

Miguel Avalos-Borja

List of Publications by Year in descending order

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126
papers

3,745
citations

147801

31
h-index

138484

58
g-index

129
all docs

129
docs citations

129
times ranked

5085
citing authors

#	ARTICLE	IF	CITATIONS
1	Biosynthesis of silver, gold and bimetallic nanoparticles using the filamentous fungus <i>Neurospora crassa</i> . <i>Colloids and Surfaces B: Biointerfaces</i> , 2011, 83, 42-48.	5.0	377
2	Crosslinking of recycled polyethylene by gamma and electron beam irradiation. <i>Radiation Physics and Chemistry</i> , 1998, 52, 171-176.	2.8	364
3	Classical theoretical characterization of the surface plasmon absorption band for silver spherical nanoparticles suspended in water and ethylene glycol. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2005, 27, 104-112.	2.7	172
4	On the nature of the silver phases of Ag/Al ₂ O ₃ catalysts for reactions involving nitric oxide. <i>Applied Catalysis B: Environmental</i> , 2002, 36, 287-297.	20.2	162
5	Ultrastructural Analysis of <i>Candida albicans</i> When Exposed to Silver Nanoparticles. <i>PLoS ONE</i> , 2014, 9, e108876.	2.5	127
6	Production of Platinum Nanoparticles and Nanoaggregates Using <i>Neurospora crassa</i> . <i>Journal of Microbiology and Biotechnology</i> , 2012, 22, 1000-1004.	2.1	104
7	Elastic properties of tantalum carbide (TaC). <i>Solid State Communications</i> , 2005, 134, 245-250.	1.9	101
8	Synthesis of silver nanoparticles in a polyvinylpyrrolidone (PVP) paste, and their optical properties in a film and in ethylene glycol. <i>Materials Research Bulletin</i> , 2008, 43, 90-96.	5.2	101
9	Biosynthesis and microscopic study of metallic nanoparticles. <i>Micron</i> , 2013, 54-55, 1-27.	2.2	99
10	Gold supported on metal oxides for volatile organic compounds total oxidation. <i>Catalysis Today</i> , 2015, 244, 103-114.	4.4	99
11	Gold nanoparticles supported on carbon materials for cyclohexane oxidation with hydrogen peroxide. <i>Applied Catalysis A: General</i> , 2013, 467, 279-290.	4.3	93
12	Assessment of growth of silver nanoparticles synthesized from an ethylene glycol-silver nitrate-polyvinylpyrrolidone solution. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2005, 25, 438-448.	2.7	92
13	Arsenic mobility controlled by solid calcium arsenates: A case study in Mexico showcasing a potentially widespread environmental problem. <i>Environmental Pollution</i> , 2013, 176, 114-122.	7.5	81
14	Gold supported on metal oxides for carbon monoxide oxidation. <i>Nano Research</i> , 2011, 4, 180-193.	10.4	76
15	SERS Properties of Different Sized and Shaped Gold Nanoparticles Biosynthesized under Different Environmental Conditions by <i>Neurospora crassa</i> Extract. <i>PLoS ONE</i> , 2013, 8, e77486.	2.5	74
16	Arsenic contamination in irrigation water, agricultural soil and maize crop from an abandoned smelter site in Matehuala, Mexico. <i>Journal of Hazardous Materials</i> , 2017, 339, 330-339.	12.4	63
17	Effect of Phosphate on the Particle Size of Ferric Oxyhydroxides Anchored onto Activated Carbon: As(V) Removal from Water. <i>Environmental Science & Technology</i> , 2012, 46, 9577-9583.	10.0	58
18	Synthesis and characterization of NiWO ₄ crystals. <i>Materials Letters</i> , 2001, 47, 314-318.	2.6	51

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19	Surface Properties of Ni [~] Pt/SiO ₂ Catalysts for N ₂ O Decomposition and Reduction by H ₂ . Journal of Physical Chemistry B, 2005, 109, 2371-2376.	2.6	51
20	Structural properties of Al ₂ O ₃ ~La ₂ O ₃ binary oxides prepared by sol~gel. Materials Research Bulletin, 2007, 42, 640-648.	5.2	51
21	Melting and freezing of Lennard-Jones clusters on a surface. Physical Review B, 1987, 36, 8447-8455.	3.2	49
22	Changes in poly-vinylidene fluoride produced by electron irradiation. Radiation Physics and Chemistry, 1999, 54, 637-641.	2.8	46
23	Alternative bio-reduction synthesis method for the preparation of Au(AgAu)/SiO ₂ ~Al ₂ O ₃ catalysts: Oxidation and hydrogenation of CO. Applied Catalysis B: Environmental, 2009, 90, 64-73.	20.2	46
24	Structural properties of Pd catalysts supported on Al ₂ O ₃ ~La ₂ O ₃ prepared by sol~gel method. Applied Catalysis B: Environmental, 1998, 17, 221-231.	20.2	45
25	Complementary methods for cluster size distribution measurements: supported platinum nanoclusters in methane reforming catalysts. Journal of Molecular Catalysis A, 2005, 228, 299-307.	4.8	43
26	Influence of phosphorus on the structure and the hydrodesulphurization and hydrodenitrogenation activity of W/Al ₂ O ₃ catalysts. Applied Catalysis A: General, 1994, 120, 147-162.	4.3	40
27	Reaction of rhenium and carbon at high pressures and temperatures. Zeitschrift Fur Kristallographie - Crystalline Materials, 2008, 223, 492-501.	0.8	40
28	Influence of pH of the impregnation solution on the phosphorus promotion in W/Al ₂ O ₃ hydrotreating catalysts. Applied Catalysis A: General, 2002, 224, 97-110.	4.3	39
29	Surface characterization of binary grafting of AAc/NIPAAm onto poly(tetrafluoroethylene) (PTFE). Nuclear Instruments & Methods in Physics Research B, 2005, 234, 471-476.	1.4	39
30	Enhanced refrigerant capacity in two-phase nanocrystalline/amorphous NdPrFe ₁₇ melt-spun ribbons. Applied Physics Letters, 2014, 104, .	3.3	39
31	Electron Microscopy of Metallic Nano Particles Using High- and Medium-Resolution Techniques. Catalysis Reviews - Science and Engineering, 1992, 34, 55-127.	12.9	38
32	Controllable Biosynthesis of Small Silver Nanoparticles Using Fungal Extract. Journal of Biomaterials and Nanobiotechnology, 2016, 07, 118-125.	0.5	32
33	REDUCTION OF NO BY CO OVER NiWO ₄ , NiO, AND WO ₃ CATALYSTS. Reaction Kinetics and Catalysis Letters, 2002, 76, 131-140.	0.6	31
34	Electron and proton irradiation of poly(vinylidene fluoride): characterization by electron paramagnetic resonance. Polymer Degradation and Stability, 2003, 81, 75-79.	5.8	28
35	Dual function of EDTA with silver nanoparticles for root canal treatment~A novel modification. PLoS ONE, 2018, 13, e0190866.	2.5	25
36	Microstructural characterization of bimetallic Ni~Pt catalysts supported on SiO ₂ . Applied Surface Science, 2002, 189, 7-17.	6.1	24

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37	Grafting of styrene and 2-vinylnaphthalene onto silicone rubber to improve radiation resistance. <i>Polymer Degradation and Stability</i> , 2012, 97, 1495-1503.	5.8	24
38	Polyamide-6: The effects on mechanical and physicochemical properties by electron beam irradiation at different temperatures. <i>Radiation Physics and Chemistry</i> , 2014, 97, 165-171.	2.8	24
39	Toward a chronology of <i>Haliotis fulgens</i> , with a review of abalone shell microstructure. <i>Marine and Freshwater Research</i> , 1995, 46, 607.	1.3	22
40	Radiation compatibilization of polyamide-6/polypropylene blends, enhanced by the presence of compatibilizing agent. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005, 236, 295-300.	1.4	22
41	Structure and catalytic activity characterization of bismuth molybdate catalysts. <i>Catalysis Letters</i> , 1993, 18, 273-281.	2.6	21
42	Study of different forms of carbon by analytical electron microscopy. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1999, 104, 61-66.	1.7	21
43	Synthesis, Characterization and Catalytic Activity in the Hydrogenation of Cyclohexene with Molybdenum Carbide. <i>Catalysis Letters</i> , 2008, 120, 137-142.	2.6	20
44	In situ observation of the reaction of scandium and carbon by neutron diffraction. <i>Journal of Alloys and Compounds</i> , 2011, 509, 1-5.	5.5	20
45	Mechanosynthesis of rhenium carbide at ambient pressure and temperature. <i>International Journal of Refractory Metals and Hard Materials</i> , 2016, 55, 11-15.	3.8	20
46	Characterization of interpenetrating networks of acrylic acid (AAc) and N-isopropylacrylamide (NIPAAm) synthesized by ionizing radiation. <i>Radiation Physics and Chemistry</i> , 2009, 78, 549-552.	2.8	19
47	Structural and catalytic properties of Pd/Al ₂ O ₃ –La ₂ O ₃ catalysts. <i>Catalysis Today</i> , 2000, 55, 301-309.	4.4	18
48	Synthesis, characterization and cyclohexene hydrogenation activity of high surface area molybdenum disulfide catalysts. <i>Catalysis Letters</i> , 2007, 113, 170-175.	2.6	18
49	Biogenic silver nanoparticles on carbonaceous material from sewage sludge for degradation of methylene blue in aqueous solution. <i>International Journal of Environmental Science and Technology</i> , 2014, 11, 977-986.	3.5	17
50	Image processing enhancement of high-resolution TEM micrographs of nanometer-size metal particles. <i>Ultramicroscopy</i> , 1989, 30, 405-416.	1.9	16
51	Coexistence of two-photon absorption and saturable absorption in ion-implanted platinum nanoparticles in silica plates. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2018, 35, 1295.	2.1	16
52	A reinvestigation of the $\hat{1}^3$ phase in Cu–Al alloys: a new long-period superstructure. <i>Materials Science and Engineering</i> , 1980, 46, 167-173.	0.1	15
53	Formation of scandium carbides and scandium oxycarbide from the elements at high-(P, T) conditions. <i>Journal of Solid State Chemistry</i> , 2010, 183, 975-983.	2.9	15
54	Pressure dependence of the lattice dynamics of diasporite, $\hat{1}^3$ -AlO(OH), from Raman spectroscopy and density functional perturbation theory. <i>Physics and Chemistry of Minerals</i> , 2011, 38, 693-700.	0.8	15

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55	Chemical Modification of Carbon Nanofibers with Plasma of Acrylic Acid. <i>Plasma Processes and Polymers</i> , 2013, 10, 627-633.	3.0	15
56	Template-free synthesis of CoMoO ₄ rods and their characterization. <i>Materials Research Bulletin</i> , 2013, 48, 4614-4617.	5.2	14
57	Mechanism to H ₂ production on rhenium carbide from pyrolysis of coconut shell. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 2784-2796.	7.1	14
58	Structure and morphology characterization of nanometer-size metal aggregates by electron scattering patterns. <i>Langmuir</i> , 1985, 1, 342-347.	3.5	12
59	Title is missing!. <i>Journal of Physics Condensed Matter</i> , 1993, 5, A219-A220.	1.8	12
60	TEM and PEELS characterization of diamond films grown on Si substrates. <i>Diamond and Related Materials</i> , 1996, 5, 1249-1253.	3.9	12
61	From photoluminescence emissions to plasmonic properties in platinum nanoparticles embedded in silica by ion implantation. <i>Journal of Luminescence</i> , 2016, 179, 8-15.	3.1	11
62	Effect of ball to powder ratio on the mechanosynthesis of Re ₂ C and its compressibility. <i>Journal of Alloys and Compounds</i> , 2019, 810, 151867.	5.5	11
63	Comparison of irradiation effects of electrons and gamma rays on PVC samples. <i>Radiation Physics and Chemistry</i> , 1994, 44, 579-582.	2.8	10
64	EELS characterization of TiN grown by the DC sputtering technique. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1999, 105, 129-133.	1.7	10
65	Interface analysis of CVD diamond on TiN surfaces. <i>Applied Surface Science</i> , 2000, 158, 236-245.	6.1	10
66	Correlation functions between specific volume and stoichiometry for transition metal nitrides. <i>Journal of Alloys and Compounds</i> , 2005, 389, 42-46.	5.5	10
67	Polymer nanocomposites containing carbon nanotubes and miscible polymer blends based on poly[ethylene- <i>co</i> (acrylic acid)]. <i>Journal of Applied Polymer Science</i> , 2008, 108, 1462-1472.	2.6	10
68	Oxygen K-edge electron energy loss spectra of hydrous and anhydrous compounds. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 485401.	1.8	10
69	Biosynthesis of lead nanoparticles by the aquatic water fern, <i>Salvinia minima</i> Baker, when exposed to high lead concentration. <i>Colloids and Surfaces B: Biointerfaces</i> , 2014, 114, 277-283.	5.0	10
70	Tuning emission in violet, blue, green and red in cubic GaN/InGaN/GaN quantum wells. <i>Journal of Crystal Growth</i> , 2016, 435, 110-113.	1.5	10
71	Nanoscale influence on photoluminescence and third order nonlinear susceptibility exhibited by ion-implanted Pt nanoparticles in silica. <i>Methods and Applications in Fluorescence</i> , 2017, 5, 025001.	2.3	10
72	Diamond films grown on p-type microcrystalline-SiC:H/crystalline-Si substrates. <i>Diamond and Related Materials</i> , 1994, 3, 177-181.	3.9	9

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73	Chemical stability of superhard rhenium diboride at oxygen and moisture ambient environmental conditions prepared by mechanical milling. <i>Journal of the American Ceramic Society</i> , 2018, 101, 3148-3155.	3.8	9
74	On the structure of small palladium particles. <i>Scripta Metallurgica</i> , 1989, 23, 1555-1558.	1.2	8
75	The shell microstructure and chronology of the abalone <i>Haliotis corrugata</i> . <i>Molluscan Research</i> , 1997, 18, 197-207.	0.7	8
76	Comparative Activity of Ni ^W and Co ^{Mo} Sulfides Using Transition Metal Oxides as Precursors in HDS Reaction of DBT. <i>Catalysis Letters</i> , 2012, 142, 1082-1088.	2.6	8
77	Analysis of stacking faults in small metallic particles. <i>Journal of Crystal Growth</i> , 1986, 74, 345-352.	1.5	7
78	Poly[ethyleneacrylate] based nanocomposites: Thermal and mechanical properties and their structural characteristics studied by Raman spectroscopy. <i>Polymer Composites</i> , 2011, 32, 1181-1189.	4.6	7
79	MoS ₂ catalysts derived from n-methylenediammonium thiomolybdates during HDS of DBT. <i>Catalysis Today</i> , 2015, 250, 66-71.	4.4	7
80	Solvent-free oxidation of 1-phenylethanol catalysed by gold nanoparticles supported on carbon powder materials. <i>Catalysis Today</i> , 2020, 357, 22-31.	4.4	7
81	CO oxidation of Bi ₂ MoO ₆ catalysts. <i>Journal of Physics Condensed Matter</i> , 1993, 5, A217-A218.	1.8	6
82	High-pressure and high-temperature powder diffraction on molybdenum diphosphide, MoP ₂ . <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2004, 219, 309-313.	0.8	6
83	Molecular Assembly of Multi-Wall Carbon Nanotubes with Amino Crown Ether: Synthesis and Characterization. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 5539-5545.	0.9	6
84	Platinum nanoclusters in silica: Photoluminescent properties and their application for enhancing the emission of silicon nanocrystals in an integrated configuration. <i>Journal of Applied Physics</i> , 2016, 120, .	2.5	6
85	On the visibility of small metallic particles on crystalline substrates. <i>Ultramicroscopy</i> , 1982, 10, 211-215.	1.9	5
86	Effect of silver in Y ₁ Ba ₂ Cu ₃ O _{7-x} samples. <i>Journal of Materials Science</i> , 1994, 29, 2713-2718.	3.7	5
87	PEELS and EXELFS characterization of diamond films grown by the HF-CVD technique on non-scratched Si substrates. <i>Thin Solid Films</i> , 1997, 304, 45-47.	1.8	5
88	Carbenoid Etherifications Catalyzed by ^{201C} Green ^{201D} ; Silver Nanoparticles and Iron-Copper Nanoparticles. <i>Letters in Organic Chemistry</i> , 2012, 9, 2-6.	0.5	5
89	Reduction of nitric oxide by carbon monoxide over NiO, CuO, and ZnO catalysts. <i>Reaction Kinetics, Mechanisms and Catalysis</i> , 2015, 114, 597-609.	1.7	5
90	Termination of hollow core nanopipes in GaN by an AlN interlayer. <i>Journal of Crystal Growth</i> , 2016, 455, 43-48.	1.5	5

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91	Redox reaction of nitric oxide and carbon monoxide over Fe ₂ O ₃ and Co ₃ O ₄ phases. Reaction Kinetics, Mechanisms and Catalysis, 2016, 117, 593-604.	1.7	5
92	Catalytic activity of hydrodesulfurization catalysts prepared by two methods. Catalysis Letters, 1989, 3, 227-233.	2.6	4
93	Homogeneous sulfide precipitation catalysts characterized by X-ray diffraction. Materials Letters, 1989, 8, 492-494.	2.6	4
94	Nucleation and growth of diamond films on mu c-SiC/x-Si by hot-filament CVD. Journal of Physics Condensed Matter, 1993, 5, A305-A306.	1.8	4
95	Microcrystals formed in proton bombarded poly(vinyl chloride) films. Radiation Physics and Chemistry, 1996, 48, 727-730.	2.8	4
96	Influence of preparation on the structure and co conversion of \hat{I}^3 -Bi ₂ MoO ₆ catalysts. Reaction Kinetics and Catalysis Letters, 1999, 67, 205-211.	0.6	4
97	Degradation of rhenium carbide obtained by mechanochemical synthesis at oxygen and moisture environmental conditions. Materials Chemistry and Physics, 2019, 229, 15-21.	4.0	4
98	Mechanosynthesis of metastable cubic \hat{I} -Ta ₁ \hat{a} [~] N. Ceramics International, 2020, 46, 23049-23058.	4.8	4
99	Improvement in the hydrodesulfurization of dibenzothiophene over supported NiMoW catalysts. Reaction Kinetics, Mechanisms and Catalysis, 2021, 132, 317-330.	1.7	4
100	Controlled modification of sodium montmorillonite clay by a planetary ball-mill as a versatile tool to tune its properties. Advanced Powder Technology, 2021, 32, 591-599.	4.1	4
101	Thermal decay of Lennard-Jones clusters. Zeitschrift F \hat{A} ^{1/4} r Physik D-Atoms Molecules and Clusters, 1989, 12, 185-187.	1.0	3
102	Mixed impregnated thiosalt decomposition catalysts characterized by X-ray diffraction. Catalysis Letters, 1991, 9, 387-393.	2.6	3
103	HRTEM and STM of Pt particles on graphite. Journal of Physics Condensed Matter, 1993, 5, A413-A416.	1.8	3
104	High resolution electron microscopy characterization of sulfided palladium particles on amorphous SiO ₂ . Catalysis Letters, 1994, 28, 351-360.	2.6	3
105	Co Oxidation by Bi ₂ MoO ₆ - \hat{I}^3 (H) Catalyst. Materials Research Society Symposia Proceedings, 1994, 368, 265.	0.1	3
106	Phosphorus promoted WS ₂ /Al ₂ O ₃ catalysts studied by transmission electron microscopy. Catalysis Letters, 1996, 42, 119-126.	2.6	3
107	PZT ferroelectric ceramics obtained by sol \hat{e} “gel method using 2-metoxxyethanol route for pyroelectric sensors. Materials Research Innovations, 2009, 13, 375-378.	2.3	3
108	Low-temperature structural phase transition in deuterated and protonated lithium acetate dihydrate. Journal of Chemical Thermodynamics, 2010, 42, 957-961.	2.0	3

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109	Interaction of silver nanoparticles with the aquatic fern <i>Azolla filiculoides</i> : root structure, particle distribution, and silver accumulation. <i>Journal of Nanoparticle Research</i> , 2021, 23, 1.	1.9	3
110	S�NTESIS DE ARSENIATOS DE CALCIO (GUERINITA, HADINGERITA Y FARMACOLITA) MORFOL�GICAMENTE SIMILARES A LOS ENCONTRADOS EN SUELOS CONTAMINADOS. <i>Revista Internacional De Contaminacion Ambiental</i> , 2017, 33, 153-163.	0.4	3
111	Inversion domains and the mechanical properties of Gamma-2 (Cu-Al) intermetallic compound. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1979, 10, 385-387.	1.4	2
112	On the morphology of small particles under weak beam conditions. <i>Journal of Crystal Growth</i> , 1986, 78, 563-566.	1.5	2
113	More on the melting of Lennard-Jones clusters. <i>Zeitschrift F�r Physik D-Atoms Molecules and Clusters</i> , 1989, 12, 181-183.	1.0	2
114	Characterization of highly irradiated poly(vinyl chloride). <i>International Journal of Radiation Applications and Instrumentation Nuclear Tracks and Radiation Measurements</i> , 1992, 39, 397-400.	0.0	2
115	Decomposition of $W(CO)_6$ at high pressures and temperatures. <i>Journal of Applied Crystallography</i> , 2011, 44, 820-830.	4.5	2
116	Rhenium borides (Re_3B and ReB_2) mechanosynthesis and their use as a catalyst for H_2 production from biomass pyrolysis. <i>Materials Research Bulletin</i> , 2021, 137, 111180.	5.2	2
117	On the Image-Contrast Characteristics of Strains, Surface Rugosity, and Defects in Small Metallic Particles. <i>Journal of Electron Microscopy Technique</i> , 1987, 6, 367-376.	1.1	1
118	High Resolution Electron Microscopy Characterization of the Poorly Crystalline Structure of Molybdenum Disulfide-Based Catalysts. <i>Studies in Surface Science and Catalysis</i> , 1993, , 611-620.	1.5	1
119	Electronic Irradiation Effect on Bi-Mo-O Catalysts Observed in a Hrtm Study. <i>Materials Research Society Symposia Proceedings</i> , 1995, 404, 195.	0.1	1
120	Elastic and thermal properties of $W_7Re_{13}B$ and synthesis of a new ternary phase $W_{1.3}Re_{2.7}B_2$. <i>Solid State Sciences</i> , 2020, 105, 106211.	3.2	1
121	Microcrystalline particles formed in highly irradiated PVC. <i>Journal of Physics Condensed Matter</i> , 1993, 5, A325-A326.	1.8	0
122	Bismuth�Molybdenum�Oxide Catalyst: a High-Resolution Transmission Electron Microscopy Study. <i>Journal of Materials Science Letters</i> , 1999, 18, 555-557.	0.5	0
123	Observation and formation mechanism of individual graphene foils inside multi-walled carbon nanotubes. <i>Materials Research Bulletin</i> , 2011, 46, 658-661.	5.2	0
124	More on the melting of Lennard-Jones clusters. , 1989, , 181-183.		0
125	Thermal decay of Lennard-Jones clusters. , 1989, , 185-187.		0
126	Identification of diagenetic calcium arsenates using synchrotron-based micro X-ray diffraction. <i>Arsenic in the Environment Proceedings</i> , 2014, , 199-200.	0.0	0