Miguel A MonclÃºs

List of Publications by Year
in descending order

64 papers	1,580 citations	331259 21 h-index	329751 37 g-index
64 all docs	64 docs citations	64 times ranked	2150 citing authors

#	Article	IF	Citations
1	The use of the PeakForce^{TM}quantitative nanomechanical mapping AFM-based method for high-resolution Young's modulus measurement of polymers. Measurement Science and Technology, 2011, 22, 125703.	1.4	276
2	Effect of solute content and temperature on the deformation mechanisms and critical resolved shear stress in Mg-Al and Mg-ZnÂalloys. Acta Materialia, 2019, 170, 155-165.	3.8	67
3	Tribomechanical properties of hard Cr-doped DLC coatings deposited by low-frequency HiPIMS. Surface and Coatings Technology, 2020, 382, 124899.	2.2	66
4	Global and local deformation behavior and mechanical properties of individual phases in a quenched and partitioned steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 630, 27-35.	2.6	55
5	Deformation behavior of a high strength multiphase steel at macro- and micro-scales. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 611, 201-211.	2.6	53
6	The influence of positive pulses on HiPIMS deposition of hard DLC coatings. Surface and Coatings Technology, 2019, 358, 43-49.	2.2	52
7	AFM indentation method used for elastic modulus characterization of interfaces and thin layers. Journal of Materials Science, 2010, 45, 3190-3197.	1.7	51
8	Microstructure and mechanical properties of physical vapor deposited Cu/W nanoscale multilayers: Influence of layer thickness and temperature. Thin Solid Films, 2014, 571, 275-282.	0.8	51
9	Adhesion enhancement of DLC hard coatings by HiPIMS metal ion etching pretreatment. Surface and Coatings Technology, 2018, 349, 787-796.	2.2	48
10	Enhanced strain rate sensitivity of Zr-based bulk metallic glasses subjected to high pressure torsion. Journal of Alloys and Compounds, 2018, 747, 595-602.	2.8	45
11	Optimum high temperature strength of two-dimensional nanocomposites. APL Materials, 2013, 1, .	2.2	43
12	Deformation Mechanism Map of Cu/Nb Nanoscale Metallic Multilayers as a Function of Temperature and Layer Thickness. Jom, 2017, 69, 2214-2226.	0.9	41
13	Single-imprint moth-eye anti-reflective and self-cleaning film with enhanced resistance. Nanoscale, 2018, 10, 15496-15504.	2.8	38
14	Hard and superhard TiAlBN coatings deposited by twin electron-beam evaporation. Surface and Coatings Technology, 2007, 201, 6078-6083.	2.2	36
15	Electrical properties of reactively sputtered CNx films. Thin Solid Films, 1999, 341, 94-100.	0.8	35
16	The use of refractive index as a measure of diamond-like carbon film quality. Diamond and Related Materials, 1998, 7, 432-434.	1.8	31
17	Selective oxidation-induced strengthening of Zr/Nb nanoscale multilayers. Acta Materialia, 2017, 122, 1-10.	3.8	30
18	Tensile deformation and fracture mechanisms of Cu/Nb nanolaminates studied by in situ TEM mechanical tests. Extreme Mechanics Letters, 2018, 25, 60-65.	2.0	26

#	Article	IF	Citations
19	The composition and bonding structure of CNx films and their influence on the mechanical properties. Thin Solid Films, 1997, 308-309, 130-134.	0.8	25
20	Nanoindentation of Amorphous Carbon: a combined experimental and simulation approach. Acta Materialia, 2021, 203, 116485.	3.8	23
21	Nanoindentation mapping of multiscale composites of graphene-reinforced polypropylene and carbon fibres. Composites Science and Technology, 2019, 169, 151-157.	3.8	22
22	Accelerated testing of creep in polymeric materials using nanoindentation. Polymer Testing, 2011, 30, 366-371.	2.3	21
23	Tip shape effect on hot nanoindentation hardness and modulus measurements. International Journal of Precision Engineering and Manufacturing, 2014, 15, 1513-1519.	1.1	21
24	Bioinspired antireflective flexible films with optimized mechanical resistance fabricated by roll to roll thermal nanoimprint. Scientific Reports, 2021, 11, 2419.	1.6	21
25	Biaxial Deformation Behavior and Enhanced Formability of Ultrafine-Grained Pure Copper. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 2399-2408.	1.1	20
26	Ultra-fine grained pure Titanium for biomedical applications. Materials Technology, 2016, 31, 756-771.	1.5	20
27	In search of validated measurements of the properties of viscoelastic materials by indentation with sharp indenters. Philosophical Magazine, 2011, 91, 1308-1328.	0.7	19
28	Key Ionic Electrolytes for Highly Selfâ€Stable Lightâ€Emitting Electrochemical Cells Based on Ir(III) Complexes. Advanced Optical Materials, 2020, 8, 2000295.	3.6	18
29	Biogenic fluorescent proteinâ€“silk fibroin phosphors for high performing light-emitting diodes. Materials Horizons, 2020, 7, 1790-1800.	6.4	18
30	Investigation of the valence band states of reactively sputtered carbon nitride films. Thin Solid Films, 1999, 355-356, 79-84.	0.8	17
31	Multifunctional Nano-engineered Polymer Surfaces with Enhanced Mechanical Resistance and Superhydrophobicity. Scientific Reports, 2017, 7, 43450.	1.6	17
32	Effect of layer thickness on the mechanical behaviour of oxidation-strengthened Zr/Nb nanoscale multilayers. Journal of Materials Science, 2018, 53, 5860-5878.	1.7	17
33	Effect of substrate bias on the bonding structure of carbon nitride thin films. Thin Solid Films, 1999, 355-356, 85-88.	0.8	15
34	A study of the nanostructure and hardness of electron beam evaporated TiAlBN Coatings. Thin Solid Films, 2010, 518, 4273-4280.	0.8	15
35	Formation and mechanical characterisation of SU8 composite films reinforced with horizontally aligned and high volume fraction CNTs. Composites Science and Technology, 2011, 71, 1301-1308.	3.8	15
36	The effect of nitrogen partial pressure on the bonding in sputtered CNx films: implications for formation of Î²-C3N4. Surface and Coatings Technology, 2000, 131, 488-492.	2.2	14

#	Article	IF	Citations
37	High Temperature Nanoindentation Response of RTM6 Epoxy Resin at Different Strain Rates. Experimental Mechanics, 2015, 55, 851-862.	1.1	14
38	Influence of temperature on the strain rate sensitivity and deformation mechanisms of nanotwinned Cu. Scripta Materialia, 2018, 154, 54-59.	2.6	14
39	High temperature in situ SEM assessment followed by ex situ AFM and EBSD investigation of the nucleation and early growth stages of Fe-Al intermetallics. Scripta Materialia, 2021, 200, 113910.	2.6	14
40	Electrical properties of reactively sputtered carbon nitride films. Surface and Coatings Technology, 1999, 116-119, 54-58.	2.2	13
41	Effect of Ultrafast Heating on the Properties of the Microconstituents in a Low-Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3145-3150.	1.1	12
42	Observations on interphase characterisation in polymer composites by nanoscale indentation and use of AFM cantilever torsion to identify measurement artefacts. Plastics, Rubber and Composites, 2012, 41, 240-246.	0.9	11
43	Investigation of the nanostructure and post-coat thermal treatment of wear-resistant PVD CrTiCuBN coatings. Surface and Coatings Technology, 2005, 200, 310-314.	2.2	10
44	Resilient moth-eye nanoimprinted antireflective and self-cleaning TiO2 sputter-coated PMMA films. Applied Surface Science, 2022, 585, 152653.	3.1	10
45	Penning type magnetron sputtering source and its use in the production of carbon nitride coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 62-69.	0.9	9
46	Nanostructural studies of PVD TiAlB coatings. Surface and Interface Analysis, 2006, 38, 731-735.	0.8	9
47	Anisotropy effect of bioinspired ceramic/ceramic composites: Can the platelet orientation enhance the mechanical properties at micro- and submicrometric length scale?. Journal of the European Ceramic Society, 2021, 41, 2753-2762.	2.8	9
48	High temperature mechanical properties and microstructure of hard TaSiN coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 797, 139976.	2.6	8
49	Effect of nanoscale Î± precipitation on slip activity in ultrastrong beta titanium alloys. Materials Letters, 2020, 264, 127398.	1.3	8
50	The effect of soaking time after ultrafast heating on the microstructure and mechanical behavior of a low carbon steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 765, 138276.	2.6	7
51	The sensitivity of the microstructure and properties to the peak temperature in an ultrafast heat treated low carbon-steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 776, 138999.	2.6	7
52	High strain rate compression of epoxy micropillars. Extreme Mechanics Letters, 2020, 40, 100905.	2.0	7
53	Corrosion behavior of diverse sputtered coatings for the helium cooled pebbles bed (HCPB) breeder concept. Nuclear Materials and Energy, 2020, 25, 100795.	0.6	7
54	High Temperature Nanomechanical Testing. , 2018, , 1-29.		5

#	Article	IF	Citations
55	Quantifying the Uncertainty of Critical Resolved Shear Stress Values Derived from Nano-Indentation in Hexagonal Ti Alloys. Experimental Mechanics, 0, , 1.	1.1	5
56	Stronger aramids through molecular design and nanoprocessing. Polymer Chemistry, 2020, 11, 1489-1495.	1.9	4
57	High temperature strength retention of Cu/Nb nanolaminates through dynamic strain ageing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 799, 140117.	2.6	3
58	Selective Metal Ion Irradiation Using Bipolar HIPIMS: A New Route to Tailor Film Nanostructure and the Resulting Mechanical Properties. Coatings, 2022, 12, 191.	1.2	3
59	Influence of the IR-mirror layer composition in the mechanical properties of solar selective coatings made from Mo:Si3N4 cermet. Thin Solid Films, 2014, 571, 316-320.	0.8	2
60	Enhanced Mechanical and Thermal Resistances of Nanoimprinted Antireflective Mothâ€Eye Surfaces Based on Poly Vinylidene Fluoride/TiO 2 Surface Nanocomposites. Advanced Engineering Materials, 0, , 2100603.	1.6	2
61	Strengthening Mechanisms of Niâ€“Coâ€“Cr Alloys via Nanotwins and Nanophases. Minerals, Metals and Materials Series, 2020, , 619-628.	0.3	2
62	Stress behaviour of reactively sputtered nitrogenated carbon films. Surface and Coatings Technology, 1998, 98, 985-990.	2.2	1
63	Development of a low temperature amorphous Si/Ti for integrated MEMS/NEMS. Microelectronic Engineering, 2010, 87, 1259-1262.	1.1	1
64	High Temperature Nanomechanical Testing. , 2019, , 2219-2247.		1