

Emilio Jimenez-Pique

List of Publications by Year in descending order

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99
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citations

185998

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104
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104
docs citations

104
times ranked

2516
citing authors

#	ARTICLE	IF	CITATIONS
1	Contact fatigue behaviour of CVD coated cemented carbides in dry and wet conditions. <i>Wear</i> , 2022, 492-493, 204215.	1.5	1
2	Silver Nanoparticles for Conductive Inks: From Synthesis and Ink Formulation to Their Use in Printing Technologies. <i>Metals</i> , 2022, 12, 234.	1.0	23
3	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. <i>International Journal of Refractory Metals and Hard Materials</i> , 2022, 108, 105949.	1.7	3
4	Low Temperature Degradation and Mechanical Properties of Alumina Reinforced Ceria-Zirconia by Colloidal Processing. <i>Journal of the European Ceramic Society</i> , 2021, 41, 1459-1470.	2.8	9
5	Indentation of Ceramics. , 2021, , 718-732.		0
6	Green Nanocoatings Based on the Deposition of Zirconium Oxide: The Role of the Substrate. <i>Materials</i> , 2021, 14, 1043.	1.3	6
7	Measuring the fracture toughness of single WC grains of cemented carbides by means of microcantilever bending and micropillar splitting. <i>International Journal of Refractory Metals and Hard Materials</i> , 2021, 98, 105529.	1.7	2
8	Mechanical properties of ceria-calcia stabilized zirconia ceramics with alumina additions. <i>Journal of the European Ceramic Society</i> , 2021, 41, 5602-5612.	2.8	12
9	Extraction of microstructural parameters from sculptured thin films nanoindentation. <i>Surface and Coatings Technology</i> , 2021, 425, 127696.	2.2	5
10	Zn-Mg and Zn-Cu alloys for stenting applications: From nanoscale mechanical characterization to in vitro degradation and biocompatibility. <i>Bioactive Materials</i> , 2021, 6, 4430-4446.	8.6	53
11	Comparative Study of Tribomechanical Properties of HiPIMS with Positive Pulses DLC Coatings on Different Tools Steels. <i>Coatings</i> , 2021, 11, 28.	1.2	16
12	Critical Influence of the Processing Route on the Mechanical Properties of Zirconia Composites with Graphene Nanoplatelets. <i>Materials</i> , 2021, 14, 108.	1.3	5
13	Contact damage investigation of CVD carbonitride hard coatings deposited on cemented carbides. <i>International Journal of Refractory Metals and Hard Materials</i> , 2020, 86, 105050.	1.7	19
14	Enhancement of mechanical properties of ceria-calcia stabilized zirconia by alumina reinforcement. <i>Journal of the European Ceramic Society</i> , 2020, 40, 3714-3722.	2.8	12
15	Microstructure, interfaces and properties of 3YTZP ceramic composites with 10 and 20 vol% different graphene-based nanostructures as fillers. <i>Journal of Alloys and Compounds</i> , 2019, 777, 213-224.	2.8	21
16	Strength and reliability of WC-Co cemented carbides: Understanding microstructural effects on the basis of R-curve behavior and fractography. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 71, 221-226.	1.7	20
17	Low temperature degradation of laser patterned 3Y-TZP: Enhancement of resistance after thermal treatment. <i>Journal of the European Ceramic Society</i> , 2018, 38, 1742-1749.	2.8	23
18	Mechanical reliability of dental grade zirconia after laser patterning. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 86, 257-263.	1.5	22

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19	Focused ion beam tomography of WC-Co cemented carbides. <i>International Journal of Refractory Metals and Hard Materials</i> , 2017, 67, 9-17.	1.7	32
20	Structural and mechanical properties of Zr _{1-x} Mox thin films: From the nano-crystalline to the amorphous state. <i>Journal of Alloys and Compounds</i> , 2017, 729, 137-143.	2.8	5
21	Nanosecond-laser patterning of 3Y-TZP: Damage and microstructural changes. <i>Journal of the European Ceramic Society</i> , 2017, 37, 4876-4887.	2.8	40
22	A parametric study of laser interference surface patterning of dental zirconia: Effects of laser parameters on topography and surface quality. <i>Dental Materials</i> , 2017, 33, e28-e38.	1.6	46
23	Characterization of interfaces between TiCN and iron-base binders. <i>International Journal of Refractory Metals and Hard Materials</i> , 2017, 63, 32-37.	1.7	21
24	Mechanical properties of Al ₂ O ₃ inverse opals by means of nanoindentation. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 455303.	1.3	6
25	Nanoindentation and scratch resistance of multilayered TiO ₂ -SiO ₂ coatings with different nanocolumnar structures deposited by PV-OAD. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 135104.	1.3	9
26	Growth and thermal stability of TiN/ZrAlN: Effect of internal interfaces. <i>Acta Materialia</i> , 2016, 121, 396-406.	3.8	44
27	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. <i>Surface and Coatings Technology</i> , 2016, 308, 414-417.	2.2	7
28	Hall-Petch strengthening of the constrained metallic binder in WC-Co cemented carbides: Experimental assessment by means of massive nanoindentation and statistical analysis. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 676, 487-491.	2.6	66
29	Microstructural influence on tolerance to corrosion-induced damage in hardmetals. <i>Materials and Design</i> , 2016, 111, 36-43.	3.3	22
30	Influence of microstructure and mechanical properties on the tribological behavior of reactive arc deposited Zr-Si-N coatings at room and high temperature. <i>Surface and Coatings Technology</i> , 2016, 304, 393-400.	2.2	10
31	Mechanical deformation of WC-Co composite micropillars under uniaxial compression. <i>International Journal of Refractory Metals and Hard Materials</i> , 2016, 54, 70-74.	1.7	32
32	Strength of pre-Roman amphorae: Comparison of the different types. <i>Journal of Archaeological Science: Reports</i> , 2015, 2, 405-417.	0.2	4
33	Contact fatigue of veneer feldspathic porcelain on dental zirconia. <i>Dental Materials</i> , 2015, 31, 217-224.	1.6	12
34	Tuning hardness and fracture resistance of ZrN/Zr _{0.63} Al _{0.37} N nanoscale multilayers by stress-induced transformation toughening. <i>Acta Materialia</i> , 2015, 89, 22-31.	3.8	57
35	Corrosion protection of carbon steel by silica-based hybrid coatings containing cerium salts: Effect of silica nanoparticle content. <i>Surface and Coatings Technology</i> , 2015, 265, 106-116.	2.2	60
36	Plastic deformation and damage induced by fatigue in TWIP steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 628, 410-418.	2.6	20

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37	Osseointegration improvement by plasma electrolytic oxidation of modified titanium alloys surfaces. <i>Journal of Materials Science: Materials in Medicine</i> , 2015, 26, 72.	1.7	48
38	Intrinsic hardness of constitutive phases in WC-Co composites: Nanoindentation testing, statistical analysis, WC crystal orientation effects and flow stress for the constrained metallic binder. <i>Journal of the European Ceramic Society</i> , 2015, 35, 3419-3425.	2.8	68
39	Dependence of nanoindentation hardness with crystallographic orientation of austenite grains in metastable stainless steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 645, 188-195.	2.6	50
40	Geometry of nanoindentation cube-corner cracks observed by FIB tomography: Implication for fracture resistance estimation. <i>Journal of the European Ceramic Society</i> , 2015, 35, 2949-2955.	2.8	26
41	A comparative study of the contact fatigue behavior and associated damage micromechanisms of TiN- and WC:H-coated cold-work tool steel. <i>Tribology International</i> , 2015, 88, 263-270.	3.0	21
42	Damage induced by monotonic and cyclic spherical indentation in polycrystalline diamond (PCD). <i>International Journal of Refractory Metals and Hard Materials</i> , 2015, 49, 292-301.	1.7	9
43	FIB/FESEM experimental and analytical assessment of R-curve behavior of WC-Co cemented carbides. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 645, 142-149.	2.6	34
44	Deformation of polycrystalline TRIP stainless steel micropillars. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 647, 51-57.	2.6	19
45	Berkovich nanoindentation and deformation mechanisms in a hardmetal binder-like cobalt alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 621, 128-132.	2.6	23
46	Influence of temperature and hot corrosion on the micro-nanomechanical behavior of protective mullite EBCs. <i>International Journal of Refractory Metals and Hard Materials</i> , 2015, 49, 383-391.	1.7	11
47	Resistance to Contact Deformation and Damage of Hard Ceramics. , 2014, , 367-383.		1
48	Corrosion damage in WC-Co cemented carbides: residual strength assessment and 3D FIB-FESEM tomography characterisation. <i>Powder Metallurgy</i> , 2014, 57, 324-330.	0.9	23
49	Deformation mechanisms induced under high cycle fatigue tests in a metastable austenitic stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 597, 232-236.	2.6	24
50	Fracture micromechanisms and mechanical behavior of YBCO bulk superconductors at 77 and 300K. <i>Ceramics International</i> , 2014, 40, 12797-12806.	2.3	4
51	Nanoindentation of nanocolumnar TiO ₂ thin films with single and stacked zig-zag layers. <i>Thin Solid Films</i> , 2014, 550, 444-449.	0.8	20
52	Nanoindentation and nanoscratch properties of mullite-based environmental barrier coatings: Influence of chemical composition Al/Si ratio. <i>Surface and Coatings Technology</i> , 2014, 239, 49-57.	2.2	21
53	Structure, deformation and fracture of arc evaporated Zr-Si-N hard films. <i>Surface and Coatings Technology</i> , 2014, 258, 1100-1107.	2.2	31
54	Study of the recycled aggregates nature's influence on the aggregate-cement paste interface and ITZ. <i>Construction and Building Materials</i> , 2014, 68, 677-684.	3.2	83

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55	Contact damage and fracture micromechanisms of multilayered TiN/CrN coatings at micro- and nano-length scales. <i>Thin Solid Films</i> , 2014, 571, 308-315.	0.8	42
56	Phase transformation and subsurface damage in 3Y-TZP after sandblasting. <i>Dental Materials</i> , 2013, 29, 566-572.	1.6	122
57	Tomography of indentation cracks in feldspathic dental porcelain on zirconia. <i>Dental Materials</i> , 2013, 29, 348-356.	1.6	17
58	Silica-based hybrid coatings for corrosion protection of carbon steel. Part I: Effect of pretreatment with phosphoric acid. <i>Surface and Coatings Technology</i> , 2013, 236, 476-484.	2.2	25
59	Enhanced Hydrothermal Resistance of ZrO ₂ -TZP Ceramics Through Colloidal Processing. <i>Journal of the American Ceramic Society</i> , 2013, 96, 1070-1076.	1.9	17
60	Surface mechanical properties of advanced zirconia after hydrothermal exposure. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012, 31, 012015.	0.3	1
61	Microstructural changes in 3Y-TZP induced by scratching and indentation. <i>Journal of the European Ceramic Society</i> , 2012, 32, 3919-3927.	2.8	27
62	Chemical and mechanical properties of anodized cp-titanium in NH ₄ H ₂ PO ₄ /NH ₄ F media for biomedical applications. <i>Surface and Coatings Technology</i> , 2012, 206, 4791-4798.	2.2	14
63	Mechanical behavior of 3Al ₂ O ₃ -2SiO ₂ films under nanoindentation. <i>Acta Materialia</i> , 2012, 60, 5889-5899.	3.8	17
64	Nanoindentation of Al ₂ O ₃ /Al ₂ TiO ₅ composites: Small-scale mechanical properties of Al ₂ TiO ₅ as reinforcement phase. <i>Journal of the European Ceramic Society</i> , 2012, 32, 3723-3731.	2.8	21
65	New epoxy thermosets obtained from diglycidylether of bisphenol a and modified hyperbranched polyesters with long aliphatic chains cured by diisocyanates. <i>Polymer Engineering and Science</i> , 2012, 52, 2597-2610.	1.5	8
66	Nanoindentation of Bridgman YBCO samples. <i>Ceramics International</i> , 2012, 38, 2035-2042.	2.3	6
67	Contact damage and residual strength in hardmetals. <i>International Journal of Refractory Metals and Hard Materials</i> , 2012, 30, 121-127.	1.7	29
68	Nanocharacterization techniques for investigating the durability of wood coatings. <i>European Polymer Journal</i> , 2012, 48, 441-453.	2.6	31
69	Evaluation of fracture toughness of small volumes by means of cube-corner nanoindentation. <i>Scripta Materialia</i> , 2012, 66, 670-673.	2.6	44
70	High hardness, low Young's modulus and low friction of nanocrystalline ZrW ₂ Laves phase and Zr _{1-x} W _x thin films. <i>Journal of Physics and Chemistry of Solids</i> , 2012, 73, 554-558.	1.9	14
71	Corrosion induced degradation of textured YBCO under operation in high humidity conditions. <i>Surface and Coatings Technology</i> , 2012, 206, 4256-4261.	2.2	5
72	Spherical instrumented indentation of porous nanocrystalline zirconia. <i>Journal of the European Ceramic Society</i> , 2012, 32, 123-132.	2.8	21

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73	Focused ion beam tomography of zirconia degraded under hydrothermal conditions. <i>Journal of the European Ceramic Society</i> , 2012, 32, 2129-2136.	2.8	30
74	Cross-sectional nanoindentation and nanoscratch of compositionally graded mullite films. <i>Surface and Coatings Technology</i> , 2011, 206, 1927-1931.	2.2	15
75	DGEBA thermosets modified with an amphiphilic star polymer. Study on the effect of the initiator on the curing process and morphology. <i>Polymer</i> , 2011, 52, 5009-5017.	1.8	11
76	Microstructural changes in ground 3Y-TZP and their effect on mechanical properties. <i>Acta Materialia</i> , 2011, 59, 6670-6683.	3.8	64
77	Subsurface evaluation of hydrothermal degradation of zirconia. <i>Acta Materialia</i> , 2011, 59, 473-484.	3.8	99
78	Influence of the elastic mismatch on the Hertzian cone crack path in ceramic bilayers. <i>Journal of the European Ceramic Society</i> , 2011, 31, 1951-1955.	2.8	3
79	Nanoindentation of multilayered epitaxial YBa ₂ Cu ₃ O _{7-δ} thin films and coated conductors. <i>Thin Solid Films</i> , 2011, 519, 2470-2476.	0.8	20
80	Fatigue susceptibility under contact loading of hardmetals coated with ceramic films. <i>Procedia Engineering</i> , 2010, 2, 299-308.	1.2	16
81	Nanoindentation with spherical tips of single crystals of YBCO textured by the Bridgman technique: Determination of indentation stress-strain curves. <i>Journal of the European Ceramic Society</i> , 2010, 30, 1477-1482.	2.8	25
82	Contact damage in artificially aged 3Y-TZP. <i>IOP Conference Series: Materials Science and Engineering</i> , 2009, 5, 012013.	0.3	0
83	Nanoindentation of yttria-doped zirconia: Effect of crystallographic structure on deformation mechanisms. <i>Journal of Materials Research</i> , 2009, 24, 719-727.	1.2	60
84	Contact fatigue behavior of PVD-coated hardmetals. <i>International Journal of Refractory Metals and Hard Materials</i> , 2009, 27, 323-331.	1.7	58
85	Mechanical characterization of nano-reinforced silica based sol-gel hybrid coatings on AISI 316L stainless steel using nanoindentation techniques. <i>Surface and Coatings Technology</i> , 2009, 203, 3325-3331.	2.2	67
86	Nanoindentation of TiO ₂ thin films with different microstructures. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 145305.	1.3	56
87	Contact strength of ceramic laminates. <i>Composites Science and Technology</i> , 2008, 68, 209-214.	3.8	10
88	Hertzian cone crack propagation on polycrystalline materials: Role of R-curve and residual stresses. <i>Acta Materialia</i> , 2008, 56, 265-273.	3.8	16
89	Quantification of hydrothermal degradation in zirconia by nanoindentation. <i>Acta Materialia</i> , 2008, 56, 4206-4216.	3.8	94
90	Yield strength, shear stress and toughness of YBCO samples textured by Bridgman technique. <i>Journal of Physics: Conference Series</i> , 2008, 97, 012116.	0.3	4

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91	Influence of the Cone Crack Geometry on the Strength Degradation. Key Engineering Materials, 2007, 333, 255-258.	0.4	0
92	Instrumented Indentation of Layered Ceramic Materials. Key Engineering Materials, 2007, 333, 107-116.	0.4	19
93	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
94	Delamination under Hertzian cyclic loading of a glass coating on Ti6Al4v for implants. Journal of Materials Science, 2006, 41, 5134-5145.	1.7	8
95	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
96	Instrumented indentation on aluminaâ€alumina/zirconia multilayered composites with residual stresses. Philosophical Magazine, 2006, 86, 5371-5382.	0.7	7
97	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
98	Hertzian contact fatigue on alumina/alumina-zirconia laminated composites. Journal of the European Ceramic Society, 2005, 25, 3393-3401.	2.8	20
99	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