

Marco Sebastiani

List of Publications by Year in descending order

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92
papers

3,817
citations

168829

31
h-index

145109

60
g-index

99
all docs

99
docs citations

99
times ranked

4306
citing authors

#	ARTICLE	IF	CITATIONS
1	Review Article: Stress in thin films and coatings: Current status, challenges, and prospects. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018, 36, .	0.9	482
2	Effects of nanosilica addition on workability and compressive strength of Portland cement pastes. <i>Construction and Building Materials</i> , 2012, 35, 666-675.	3.2	252
3	A review of experimental approaches to fracture toughness evaluation at the micro-scale. <i>Materials and Design</i> , 2019, 173, 107762.	3.3	167
4	Measurement of fracture toughness by nanoindentation methods: Recent advances and future challenges. <i>Current Opinion in Solid State and Materials Science</i> , 2015, 19, 324-333.	5.6	164
5	Residual stress evaluation at the micrometer scale: Analysis of thin coatings by FIB milling and digital image correlation. <i>Surface and Coatings Technology</i> , 2010, 205, 2393-2403.	2.2	152
6	Focused ion beam ring drilling for residual stress evaluation. <i>Materials Letters</i> , 2009, 63, 1961-1963.	1.3	146
7	Influence of Ti/TiN multilayer PVD-coatings design on residual stresses and adhesion. <i>Materials & Design</i> , 2015, 75, 47-56.	5.1	138
8	Depth-resolved residual stress analysis of thin coatings by a new FIB-DIC method. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 7901-7908.	2.6	133
9	F-substituted hydroxyapatite nanopowders: Thermal stability, sintering behaviour and mechanical properties. <i>Ceramics International</i> , 2010, 36, 313-322.	2.3	114
10	A novel pillar indentation splitting test for measuring fracture toughness of thin ceramic coatings. <i>Philosophical Magazine</i> , 2015, 95, 1928-1944.	0.7	110
11	High thickness Ti/TiN multilayer thin coatings for wear resistant applications. <i>Surface and Coatings Technology</i> , 2006, 201, 2155-2165.	2.2	105
12	Characterization and residual stresses of WC-Co thermally sprayed coatings. <i>Surface and Coatings Technology</i> , 2008, 202, 4560-4565.	2.2	78
13	Determination of the elastic moduli and residual stresses of freestanding Au-TiW bilayer thin films by nanoindentation. <i>Materials and Design</i> , 2016, 106, 436-445.	3.3	78
14	Effect of Silica Nanoparticles on the Mechanical Performances of Poly(Lactic Acid). <i>Journal of Polymers and the Environment</i> , 2012, 20, 713-725.	2.4	75
15	High-resolution high-speed nanoindentation mapping of cement pastes: Unravelling the effect of microstructure on the mechanical properties of hydrated phases. <i>Materials and Design</i> , 2016, 97, 372-380.	3.3	69
16	Effects of indenter angle on micro-scale fracture toughness measurement by pillar splitting. <i>Journal of the American Ceramic Society</i> , 2017, 100, 5731-5738.	1.9	66
17	Tribological studies on PVD/HVOF duplex coatings on Ti6Al4V substrate. <i>Surface and Coatings Technology</i> , 2008, 203, 566-571.	2.2	63
18	Modelling, production and characterisation of duplex coatings (HVOF and PVD) on Ti6Al4V substrate for specific mechanical applications. <i>Surface and Coatings Technology</i> , 2007, 201, 7652-7662.	2.2	61

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19	A critical comparison between XRD and FIB residual stress measurement techniques in thin films. <i>Thin Solid Films</i> , 2014, 572, 224-231.	0.8	58
20	Mechanical property measurements of heterogeneous materials by selective nanoindentation: Application to LiMn ₂ O ₄ cathode. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 593, 92-102.	2.6	56
21	Nanoscale residual stress depth profiling by Focused Ion Beam milling and eigenstrain analysis. <i>Materials and Design</i> , 2018, 145, 55-64.	3.3	54
22	Damage progression in thermal barrier coating systems during thermal cycling: A nano-mechanical assessment. <i>Materials and Design</i> , 2019, 166, 107615.	3.3	47
23	Effect of lithiation on micro-scale fracture toughness of Li _x Mn ₂ O ₄ cathode. <i>Scripta Materialia</i> , 2016, 116, 62-66.	2.6	46
24	Production and characterization of duplex coatings (HVOF and PVD) on Ti-6Al-4V substrate. <i>Thin Solid Films</i> , 2006, 515, 186-194.	0.8	43
25	Residual stress measurement in thin films at sub-micron scale using Focused Ion Beam milling and imaging. <i>Thin Solid Films</i> , 2012, 520, 2073-2076.	0.8	42
26	Anisotropic distribution of the micro residual stresses in lath martensite revealed by FIB ring-core milling technique. <i>Acta Materialia</i> , 2018, 150, 327-338.	3.8	41
27	Implementation and Development of the Incremental Hole Drilling Method for the Measurement of Residual Stress in Thermal Spray Coatings. <i>Journal of Thermal Spray Technology</i> , 2005, 14, 462-470.	1.6	40
28	Preparation and mechanical characterization of dense and porous zirconia produced by gel casting with gelatin as a gelling agent. <i>Ceramics International</i> , 2009, 35, 2481-2491.	2.3	39
29	Design, fabrication and characterization of multilayer Cr-CrN thin coatings with tailored residual stress profiles. <i>Materials and Design</i> , 2016, 112, 162-171.	3.3	39
30	High resolution residual stress measurement on amorphous and crystalline plasma-sprayed single-splats. <i>Surface and Coatings Technology</i> , 2012, 206, 4872-4880.	2.2	37
31	Wear mechanisms and in-service surface modifications of a Stellite 6B Co-Cr alloy. <i>Wear</i> , 2012, 290-291, 10-17.	1.5	35
32	Metrology and nano-mechanical tests for nano-manufacturing and nano-bio interface: Challenges & future perspectives. <i>Materials and Design</i> , 2018, 137, 446-462.	3.3	35
33	Effects of intra-crystalline microcracks on the mechanical behavior of a marble under indentation. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2012, 54, 47-55.	2.6	33
34	Low temperature degradation resistant nanostructured yttria-stabilized zirconia for dental applications. <i>Ceramics International</i> , 2016, 42, 8190-8197.	2.3	31
35	Mechanical properties of cellular ceramics obtained by gel casting: Characterization and modeling. <i>Journal of the European Ceramic Society</i> , 2009, 29, 2979-2989.	2.8	30
36	Optimized coating procedure for the protection of TiAl intermetallic alloy against high temperature oxidation. <i>Intermetallics</i> , 2013, 37, 76-82.	1.8	30

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37	Focused ion beam four-slot milling for Poisson's ratio and residual stress evaluation at the micron scale. <i>Surface and Coatings Technology</i> , 2014, 251, 151-161.	2.2	29
38	Generalised residual stress depth profiling at the nanoscale using focused ion beam milling. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 125, 488-501.	2.3	29
39	Residual stress measurement at the micrometer scale: focused ion beam (FIB) milling and nanoindentation testing. <i>Philosophical Magazine</i> , 2011, 91, 1121-1136.	0.7	27
40	Multi-step anodizing on Ti6Al4V components to improve tribomechanical performances. <i>Surface and Coatings Technology</i> , 2013, 227, 19-27.	2.2	27
41	Effect of composition on mechanical behaviour of diamond-like carbon coatings modified with titanium. <i>Thin Solid Films</i> , 2011, 519, 3061-3067.	0.8	25
42	Ni-B electrodeposits with low B content: Effect of DMAB concentration on the internal stresses and the electrochemical behaviour. <i>Surface and Coatings Technology</i> , 2018, 344, 190-196.	2.2	25
43	Structural characterisation of High Velocity Suspension Flame Sprayed (HVSFS) TiO ₂ coatings. <i>Surface and Coatings Technology</i> , 2010, 204, 3902-3910.	2.2	24
44	Residual micro-stress distributions in heat-pressed ceramic on zirconia and porcelain-fused to metal systems: Analysis by FIB-DIC ring-core method and correlation with fracture toughness. <i>Dental Materials</i> , 2015, 31, 1396-1405.	1.6	23
45	Residual stress measurement in thin films using the semi-destructive ring-core drilling method using Focused Ion Beam. <i>Procedia Engineering</i> , 2011, 10, 2190-2195.	1.2	21
46	Effect of micro-droplets on the local residual stress field in CAE-PVD thin coatings. <i>Surface and Coatings Technology</i> , 2013, 215, 407-412.	2.2	20
47	Innovative Data Management in advanced characterization: Implications for materials design. <i>Materials Today Communications</i> , 2019, 20, 100541.	0.9	20
48	Experimental and modelling characterisation of residual stresses in cylindrical samples of rapidly cooled bulk metallic glass. <i>Materials and Design</i> , 2016, 104, 235-241.	3.3	19
49	Superconducting and microstructural studies on sputtered niobium thin films for accelerating cavity applications. <i>Superconductor Science and Technology</i> , 2008, 21, 125026.	1.8	18
50	Effects of Residual Stress Distribution on Interfacial Adhesion of Magnetron Sputtered AlN and AlN/Al Nanostructured Coatings on a (100) Silicon Substrate. <i>Nanomaterials</i> , 2018, 8, 896.	1.9	18
51	Fantappieite, a new mineral of the cancrinite-sodalite group with a 33-layer stacking sequence: Occurrence and crystal structure. <i>American Mineralogist</i> , 2010, 95, 472-480.	0.9	17
52	Editorial note "On the aims & scope and priority areas in <i>Materials & Design</i> ". <i>Materials and Design</i> , 2015, 88, 1377-1380.	3.3	16
53	A Comparison of Microscale Techniques for Determining Fracture Toughness of LiMn ₂ O ₄ Particles. <i>Materials</i> , 2017, 10, 403.	1.3	16
54	Ti _{1-x} Al _x N coatings by Reactive High Power Impulse Magnetron Sputtering: film/substrate interface effect on residual stress and high temperature oxidation. <i>Surface and Coatings Technology</i> , 2018, 354, 56-65.	2.2	16

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55	Structural, morphological and mechanical characterization of Mo sputtered coatings. <i>Surface and Coatings Technology</i> , 2015, 266, 14-21.	2.2	15
56	An Innovative Non-contact Method to Determine Surface Free Energy on Micro-areas. <i>Journal of Adhesion Science and Technology</i> , 2012, 26, 131-150.	1.4	13
57	Leaching behaviour of cement pastes containing nanosilica. <i>Advances in Cement Research</i> , 2013, 25, 352-361.	0.7	13
58	Kircherite, a new mineral of the cancrinite-sodalite group with a 36-layer stacking sequence: Occurrence and crystal structure. <i>American Mineralogist</i> , 2012, 97, 1494-1504.	0.9	12
59	Quantitative multi-scale characterization of single basalt fibres: Insights into strength loss mechanisms after thermal conditioning. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 797, 139963.	2.6	12
60	Nano-Scale Residual Stress Profiling in Thin Multilayer Films with Non-Equibiaxial Stress State. <i>Nanomaterials</i> , 2020, 10, 853.	1.9	12
61	Biocompatibility and antibacterial properties of TiCu(Ag) thin films produced by physical vapor deposition magnetron sputtering. <i>Applied Surface Science</i> , 2022, 573, 151604.	3.1	12
62	On the Influence of Residual Stress on Nano-Mechanical Characterization of Thin Coatings. <i>Journal of Nanoscience and Nanotechnology</i> , 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. <i>Materials and Design</i> , 2016, 112, 505-511.	3.3	11
64	Humidity-dependent flaw sensitivity in the crack propagation resistance of 3D-printed nano-ceramics. <i>Scripta Materialia</i> , 2021, 194, 113684.	2.6	11
65	Graded selective coatings based on zirconium and titanium oxynitride. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 115406.	1.3	10
66	A New Methodology For In-Situ Residual Stress Measurement In MEMS Structures. <i>AIP Conference Proceedings</i> , 2010, , .	0.3	10
67	Role of grain boundaries and micro-defects on the mechanical response of a crystalline rock at multiscale. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2014, 71, 429-441.	2.6	8
68	Influence of the Silver Content on Mechanical Properties of Ti-Cu-Ag Thin Films. <i>Nanomaterials</i> , 2021, 11, 435.	1.9	8
69	A novel nanoindentation protocol to characterize surface free energy of superhydrophobic nanopatterned materials. <i>Journal of Materials Research</i> , 2021, 36, 2357-2370.	1.2	8
70	Study on the Correlation between Microstructure Corrosion and Wear Resistance of Ag-Cu-Ge Alloys. <i>Coatings</i> , 2015, 5, 78-94.	1.2	7
71	An Innovative Procedure for the In-situ Characterization of Elastomeric Bearings by Using Nanoindentation Test. <i>International Journal of Architectural Heritage</i> , 2021, 15, 79-91.	1.7	7
72	Dense and Cellular Zirconia Produced by Gel Casting with Agar: Preparation and High Temperature Characterization. <i>Journal of Nanomaterials</i> , 2013, 2013, 1-11.	1.5	6

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73	Integrated molecular dynamics and experimental approach to characterize low-free-energy perfluoro-decyl-acrylate (PFDA) coated silicon. <i>Materials and Design</i> , 2021, 208, 109902.	3.3	6
74	A Nanoindentation Approach for Time-Dependent Evaluation of Surface Free Energy in Micro- and Nano-Structured Titanium. <i>Materials</i> , 2022, 15, 287.	1.3	6
75	ON THE MEASUREMENT AND INTERPRETATION OF RESIDUAL STRESS AT THE MICRO-SCALE. <i>International Journal of Modern Physics B</i> , 2010, 24, 1-9.	1.0	5
76	Quantifying residual stress in Helium-implanted surfaces and its implication for blistering. <i>Journal of Materials Research</i> , 2021, 36, 2349-2356.	1.2	5
77	Elastic anisotropy of coatings by AFM analysis of microindentations. <i>Surface Engineering</i> , 2014, 30, 41-47.	1.1	4
78	Load displacement and high speed nanoindentation data set at different state of charge (SoC) for spinel Li Mn2O4 cathodes. <i>Data in Brief</i> , 2016, 8, 203-206.	0.5	3
79	Fracture toughness of radiation-damaged zircon studied by nanoindentation pillar-splitting. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	3
80	Focused ion beam and transmission electron microscopy as a powerful tool to understand localized corrosion phenomena. <i>Corrosion Reviews</i> , 2011, 29, .	1.0	2
81	Focused Ion Beam and Nanomechanical Tests for High Resolution Surface Characterisation: New Resources for Platinum Group Metals Testing. <i>Platinum Metals Review</i> , 2014, 58, 3-19.	1.5	2
82	Investigations into fatigue failure in e-type fastening clips used in railway tracks. <i>Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit</i> , 2021, 235, 898-905.	1.3	2
83	Finite element analysis of residual stress in plasma-sprayed ceramic coatings. , 0, .		2
84	Discussion on "Interfacial Residual Stress Analysis of Thermal Spray Coatings by Miniature Ring-Core Cutting Combined with DIC Method" by J.G. Zhu et al., <i>Experimental Mechanics</i> DOI:10.1007/s11340-012-9640-2. <i>Experimental Mechanics</i> , 2014, 54, 1305-1306.	1.1	1
85	Contraintes résiduelles et comportement mécanique de revêtements nickel-bore. <i>Materiaux Et Techniques</i> , 2019, 107, 205.	0.3	1
86	Complex wear measurement on thin coatings by the cratering method. <i>Lubrication Science</i> , 2009, 21, 269-288.	0.9	0
87	Nanomechanical Characterization of Brittle Rocks. <i>Solid Mechanics and Its Applications</i> , 2014, , 209-229.	0.1	0
88	Editorial for the Special Issue "Characterization of Nanomaterials: Selected Papers from 6th Dresden Nanoanalysis Symposium". <i>Nanomaterials</i> , 2019, 9, 1527.	1.9	0
89	Helium Implantation Studies Utilizing the HIM. Turning a Bug into a Feature. <i>Microscopy and Microanalysis</i> , 2020, 26, 782-783.	0.2	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