J MuÃ±oz-SaldaÃ±a

List of Publications by Year
in descending order

118 papers	2,384 citations	236612 25 h-index	243296 44 g-index
122 all docs	122 docs citations	122 times ranked	2570 citing authors

#	Article	IF	Citations
1	Nanoscale reconstruction of surface crystallography from three-dimensional polarization distribution in ferroelectric bariumâ€“titanate ceramics. Applied Physics Letters, 1999, 74, 233-235.	1.5	194
2	High-resolution characterization of piezoelectric ceramics by ultrasonic scanning force microscopy techniques. Journal Physics D: Applied Physics, 2002, 35, 2621-2635.	1.3	140
3	Modeling and measurement of surface displacements in BaTiO3 bulk material in piezoresponse force microscopy. Journal of Applied Physics, 2004, 96, 563-568.	1.1	117
4	TiCN/TiNbCN multilayer coatings with enhanced mechanical properties. Applied Surface Science, 2010, 256, 5898-5904.	3.1	101
5	Stress induced movement of ferroelastic domain walls in BaTiO3 single crystals evaluated by scanning force microscopy. Surface Science, 2001, 480, L402-L410.	0.8	93
6	Fracture toughness from submicron derived indentation cracks. Applied Physics Letters, 2004, 84, 3055-3057.	1.5	79
7	Mechanical properties and low-temperature aging of tetragonal zirconia polycrystals processed by hot isostatic pressing. Journal of Materials Research, 2003, 18, 2415-2426.	1.2	68
8	Effect of applied bias voltage on corrosion-resistance for TiC1â^'xNx and Ti1â^'xNbxC1â^'yNy coatings. Applied Surface Science, 2010, 256, 2876-2883.	3.1	62
9	Mechanical, tribological, and electrochemical behavior of Cr1â^'xAlxN coatings deposited by r.f. reactive magnetron co-sputtering method. Applied Surface Science, 2010, 256, 2380-2387.	3.1	58
10	Corrosion study of Alumina/Yttria-Stabilized Zirconia (Al2O3/YSZ) nanostructured Thermal Barrier Coatings (TBC) exposed to high temperature treatment. Corrosion Science, 2009, 51, 2994-2999.	3.0	56
11	Composition and mechanical properties of AlC, AlN and AlCN thin films obtained by r.f. magnetron sputtering. Surface and Coatings Technology, 2009, 203, 1904-1907.	2.2	54
12	Effect of ZnO content on the physical, mechanical and chemical properties of glass-ceramics in the CaOâ€“SiO2â€“Al2O3 system. Ceramics International, 2020, 46, 4322-4328.	2.3	54
13	Enhancement of mechanical and tribological properties in AISI D3 steel substrates by using a non-isostructural CrN/AlN multilayer coating. Materials Chemistry and Physics, 2011, 125, 576-586.	2.0	52
14	Synthesis, Characterization and In Vitro Study of Synthetic and Bovine-Derived Hydroxyapatite Ceramics: A Comparison. Materials, 2018, 11, 333.	1.3	52
15	Domain rearrangement during nanoindentation in single-crystalline barium titanate measured by atomic force microscopy and piezoresponse force microscopy. Applied Physics Letters, 2005, 86, 192903.	1.5	47
16	Comparative Study of Ferroelectric and Piezoelectric Properties of BNT-BKT-BT Ceramics near the Phase Transition Zone. Materials, 2018, 11, 361.	1.3	44
17	Simulation of vibrational resonances of stiff AFM cantilevers by finite element methods. New Journal of Physics, 2009, 11, 083034.	1.2	42
18	Nanoindentation of BaTiO3: dislocation nucleation and mechanical twinning. Journal Physics D: Applied Physics, 2009, 42, 085502.	1.3	34

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19	Study of volumetric energy density limitations on the IN718 mesostructure and microstructure in laser powder bed fusion process. Journal of Manufacturing Processes, 2021, 64, 1261-1272.	2.8	33
20	Geometry and bluntness tip effects on elasticâ€“plastic behaviour during nanoindentation of fused silica: experimental and FE simulation. Modelling and Simulation in Materials Science and Engineering, 2010, 18, 075006.	0.8	31
21	Inhibition of the two-photon absorption response exhibited by a bilayer TiO2 film with embedded Au nanoparticles. Optics Express, 2010, 18, 16406.	1.7	30
22	Experimental and computational study of the morphological evolution of intermetallic compound (Cu6Sn5) layers at the Cu/Sn interface under isothermal soldering conditions. Acta Materialia, 2012, 60, 5125-5134.	3.8	30
23	Bismuth-based nanoparticles as the environmentally friendly replacement for lead-based piezoelectrics. RSC Advances, 2015, 5, 27295-27304.	1.7	29
24	Preparation of BaTiO3 single crystals using the modified SiO2-exaggerated grain growth method. Journal of the European Ceramic Society, 2002, 22, 681-688.	2.8	28
25	Nanoindentation testing of SiO2-PMMA hybrid films on acrylic substrates with variable coupling agent content. Journal of Sol-Gel Science and Technology, 2010, 54, 312-318.	1.1	28
26	Ferroelectric properties of manganese doped (Bi1/2Na1/2)TiO3 and (Bi1/2Na1/2)TiO3â€“BaTiO3 epitaxial thin films. Applied Surface Science, 2015, 359, 923-930.	3.1	27
27	Microstructural analysis of Ta-containing NiCoCrAlY bond coats deposited by HVOF on different Ni-based superalloys. Surface and Coatings Technology, 2018, 354, 214-225.	2.2	26
28	Mechanical and thermal properties of SiO2â€“PMMA monoliths. Journal of Non-Crystalline Solids, 2006, 352, 3561-3566.	1.5	24
29	Kinetic Study of the Competitive Growth Between Î¸-Al2O3 and Î±-Al2O3 During the Early Stages of Oxidation of Î²-(Ni,Pt)Al Bond Coat Systems: Effects of Low Oxygen Partial Pressure and Temperature. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 726-738.	1.1	24
30	High-toughness/low-friction ductile epoxy coatings reinforced with carbon nanostructures. Polymer Testing, 2015, 47, 113-119.	2.3	24
31	Bovine-derived hydroxyapatite coatings deposited by high-velocity oxygen-fuel and atmospheric plasma spray processes: A comparative study. Surface and Coatings Technology, 2020, 381, 125193.	2.2	24
32	Indentation size effect in barium titanate with spherical tipped nanoindenters. Applied Physics Letters, 2006, 88, 091908.	1.5	22
33	Effect of HVOF Processing Parameters on the Properties of NiCoCrAlY Coatings by Design of Experiments. Journal of Thermal Spray Technology, 2014, 23, 950-961.	1.6	22
34	High temperature interaction of volcanic ashes with 7YSZ TBC's produced by APS: Infiltration behavior and phase stability. Surface and Coatings Technology, 2019, 378, 124915.	2.2	21
35	Phosphate removal from aqueous solutions by heat treatment of eggshell and palm fiber. Journal of Environmental Chemical Engineering, 2021, 9, 104684.	3.3	21
36	Enhancement of surface mechanical properties by using TiN[BCN/BN]n/c-BN multilayer system. Applied Surface Science, 2010, 257, 1098-1104.	3.1	20

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37	A novel bismuth-based lead-free piezoelectric transducer immunosensor for carbaryl quantification. Sensors and Actuators B: Chemical, 2019, 285, 423-430.	4.0	19
38	High ionic conductivity dysprosium and tantalum Co-doped bismuth oxide electrolyte for low-temperature SOFCs. Ionics, 2020, 26, 4579-4586.	1.2	19
39	Ferroelectric domains in coarse-grained lead zirconate titanate ceramics characterized by scanning force microscopy. Journal of Materials Research, 2003, 18, 1777-1786.	1.2	18
40	Influence of the N2 partial pressure on the mechanical properties and tribological behavior of zirconium nitride deposited by reactive magnetron sputtering. Surface and Coatings Technology, 2008, 202, 3653-3660.	2.2	18
41	Effects of VC additions on the mechanical properties of bimodal WCâ€“Co HVOF thermal sprayed coatings measured by nanoindentation. International Journal of Refractory Metals and Hard Materials, 2015, 48, 167-178.	1.7	18
42	Optimization of Inconel 718 thick deposits by cold spray processing and annealing. Surface and Coatings Technology, 2019, 378, 124997.	2.2	18
43	Atomic force microscopy cantilever simulation by finite element methods for quantitative atomic force acoustic microscopy measurements. Journal of Materials Research, 2006, 21, 3072-3079.	1.2	16
44	Determination of fracture toughness and energy dissipation of SiO2-poly(methyl metacrylate) hybrid films by nanoindentation. Thin Solid Films, 2011, 519, 5528-5534.	0.8	15
45	First Stages of Oxidation of Pt-Modified Nickel Aluminide Bond Coat Systems at Low Oxygen Partial Pressure. Oxidation of Metals, 2012, 78, 269-284.	1.0	15
46	Microstructure and mechanical properties of Al2O3â€“YSZ spherical polycrystalline composites. Journal of the European Ceramic Society, 2013, 33, 1907-1916.	2.8	15
47	Preferred Growth Orientation of Apatite Crystals on Biological Hydroxyapatite Enriched with Bioactive Glass: A Biomimetic Behavior. Crystal Growth and Design, 2019, 19, 5005-5018.	1.4	15
48	Influence of HVOF parameters on HAp coating generation: An integrated approach using process maps. Surface and Coatings Technology, 2019, 358, 299-307.	2.2	15
49	Creep behavior of polycrystalline and single crystal Ni-based superalloys coated with Ta-containing NiCoCrAlY by high-velocity oxy-fuel spraying. Scripta Materialia, 2020, 178, 522-526.	2.6	15
50	Nanoindentation characterization of the micro-lamellar arrangement of black coral skeleton. Journal of Structural Biology, 2012, 177, 349-357.	1.3	14
51	Microstructure and lifetime of Hf or Zr doped sputtered NiAlCr bond coat/7YSZ EB-PVD TBC systems. Surface and Coatings Technology, 2018, 335, 41-51.	2.2	13
52	Structure and mechanical properties of (Ti,Al)(B,N) coatings fabricated by reactive DC magnetron sputtering. Vacuum, 2004, 76, 161-164.	1.6	12
53	Indentation size effect in soft PZT ceramics with tetragonal structure close to the MPB. Journal Physics D: Applied Physics, 2008, 41, 035407.	1.3	12
54	Hybrid natural-synthetic chitosan resin: thermal and mechanical behavior. Journal of Biomaterials Science, Polymer Edition, 2008, 19, 259-273.	1.9	12

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55	Microstructural evaluation and nanohardness of an AlCoCuCrFeNiTi high-entropy alloy. International Journal of Minerals, Metallurgy and Materials, 2019, 26, 634-641.	2.4	12
56	Synthesis and mechanical characterization by nanoindentation of polycrystalline YAG with Eu and Nd additions. Ceramics International, 2013, 39, 3141-3149.	2.3	11
57	Piezoelectric and ferroelectric response enhancement in multiferroic YCrO 3 films by reduction in thickness. Materials Letters, 2014, 114, 148-151.	1.3	11
58	Isothermal phase transformations of bovine-derived hydroxyapatite/bioactive glass: A study by design of experiments. Journal of the European Ceramic Society, 2019, 39, 1613-1624.	2.8	11
59	Hardness and wearing properties of SiO₂â€“PMMA hybrid coatings reinforced with Al₂O₃ nanowhiskers. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 4254-4259.	0.8	10
60	Influence of bias voltage on the crystallographic orientation and morphology of sputter deposited yttria stabilized zirconia (YSZ) thin films. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 4288-4293.	0.8	10
61	Preparation of neodymium-doped yttrium aluminum garnet powders and fibers. Journal of Rare Earths, 2008, 26, 670-673.	2.5	10
62	Effects of the Modification of Processing Parameters on Mechanical Properties of HVOF Cr2C3-25NiCr Coatings. Journal of Thermal Spray Technology, 2015, 24, 938-946.	1.6	10
63	Electrochemical Corrosion of HVOF-Sprayed NiCoCrAlY Coatings in CO2-Saturated Brine. Journal of Thermal Spray Technology, 2016, 25, 1330-1343.	1.6	10
64	Unraveling the Caâ€“P species produced over the time during phosphorus removal from aqueous solution using biocomposite of eggshell-palm mesocarp fiber. Chemosphere, 2022, 287, 132333.	4.2	10
65	Nanoindentation of melt-extracted amorphous YAG and YAG:Eu, Nd micrometric fibers synthesized by the citrate precursor method. Journal of the European Ceramic Society, 2010, 30, 73-79.	2.8	9
66	Thermal Spray Deposition, Phase Stability and Mechanical Properties of La2Zr2O7/LaAlO3 Coatings. Journal of Thermal Spray Technology, 2017, 26, 1198-1206.	1.6	9
67	Determination of strontium and lanthanum zirconates in YPSZâ€“LSM mixtures for SOFC. Journal of Power Sources, 2008, 180, 209-214.	4.0	8
68	Structural evolution of B2-NiAl synthesized by high-energy ball milling. Journal of Materials Science, 2013, 48, 265-272.	1.7	8
69	Mechanosynthesis of LaMnO3 from different manganese oxides. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 4054-4063.	0.8	7
70	Synthesis of lanthanum aluminate by reverse chemical precipitation using pseudoboehmite as alumina precursor. Applied Radiation and Isotopes, 2016, 117, 96-99.	0.7	7
71	Finite-Element Simulation of Cantilever Vibrations in Atomic Force Acoustic Microscopy. Journal of Physics: Conference Series, 2007, 61, 293-297.	0.3	6
72	Influence of substrate temperature and N₂/Ar flow ratio on the stoichiometry, structure and hardness of TaNx coatings deposited by DC reactive sputtering. Surface and Interface Analysis, 2015, 47, 1015-1019.	0.8	6

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73	Influence of Oxidation Treatments and Surface Finishing on the Electrochemical Behavior of Ni-20Cr HVOF Coatings. Journal of Materials Engineering and Performance, 2017, 26, 6064-6074.	1.2	6
74	Microstructural analysis after furnace cyclic testing of pre-oxidized ReneN5/(Ni,Pt)Al/7YSZ thermal barrier coatings. Surface and Coatings Technology, 2020, 403, 126376.	2.2	6
75	In-vitro bioactivity and cytotoxicity of polarized (Bi0.5Na0.5)TiO3 ceramics as a novel biomaterial for bone repair. Materials Letters, 2020, 275, 128078.	1.3	6
76	Structure and thermal stability of ball milled Tiâ€“Alâ€“H powders. Journal of Alloys and Compounds, 2005, 388, 266-273.	2.8	5
77	Preparation of Size Controlled Nanometric Spheres of Colloidal Silica for Synthetic Opal Manufacture. Materials Science Forum, 2006, 509, 187-192.	0.3	5
78	The Effect of Different SO2/SO3 Catalytic Media on High-Temperature Corrosion Processes (Hot) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 5	1.0	5
79	Study of the Isothermal Oxidation Process and Phase Transformations in B2-(Ni,Pt)Al/RENE-N5 System. Metals, 2016, 6, 208.	1.0	5
80	Effect of grit-blasting on the competitive growth between Î¸-Al2O3 and Î±-Al2O3 during the oxidation of Î²-(Ni,Pt)Al bond coat systems. Materials Letters, 2020, 277, 128288.	1.3	5
81	Apatite Mineralization Process from Silicocarnotite Bioceramics: Mechanism of Crystal Growth and Maturation. Crystal Growth and Design, 2020, 20, 4030-4045.	1.4	5
82	Statistical characterization of the lapping plate surface morphology evolution in a diamond charging process. Measurement Science and Technology, 2008, 19, 065706.	1.4	4
83	Mechanosynthesis and reactive sintering of Ba_{1â€“x}Sr_xTiO₃ceramics. Materials Research Innovations, 2009, 13, 368-371.	1.0	4
84	Corrosion Performance of AISI 304 Stainless Steel in CO2-Saturated Brine Solution. Protection of Metals and Physical Chemistry of Surfaces, 2019, 55, 1226-1235.	0.3	4
85	Reaction Products from High Temperature Treatments of (LaxGd1â^'x)2Zr2O7 System and Volcanic Ash Powder Mixtures. Jom, 2022, 74, 2791-2808.	0.9	4
86	Nanoindentation and structural characterization of molded starch. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 4242-4247.	0.8	3
87	Relationship Between Crystalline Structure and Hardness of Ti-Si-N-O Coatings Fabricated by dc Sputtering. Journal of Materials Engineering and Performance, 2008, 17, 580-585.	1.2	3
88	Correlation between optical characterization of the plasma in reactive magnetron sputtering deposition of Zrâ€“N on SS 316L and surface and mechanical properties of the deposited films. Applied Surface Science, 2008, 254, 4632-4637.	3.1	3
89	PZT ferroelectric ceramics obtained by solâ€“gel method using 2-metoxyethanol route for pyroelectric sensors. Materials Research Innovations, 2009, 13, 375-378.	1.0	3
90	Piezoresponse Force Microscopy Studies of pc-BiFeO₃ Thin Films Produced by the Simultaneous Laser Ablation of Bi and FeO₃. Materials Research Society Symposia Proceedings, 2012, 1477, 52.	0.1	3

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91	Following the Integration of Diamond Particles on the Lapping-Plate Surface: Towards a More Efficient Charging Process. Journal of Tribology, 2012, 134, .	1.0	3
92	Thermal Characterization of PZT Ceramics Obtained by Mechanically Activated Mixed Oxides Using Different Pb Sources. International Journal of Thermophysics, 2012, 33, 2366-2376.	1.0	3
93	Nanohardness and Microstructure of NiCoAlFeCu and NiCoAlFeCuCr Alloys Produced by Mechanical Alloying. Microscopy and Microanalysis, 2014, 20, 2106-2107.	0.2	3
94	Bi4Si3O12 thin films for scintillator applications. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	3
95	Effect of HVOF Process Parameters on TiO2 Coatings: An Approach Using DoE and First-Order Process Maps. Journal of Thermal Spray Technology, 2019, 28, 1160-1172.	1.6	3
96	Controlling micro-porous size in TiO2 pellets processed by sol-gel and rapid liquid phase sintering. Ceramics International, 2019, 45, 14510-14516.	2.3	3
97	Effect of pre-oxidation treatments on the structural, microstructural, and chemical properties of Î²-(Ni,Pt)Al system. Surface and Coatings Technology, 2019, 367, 156-164.	2.2	3
98	Manufacturing of Photoactive Î²-Bismuth Oxide by Flame Spray Oxidation. Journal of Thermal Spray Technology, 2021, 30, 1107-1119.	1.6	3
99	Oxidation behavior of dense Yttrium doped B2-NiAl bulk material fabricated by ball milling self-propagating high-temperature synthesis and densified by spark plasma sintering. Surface and Coatings Technology, 2021, 421, 127448.	2.2	3
100	Eco-friendly materials obtained through a simple thermal transformation of water hyacinth (Eichhornia Crassipes) for the removal and immobilization of Cd2+ and Cu2+ from aqueous solutions. Environmental Nanotechnology, Monitoring and Management, 2021, 16, 100574.	1.7	3
101	Thermal Stability, Structure and Mechanical Properties of TiSiN Coatings Prepared by Reactive DC Magnetron Co-Sputtering. Materials Science Forum, 2006, 509, 93-98.	0.3	2
102	Inter Laboratory Comparison and Analysis on Mechanical Properties by Nanoindentation. Materials Research Society Symposia Proceedings, 2009, 1243, 1.	0.1	2
103	Surface texture and tetragonality of mechanically affected powders and sintered ceramics of BaTiO₃. Materials Research Innovations, 2009, 13, 391-395.	1.0	2
104	Swirling Effects in Atmospheric Plasma Spraying Process: Experiments and Simulation. Coatings, 2020, 10, 388.	1.2	2
105	Accelerated bioactive behavior of Nagelschmidtite bioceramics: Mimicking the nano and microstructural aspects of biological mineralization. Journal of the European Ceramic Society, 2021, 41, 7921-7934.	2.8	2
106	Estimate of the Crystallization Kinetics in Stoichiometry Compositions Films of Ge:Sb:Te. Journal of Surface Engineered Materials and Advanced Technology, 2012, 02, 44-46.	0.2	2
107	Visible-light photoactive thermally sprayed coatings deposited from spray-dried (Na0.5Bi0.5)TiO3 microspheres. Surface and Coatings Technology, 2021, 427, 127851.	2.2	2
108	Mechanical characterization of thin amorphous tungstenâ€“carbon (Wx Cy) films prepared by DC-cosputtering. Vacuum, 2004, 76, 173-176.	1.6	1

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109	PIEZORESPONSE FORCE MICROSCOPY STUDIES ON (100), (110) AND (111) EPITAXIALLY GROWTH BiFeO3 THIN FILMS. Materials Research Society Symposia Proceedings, 2012, 1477, 7.	0.1	1
110	Biomimetic titania/hydroxyapatite coating of CrCoMo microimplants enhances biocompatibility and reduces metal-associated toxicity. Toxicology Letters, 2016, 259, S154.	0.4	1
111	Characterization of mechanical properties and electrochemical behaviour in a HankÂ´s solution of 316L/Cr₁₋ _xAl_xN system. Journal of Physics: Conference Series, 2017, 786, 012037.	0.3	1
112	Synthesis and characterization of 50-50 wt. lanthanum aluminate-lanthanum zirconate composite dried by spray-drying. MRS Advances, 2020, 5, 2173-2179.	0.5	1
113	Microstructural Analysis of TiAlxNyOz Coatings Fabricated by DC Reactive Sputtering. Journal of Materials Engineering and Performance, 2009, 18, 102-105.	1.2	0
114	Effect of Surface Substrate Roughness and of Chelating Agent on the Microstructure and Mechanical Properties of Electroless Processed Brass Coatings. Industrial & Engineering Chemistry Research, 2010, 49, 6388-6393.	1.8	0
115	Biocompatibility evaluation of hydroxyapatite coatings for prosthetic applications. Toxicology Letters, 2015, 238, S94.	0.4	0
116	Solid state synthesis of Bi 0 . 4 Sr 0 . 6 FeO 3 â˜’ Î´ powder for SOFC applications. Hyperfine Interactions, 2017, 238, 1.	0.2	0
117	Estructuras Porosas de TiO2-Na0.8Ti4O8-Na2Ti6O13: Propiedades Superficiales y EvaluaciÃ³n CitotÃ³xica. Informacion Tecnologica (discontinued), 2018, 29, 95-102.	0.1	0
118	Tribological behavior of multiphase super hard boron nitride films deposited by HiPIMS. Materials Letters, 2022, 318, 132167.	1.3	0