. Journal of Electroanalytical Chemistry, 2007, 607, 10-16.	1.9	4
58	Calculation of the diffusion coefficient of thiophene oligomers using molecular dynamics. Molecular Simulation, 2012, 38, 882-885.	0.9	4
59	Bimetallic Synergy on Iridiumâ€“Gold Catalysts for the CO Oxidation Reaction. Journal of Physical Chemistry C, 2022, 126, 1742-1750.	1.5	4
60	Diffusion mechanisms taking place at the early stages of cobalt deposition on Au(111). Journal of Physics Condensed Matter, 2008, 20, 265010.	0.7	3
61	One-step/one-pot decoration of oxide microparticles with silver nanoparticles. Journal of Colloid and Interface Science, 2014, 428, 32-35.	5.0	3
62	Avoiding oxidation with coating: graphene protected magnesium surfaces. Physical Chemistry Chemical Physics, 2019, 21, 18660-18666.	1.3	3
63	Structure stability of free copper nanoclusters: FSA-DFT Cu-building and FDM-XANES study. Journal of Electron Spectroscopy and Related Phenomena, 2019, 235, 1-7.	0.8	3
64	Mechanochemical stability of sub-nm ZnO chains. Physical Chemistry Chemical Physics, 2016, 18, 7688-7694.	1.3	2
65	A density functional study on the reactivity enhancement induced by gold in IrAu nanoalloys. RSC Advances, 2018, 8, 10450-10456.	1.7	2
66	MoS₂ Effect on Nickel Electrochemical Activation: An Atomistic/Experimental Approach. Journal of Physical Chemistry C, 2021, 125, 18640-18652.	1.5	2
67	Computer Simulations of Electrochemical Low-Dimensional Metal Phase Formation. , 0, , 30-60.		1
68	Modeling of Protected Nanoparticles. Nanostructure Science and Technology, 2013, , 275-304.	0.1	0
69	A novel one-pot room-temperature synthesis route to produce very small photoluminescent silicon nanocrystals. Journal of Nanoparticle Research, 2018, 20, 1.	0.8	0