Emilio Jimenez-Pique

List of Publications by Year
in descending order

99	2,472	185998 28	243296 44
papers	citations	h-index	g-index

104	104	104	2516
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Phase transformation and subsurface damage in 3Y-TZP after sandblasting. Dental Materials, 2013, 29, 566-572.	1.6	122
2	Subsurface evaluation of hydrothermal degradation of zirconia. Acta Materialia, 2011, 59, 473-484.	3.8	99
3	Quantification of hydrothermal degradation in zirconia by nanoindentation. Acta Materialia, 2008, 56, 4206-4216.	3.8	94
4	Study of the recycled aggregates natureâ€™s influence on the aggregateâ€“cement paste interface and ITZ. Construction and Building Materials, 2014, 68, 677-684.	3.2	83
5	Intrinsic hardness of constitutive phases in WCâ€“Co composites: Nanoindentation testing, statistical analysis, WC crystal orientation effects and flow stress for the constrained metallic binder. Journal of the European Ceramic Society, 2015, 35, 3419-3425.	2.8	68
6	Mechanical characterization of nano-reinforced silica based solâ€“gel hybrid coatings on AISI 316L stainless steel using nanoindentation techniques. Surface and Coatings Technology, 2009, 203, 3325-3331.	2.2	67
7	Hall-Petch strengthening of the constrained metallic binder in WCâ€“Co cemented carbides: Experimental assessment by means of massive nanoindentation and statistical analysis. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 676, 487-491.	2.6	66
8	Microstructural changes in ground 3Y-TZP and their effect on mechanical properties. Acta Materialia, 2011, 59, 6670-6683.	3.8	64
9	Nanoindentation of yttria-doped zirconia: Effect of crystallographic structure on deformation mechanisms. Journal of Materials Research, 2009, 24, 719-727.	1.2	60
10	Corrosion protection of carbon steel by silica-based hybrid coatings containing cerium salts: Effect of silica nanoparticle content. Surface and Coatings Technology, 2015, 265, 106-116.	2.2	60
11	Contact fatigue behavior of PVD-coated hardmetals. International Journal of Refractory Metals and Hard Materials, 2009, 27, 323-331.	1.7	58
12	Tuning hardness and fracture resistance of ZrN/Zr0.63Al0.37N nanoscale multilayers by stress-induced transformation toughening. Acta Materialia, 2015, 89, 22-31.	3.8	57
13	Nanoindentation of TiO₂thin films with different microstructures. Journal Physics D: Applied Physics, 2009, 42, 145305.	1.3	56
14	Zn-Mg and Zn-Cu alloys for stenting applications: From nanoscale mechanical characterization to in vitro degradation and biocompatibility. Bioactive Materials, 2021, 6, 4430-4446.	8.6	53
15	Dependence of nanoindentation hardness with crystallographic orientation of austenite grains in metastable stainless steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 645, 188-195.	2.6	50
16	Osseointegration improvement by plasma electrolytic oxidation of modified titanium alloys surfaces. Journal of Materials Science: Materials in Medicine, 2015, 26, 72.	1.7	48
17	A parametric study of laser interference surface patterning of dental zirconia: Effects of laser parameters on topography and surface quality. Dental Materials, 2017, 33, e28-e38.	1.6	46
18	Evaluation of fracture toughness of small volumes by means of cube-corner nanoindentation. Scripta Materialia, 2012, 66, 670-673.	2.6	44

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19	Growth and thermal stability of TiN/ZrAlN: Effect of internal interfaces. Acta Materialia, 2016, 121, 396-406.	3.8	44
20	Contact damage and fracture micromechanisms of multilayered TiN/CrN coatings at micro- and nano-length scales. Thin Solid Films, 2014, 571, 308-315.	0.8	42
21	Nanosecond-laser patterning of 3Y-TZP: Damage and microstructural changes. Journal of the European Ceramic Society, 2017, 37, 4876-4887.	2.8	40
22	FIB/FESEM experimental and analytical assessment of R-curve behavior of WCâ€“Co cemented carbides. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 645, 142-149.	2.6	34
23	Mechanical deformation of WCâ€“Co composite micropillars under uniaxial compression. International Journal of Refractory Metals and Hard Materials, 2016, 54, 70-74.	1.7	32
24	Focused ion beam tomography of WC-Co cemented carbides. International Journal of Refractory Metals and Hard Materials, 2017, 67, 9-17.	1.7	32
25	Nanocharacterization techniques for investigating the durability of wood coatings. European Polymer Journal, 2012, 48, 441-453.	2.6	31
26	Structure, deformation and fracture of arc evaporated Zrâ€“Siâ€“N hard films. Surface and Coatings Technology, 2014, 258, 1100-1107.	2.2	31
27	Focused ion beam tomography of zirconia degraded under hydrothermal conditions. Journal of the European Ceramic Society, 2012, 32, 2129-2136.	2.8	30
28	Contact damage and residual strength in hardmetals. International Journal of Refractory Metals and Hard Materials, 2012, 30, 121-127.	1.7	29
29	Microstructural changes in 3Y-TZP induced by scratching and indentation. Journal of the European Ceramic Society, 2012, 32, 3919-3927.	2.8	27
30	Geometry of nanoindentation cube-corner cracks observed by FIB tomography: Implication for fracture resistance estimation. Journal of the European Ceramic Society, 2015, 35, 2949-2955.	2.8	26
31	Nanoindentation with spherical tips of single crystals of YBCO textured by the Bridgman technique: Determination of indentation stressâ€“strain curves. Journal of the European Ceramic Society, 2010, 30, 1477-1482.	2.8	25
32	Silica-based hybrid coatings for corrosion protection of carbon steel. Part I: Effect of pretreatment with phosphoric acid. Surface and Coatings Technology, 2013, 236, 476-484.	2.2	25
33	Deformation mechanisms induced under high cycle fatigue tests in a metastable austenitic stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 597, 232-236.	2.6	24
34	Corrosion damage in WCâ€“Co cemented carbides: residual strength assessment and 3D FIB-FESEM tomography characterisation. Powder Metallurgy, 2014, 57, 324-330.	0.9	23
35	Berkovich nanoindentation and deformation mechanisms in a hardmetal binder-like cobalt alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 621, 128-132.	2.6	23
36	Low temperature degradation of laser patterned 3Y-TZP: Enhancement of resistance after thermal treatment. Journal of the European Ceramic Society, 2018, 38, 1742-1749.	2.8	23

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37	Silver Nanoparticles for Conductive Inks: From Synthesis and Ink Formulation to Their Use in Printing Technologies. Metals, 2022, 12, 234.	1.0	23
38	Stressâ€“corrosion cracking by indentation techniques of a glass coating on Ti6Al4V for biomedical applications. Journal of the European Ceramic Society, 2006, 26, 1159-1169.	2.8	22
39	Microstructural influence on tolerance to corrosion-induced damage in hardmetals. Materials and Design, 2016, 111, 36-43.	3.3	22
40	Mechanical reliability of dental grade zirconia after laser patterning. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 86, 257-263.	1.5	22
41	Nanoindentation of Al2O3/Al2TiO5 composites: Small-scale mechanical properties of Al2TiO5 as reinforcement phase. Journal of the European Ceramic Society, 2012, 32, 3723-3731.	2.8	21
42	Spherical instrumented indentation of porous nanocrystalline zirconia. Journal of the European Ceramic Society, 2012, 32, 123-132.	2.8	21
43	Nanoindentation and nanoscratch properties of mullite-based environmental barrier coatings: Influence of chemical composition â€" Al/Si ratio. Surface and Coatings Technology, 2014, 239, 49-57.	2.2	21
44	A comparative study of the contact fatigue behavior and associated damage micromechanisms of TiN- and WC:H-coated cold-work tool steel. Tribology International, 2015, 88, 263-270.	3.0	21
45	Characterization of interfaces between TiCN and iron-base binders. International Journal of Refractory Metals and Hard Materials, 2017, 63, 32-37.	1.7	21
46	Microstructure, interfaces and properties of 3YTZP ceramic composites with 10 and 20â€¯vol% different graphene-based nanostructures as fillers. Journal of Alloys and Compounds, 2019, 777, 213-224.	2.8	21
47	Hertzian contact fatigue on alumina/alumina-zirconia laminated composites. Journal of the European Ceramic Society, 2005, 25, 3393-3401.	2.8	20
48	Nanoindentation of multilayered epitaxial YBa2Cu3O7-Î´ thin films and coated conductors. Thin Solid Films, 2011, 519, 2470-2476.	0.8	20
49	Nanoindentation of nanocolumnar TiO2 thin films with single and stacked zig-zag layers. Thin Solid Films, 2014, 550, 444-449.	0.8	20
50	Plastic deformation and damage induced by fatigue in TWIP steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 628, 410-418.	2.6	20
51	Strength and reliability of WC-Co cemented carbides: Understanding microstructural effects on the basis of R-curve behavior and fractography. International Journal of Refractory Metals and Hard Materials, 2018, 71, 221-226.	1.7	20
52	Instrumented Indentation of Layered Ceramic Materials. Key Engineering Materials, 2007, 333, 107-116.	0.4	19
53	Deformation of polycrystalline TRIP stainless steel micropillars. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 647, 51-57.	2.6	19
54	Contact damage investigation of CVD carbonitride hard coatings deposited on cemented carbides. International Journal of Refractory Metals and Hard Materials, 2020, 86, 105050.	1.7	19

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55	Mechanical behavior of 3Al2O3Â·2SiO2 films under nanoindentation. Acta Materialia, 2012, 60, 5889-5899.	3.8	17
56	Tomography of indentation cracks in feldspathic dental porcelain on zirconia. Dental Materials, 2013, 29, 348-356.	1.6	17
57	Enhanced Hydrothermal Resistance of Yâ€‹scp›TZP‹/scp› Ceramics Through Colloidal Processing. Journal of the American Ceramic Society, 2013, 96, 1070-1076.	1.9	17
58	Scale dependence of the Young's modulus measured by nanoindentation in columnar YSZ EB-PVD thermal barriers coatings. Philosophical Magazine, 2006, 86, 5441-5451.	0.7	16
59	Hertzian cone crack propagation on polycrystalline materials: Role of R-curve and residual stresses. Acta Materialia, 2008, 56, 265-273.	3.8	16
60	Fatigue susceptibility under contact loading of hardmetals coated with ceramic films. Procedia Engineering, 2010, 2, 299-308.	1.2	16
61	Comparative Study of Tribomechanical Properties of HiPIMS with Positive Pulses DLC Coatings on Different Tools Steels. Coatings, 2021, 11, 28.	1.2	16
62	Cross-sectional nanoindentation and nanoscratch of compositionally graded mullite films. Surface and Coatings Technology, 2011, 206, 1927-1931.	2.2	15
63	Chemical and mechanical properties of anodized cp-titanium in NH4 H2PO4/NH4F media for biomedical applications. Surface and Coatings Technology, 2012, 206, 4791-4798.	2.2	14
64	High hardness, low Young's modulus and low friction of nanocrystalline ZrW2 Laves phase and Zr1â^'xWx thin films. Journal of Physics and Chemistry of Solids, 2012, 73, 554-558.	1.9	14
65	Contact fatigue of veneer feldspathic porcelain on dental zirconia. Dental Materials, 2015, 31, 217-224.	1.6	12
66	Enhancement of mechanical properties of ceria-calcia stabilized zirconia by alumina reinforcement. Journal of the European Ceramic Society, 2020, 40, 3714-3722.	2.8	12
67	Mechanical properties of ceria-calcia stabilized zirconia ceramics with alumina additions. Journal of the European Ceramic Society, 2021, 41, 5602-5612.	2.8	12
68	DGEBA thermosets modified with an amphiphilic star polymer. Study on the effect of the initiator on the curing process and morphology. Polymer, 2011, 52, 5009-5017.	1.8	11
69	Influence of temperature and hot corrosion on the microâ€“nanomechanical behavior of protective mullite EBCs. International Journal of Refractory Metals and Hard Materials, 2015, 49, 383-391.	1.7	11
70	Contact strength of ceramic laminates. Composites Science and Technology, 2008, 68, 209-214.	3.8	10
71	Influence of microstructure and mechanical properties on the tribological behavior of reactive arc deposited Zr-Si-N coatings at room and high temperature. Surface and Coatings Technology, 2016, 304, 393-400.	2.2	10
72	Surface contact degradation of multilayer ceramics under cyclic subcritical loads and high number of cycles. International Journal of Refractory Metals and Hard Materials, 2005, 23, 375-381.	1.7	9

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73	Damage induced by monotonic and cyclic spherical indentation in polycrystalline diamond (PCD). International Journal of Refractory Metals and Hard Materials, 2015, 49, 292-301.	1.7	9
74	Nanoindentation and scratch resistance of multilayered TiO2-SiO2coatings with different nanocolumnar structures deposited by PV-OAD. Journal Physics D: Applied Physics, 2016, 49, 135104.	1.3	9
75	Low Temperature Degradation and Mechanical Properties of Alumina Reinforced Ceria-Zirconia by Colloidal Processing. Journal of the European Ceramic Society, 2021, 41, 1459-1470.	2.8	9
76	Delamination under Hertzian cyclic loading of a glass coating on Ti6al4v for implants. Journal of Materials Science, 2006, 41, 5134-5145.	1.7	8
77	New epoxy thermosets obtained from diglycidylether of bisphenol a and modified hyperbranched polyesters with long aliphatic chains cured by diisocyanates. Polymer Engineering and Science, 2012, 52, 2597-2610.	1.5	8
78	Instrumented indentation on aluminaâ€“alumina/zirconia multilayered composites with residual stresses. Philosophical Magazine, 2006, 86, 5371-5382.	0.7	7
79	Small scale fracture behaviour of multilayer TiN/CrN systems: Assessment of bilayer thickness effects by means of ex-situ tests on FIB-milled micro-cantilevers. Surface and Coatings Technology, 2016, 308, 414-417.	2.2	7
80	Nanoindentation of Bridgman YBCO samples. Ceramics International, 2012, 38, 2035-2042.	2.3	6
81	Mechanical properties of Al2O3 inverse opals by means of nanoindentation. Journal Physics D: Applied Physics, 2016, 49, 455303.	1.3	6
82	Green Nanocoatings Based on the Deposition of Zirconium Oxide: The Role of the Substrate. Materials, 2021, 14, 1043.	1.3	6
83	Corrosion induced degradation of textured YBCO under operation in high humidity conditions. Surface and Coatings Technology, 2012, 206, 4256-4261.	2.2	5
84	Structural and mechanical properties of Zr1â^'x Mox thin films: From the nano-crystalline to the amorphous state. Journal of Alloys and Compounds, 2017, 729, 137-143.	2.8	5
85	Extraction of microstructural parameters from sculptured thin films nanoindentation. Surface and Coatings Technology, 2021, 425, 127696.	2.2	5
86	Critical Influence of the Processing Route on the Mechanical Properties of Zirconia Composites with Graphene Nanoplatelets. Materials, 2021, 14, 108.	1.3	5
87	Yield strength, shear stress and toughness of YBCO samples textured by Bridgman technique. Journal of Physics: Conference Series, 2008, 97, 012116.	0.3	4
88	Fracture micromechanisms and mechanical behavior of YBCO bulk superconductors at 77 and 300K. Ceramics International, 2014, 40, 12797-12806.	2.3	4
89	Strength of pre-Roman amphorae: Comparison of the different types. Journal of Archaeological Science: Reports, 2015, 2, 405-417.	0.2	4
90	Influence of the elastic mismatch on the Hertzian cone crack path in ceramic bilayers. Journal of the European Ceramic Society, 2011, 31, 1951-1955.	2.8	3

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91	Assessment of fracture toughness of cemented carbides by using a shallow notch produced by ultrashort pulsed laser ablation, and a comparative study with tests employing precracked specimens. International Journal of Refractory Metals and Hard Materials, 2022, 108, 105949.	1.7	3
92	Measuring the fracture toughness of single WC grains of cemented carbides by means of microcantilever bending and micropillar splitting. International Journal of Refractory Metals and Hard Materials, 2021, 98, 105529.	1.7	2
93	Surface mechanical properties of advanced zirconia after hydrothermal exposure. IOP Conference Series: Materials Science and Engineering, 2012, 31, 012015.	0.3	1
94	Resistance to Contact Deformation and Damage of Hard Ceramics. , 2014, , 367-383.		1
95	Contact fatigue behaviour of CVD coated cemented carbides in dry and wet conditions. Wear, 2022, 492-493, 204215.	1.5	1
96	Fracture and crack profile fictitious crack modeling of porous poly(methyl methacrylate). Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 1112-1122.	2.4	0
97	Influence of the Cone Crack Geometry on the Strength Degradation. Key Engineering Materials, 2007, 333, 255-258.	0.4	0
98	Contact damage in artificially aged 3Y-TZP. IOP Conference Series: Materials Science and Engineering, 2009, 5, 012013.	0.3	0
99	Indentation of Ceramics. , 2021, , 718-732.		0