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List of Publications by Year in descending order

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Version: 2024-02-01

92 papers	3,817 citations	147801 31 h-index	128289 60 g-index
99 all docs	99 docs citations	99 times ranked	3871 citing authors

#	Article	IF	Citations
1	Review Article: Stress in thin films and coatings: Current status, challenges, and prospects. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	482
2	Effects of nanosilica addition on workability and compressive strength of Portland cement pastes. Construction and Building Materials, 2012, 35, 666-675.	7.2	252
3	A review of experimental approaches to fracture toughness evaluation at the micro-scale. Materials and Design, 2019, 173, 107762.	7.0	167
4	Measurement of fracture toughness by nanoindentation methods: Recent advances and future challenges. Current Opinion in Solid State and Materials Science, 2015, 19, 324-333.	11.5	164
5	Residual stress evaluation at the micrometer scale: Analysis of thin coatings by FIB milling and digital image correlation. Surface and Coatings Technology, 2010, 205, 2393-2403.	4.8	152
6	Focused ion beam ring drilling for residual stress evaluation. Materials Letters, 2009, 63, 1961-1963.	2.6	146
7	Influence of Tiâ€“TiN multilayer PVD-coatings design on residual stresses and adhesion. Materials & Design, 2015, 75, 47-56.	5.1	138
8	Depth-resolved residual stress analysis of thin coatings by a new FIBâ€“DIC method. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7901-7908.	5.6	133
9	F-substituted hydroxyapatite nanopowders: Thermal stability, sintering behaviour and mechanical properties. Ceramics International, 2010, 36, 313-322.	4.8	114
10	A novel pillar indentation splitting test for measuring fracture toughness of thin ceramic coatings. Philosophical Magazine, 2015, 95, 1928-1944.	1.6	110
11	High thickness Ti/TiN multilayer thin coatings for wear resistant applications. Surface and Coatings Technology, 2006, 201, 2155-2165.	4.8	105
12	Characterization and residual stresses of WCâ€“Co thermally sprayed coatings. Surface and Coatings Technology, 2008, 202, 4560-4565.	4.8	78
13	Determination of the elastic moduli and residual stresses of freestanding Au-TiW bilayer thin films by nanoindentation. Materials and Design, 2016, 106, 436-445.	7.0	78
14	Effect of Silica Nanoparticles on the Mechanical Performances of Poly(Lactic Acid). Journal of Polymers and the Environment, 2012, 20, 713-725.	5.0	75
15	High-resolution high-speed nanoindentation mapping of cement pastes: Unravelling the effect of microstructure on the mechanical properties of hydrated phases. Materials and Design, 2016, 97, 372-380.	7.0	69
16	Effects of indenter angle on microâ€scale fracture toughness measurement by pillar splitting. Journal of the American Ceramic Society, 2017, 100, 5731-5738.	3.8	66
17	Tribological studies on PVD/HVOF duplex coatings on Ti6Al4V substrate. Surface and Coatings Technology, 2008, 203, 566-571.	4.8	63
18	Modelling, production and characterisation of duplex coatings (HVOF and PVD) on Tiâ€“6Alâ€“4V substrate for specific mechanical applications. Surface and Coatings Technology, 2007, 201, 7652-7662.	4.8	61

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19	A critical comparison between XRD and FIB residual stress measurement techniques in thin films. Thin Solid Films, 2014, 572, 224-231.	1.8	58
20	Mechanical property measurements of heterogeneous materials by selective nanoindentation: Application to LiMn2O4 cathode. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 593, 92-102.	5.6	56
21	Nanoscale residual stress depth profiling by Focused Ion Beam milling and eigenstrain analysis. Materials and Design, 2018, 145, 55-64.	7.0	54
22	Damage progression in thermal barrier coating systems during thermal cycling: A nano-mechanical assessment. Materials and Design, 2019, 166, 107615.	7.0	47
23	Effect of lithiation on micro-scale fracture toughness of LixMn2O4 cathode. Scripta Materialia, 2016, 116, 62-66.	5.2	46
24	Production and characterization of duplex coatings (HVOF and PVD) on Tiâ€“6Alâ€“4V substrate. Thin Solid Films, 2006, 515, 186-194.	1.8	43
25	Residual stress measurement in thin films at sub-micron scale using Focused Ion Beam milling and imaging. Thin Solid Films, 2012, 520, 2073-2076.	1.8	42
26	Anisotropic distribution of the micro residual stresses in lath martensite revealed by FIB ring-core milling technique. Acta Materialia, 2018, 150, 327-338.	7.9	41
27	Implementation and Development of the Incremental Hole Drilling Method for the Measurement of Residual Stress in Thermal Spray Coatings. Journal of Thermal Spray Technology, 2005, 14, 462-470.	3.1	40
28	Preparation and mechanical characterization of dense and porous zirconia produced by gel casting with gelatin as a gelling agent. Ceramics International, 2009, 35, 2481-2491.	4.8	39
29	Design, fabrication and characterization of multilayer Cr-CrN thin coatings with tailored residual stress profiles. Materials and Design, 2016, 112, 162-171.	7.0	39
30	High resolution residual stress measurement on amorphous and crystalline plasma-sprayed single-splats. Surface and Coatings Technology, 2012, 206, 4872-4880.	4.8	37
31	Wear mechanisms and in-service surface modifications of a Stellite 6B Coâ€“Cr alloy. Wear, 2012, 290-291, 10-17.	3.1	35
32	Metrology and nano-mechanical tests for nano-manufacturing and nano-bio interface: Challenges & future perspectives. Materials and Design, 2018, 137, 446-462.	7.0	35
33	Effects of intra-crystalline microcracks on the mechanical behavior of a marble under indentation. International Journal of Rock Mechanics and Minings Sciences, 2012, 54, 47-55.	5.8	33
34	Low temperature degradation resistant nanostructured yttria-stabilized zirconia for dental applications. Ceramics International, 2016, 42, 8190-8197.	4.8	31
35	Mechanical properties of cellular ceramics obtained by gel casting: Characterization and modeling. Journal of the European Ceramic Society, 2009, 29, 2979-2989.	5.7	30
36	Optimized coating procedure for the protection of TiAl intermetallic alloy against high temperature oxidation. Intermetallics, 2013, 37, 76-82.	3.9	30

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37	Focused ion beam four-slot milling for Poisson's ratio and residual stress evaluation at the micron scale. Surface and Coatings Technology, 2014, 251, 151-161.	4.8	29
38	Generalised residual stress depth profiling at the nanoscale using focused ion beam milling. Journal of the Mechanics and Physics of Solids, 2019, 125, 488-501.	4.8	29
39	Residual stress measurement at the micrometer scale: focused ion beam (FIB) milling and nanoindentation testing. Philosophical Magazine, 2011, 91, 1121-1136.	1.6	27
40	Multi-step anodizing on Ti6Al4V components to improve tribomechanical performances. Surface and Coatings Technology, 2013, 227, 19-27.	4.8	27
41	Effect of composition on mechanical behaviour of diamond-like carbon coatings modified with titanium. Thin Solid Films, 2011, 519, 3061-3067.	1.8	25
42	Ni-B electrodeposits with low B content: Effect of DMAB concentration on the internal stresses and the electrochemical behaviour. Surface and Coatings Technology, 2018, 344, 190-196.	4.8	25
43	Structural characterisation of High Velocity Suspension Flame Sprayed (HVSFS) TiO2 coatings. Surface and Coatings Technology, 2010, 204, 3902-3910.	4.8	24
44	Residual micro-stress distributions in heat-pressed ceramic on zirconia and porcelain-fused to metal systems: Analysis by FIBâ€“DIC ring-core method and correlation with fracture toughness. Dental Materials, 2015, 31, 1396-1405.	3.5	23
45	Residual stress measurement in thin films using the semi-destructive ring-core drilling method using Focused Ion Beam. Procedia Engineering, 2011, 10, 2190-2195.	1.2	21
46	Effect of micro-droplets on the local residual stress field in CAE-PVD thin coatings. Surface and Coatings Technology, 2013, 215, 407-412.	4.8	20
47	Innovative Data Management in advanced characterization: Implications for materials design. Materials Today Communications, 2019, 20, 100541.	1.9	20
48	Experimental and modelling characterisation of residual stresses in cylindrical samples of rapidly cooled bulk metallic glass. Materials and Design, 2016, 104, 235-241.	7.0	19
49	Superconducting and microstructural studies on sputtered niobium thin films for accelerating cavity applications. Superconductor Science and Technology, 2008, 21, 125026.	3.5	18
50	Effects of Residual Stress Distribution on Interfacial Adhesion of Magnetron Sputtered AlN and AlN/Al Nanostructured Coatings on a (100) Silicon Substrate. Nanomaterials, 2018, 8, 896.	4.1	18
51	Fantappieite, a new mineral of the cancrinite-sodalite group with a 33-layer stacking sequence: Occurrence and crystal structure. American Mineralogist, 2010, 95, 472-480.	1.9	17
52	Editorial note â€" On the aims & scope and priority areas in Materials & Design. Materials and Design, 2015, 88, 1377-1380.	7.0	16
53	A Comparison of Microscale Techniques for Determining Fracture Toughness of LiMn2O4 Particles. Materials, 2017, 10, 403.	2.9	16
54	Ti1â^'xAlxN coatings by Reactive High Power Impulse Magnetron Sputtering: film/substrate interface effect on residual stress and high temperature oxidation. Surface and Coatings Technology, 2018, 354, 56-65.	4.8	16

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55	Structural, morphological and mechanical characterization of Mo sputtered coatings. Surface and Coatings Technology, 2015, 266, 14-21.	4.8	15
56	An Innovative Non-contact Method to Determine Surface Free Energy on Micro-areas. Journal of Adhesion Science and Technology, 2012, 26, 131-150.	2.6	13
57	Leaching behaviour of cement pastes containing nanosilica. Advances in Cement Research, 2013, 25, 352-361.	1.6	13
58	Kircherite, a new mineral of the cancrinite-sodalite group with a 36-layer stacking sequence: Occurrence and crystal structure. American Mineralogist, 2012, 97, 1494-1504.	1.9	12
59	Quantitative multi-scale characterization of single basalt fibres: Insights into strength loss mechanisms after thermal conditioning. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 797, 139963.	5.6	12
60	Nano-Scale Residual Stress Profiling in Thin Multilayer Films with Non-Equibiaxial Stress State. Nanomaterials, 2020, 10, 853.	4.1	12
61	Biocompatibility and antibacterial properties of TiCu(Ag) thin films produced by physical vapor deposition magnetron sputtering. Applied Surface Science, 2022, 573, 151604.	6.1	12
62	On the Influence of Residual Stress on Nano-Mechanical Characterization of Thin Coatings. Journal of Nanoscience and Nanotechnology, 2011, 11, 8864-8872.	0.9	11
63	Effect of elastic anisotropy on strain relief and residual stress determination in cubic systems by FIB-DIC experiments. Materials and Design, 2016, 112, 505-511.	7.0	11
64	Humidity-dependent flaw sensitivity in the crack propagation resistance of 3D-printed nano-ceramics. Scripta Materialia, 2021, 194, 113684.	5.2	11
65	Graded selective coatings based on zirconium and titanium oxynitride. Journal Physics D: Applied Physics, 2009, 42, 115406.	2.8	10
66	A New Methodology For In-Situ Residual Stress Measurement In MEMS Structures. AIP Conference Proceedings, 2010, , .	0.4	10
67	Role of grain boundaries and micro-defects on the mechanical response of a crystalline rock at multiscale. International Journal of Rock Mechanics and Minings Sciences, 2014, 71, 429-441.	5.8	8
68	Influence of the Silver Content on Mechanical Properties of Ti-Cu-Ag Thin Films. Nanomaterials, 2021, 11, 435.	4.1	8
69	A novel nanoindentation protocol to characterize surface free energy of superhydrophobic nanopatterned materials. Journal of Materials Research, 2021, 36, 2357-2370.	2.6	8
70	Study on the Correlation between Microstructure Corrosion and Wear Resistance of Ag-Cu-Ge Alloys. Coatings, 2015, 5, 78-94.	2.6	7
71	An Innovative Procedure for the In-situ Characterization of Elastomeric Bearings by Using Nanoindentation Test. International Journal of Architectural Heritage, 2021, 15, 79-91.	3.1	7
72	Dense and Cellular Zirconia Produced by Gel Casting with Agar: Preparation and High Temperature Characterization. Journal of Nanomaterials, 2013, 2013, 1-11.	2.7	6

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73	Integrated molecular dynamics and experimental approach to characterize low-free-energy perfluoro-decyl-acrylate (PFDA) coated silicon. Materials and Design, 2021, 208, 109902.	7.0	6
74	A Nanoindentation Approach for Time-Dependent Evaluation of Surface Free Energy in Micro- and Nano-Structured Titanium. Materials, 2022, 15, 287.	2.9	6
75	ON THE MEASUREMENT AND INTERPRETATION OF RESIDUAL STRESS AT THE MICRO-SCALE. International Journal of Modern Physics B, 2010, 24, 1-9.	2.0	5
76	Quantifying residual stress in Helium-implanted surfaces and its implication for blistering. Journal of Materials Research, 2021, 36, 2349-2356.	2.6	5
77	Elastic anisotropy of coatings by AFM analysis of microindentations. Surface Engineering, 2014, 30, 41-47.	2.2	4
78	Load displacement and high speed nanoindentation data set at different state of charge (SoC) for spinel Li Mn2O4 cathodes. Data in Brief, 2016, 8, 203-206.	1.0	3
79	Fracture toughness of radiation-damaged zircon studied by nanoindentation pillar-splitting. Applied Physics Letters, 2021, 119, .	3.3	3
80	Focused ion beam and transmission electron microscopy as a powerful tool to understand localized corrosion phenomena. Corrosion Reviews, 2011, 29, .	2.0	2
81	Focused Ion Beam and Nanomechanical Tests for High Resolution Surface Characterisation: New Resources for Platinum Group Metals Testing. Platinum Metals Review, 2014, 58, 3-19.	1.2	2
82	Investigations into fatigue failure in e-type fastening clips used in railway tracks. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2021, 235, 898-905.	2.0	2
83	Finite element analysis of residual stress in plasma-sprayed ceramic coatings. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2004, 218, 321-330.	1.1	2
84	Discussion on â€œInterfacial Residual Stress Analysis of Thermal Spray Coatings by Miniature Ring-Core Cutting Combined with DIC Methodâ€•by J.G. Zhu et al., Experimental Mechanics DOI:10.1007/s11340-012-9640-2. Experimental Mechanics, 2014, 54, 1305-1306.	2.0	1
85	Contraintes rÃ©siduelles et comportement mÃ©canique de revÃªtements nickel-bore. Materiaux Et Techniques, 2019, 107, 205.	0.9	1
86	Complex wear measurement on thin coatings by the cratering method. Lubrication Science, 2009, 21, 269-288.	2.1	0
87	NanomechanicalÂCharacterization of Brittle Rocks. Solid Mechanics and Its Applications, 2014, , 209-229.	0.2	0
88	Editorial for the Special Issue â€œCharacterization of Nanomaterials: Selected Papers from 6th Dresden Nanoanalysis Symposiumâ€• Nanomaterials, 2019, 9, 1527.	4.1	0
89	Helium Implantation Studies Utilizing the HIM. Turning a Bug into a Feature. Microscopy and Microanalysis, 2020, 26, 782-783.	0.4	0
90	Condition assessment of in situ elastomeric bearings. , 2021, , .		0

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91	Development of a Duplex Coating Procedure (HVOF and PVD) on TI-6AL-4V Substrate for Automotive Applications.. , 0, , 145-158.		0
92	Pure And Substituted Hydroxyapatite Nanopowders By Precipitation. , 0, , 65-74.		0