Edoardo Bemporad

List of Publications by Year
in descending order

120 papers	3,113 citations	147801 31 h-index	182427 51 g-index
122 all docs	122 docs citations	122 times ranked	3210 citing authors

#	Article	IF	Citations
1	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
2	Basaltic Glass Fibers from Industrial Wastes: A Laboratory-Scale Technical Feasibility Study. Crystals, 2022, 12, 359.	2.2	0
3	A Nanoindentation Approach for Time-Dependent Evaluation of Surface Free Energy in Micro- and Nano-Structured Titanium. Materials, 2022, 15, 287.	2.9	6
4	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
5	Influence of the Silver Content on Mechanical Properties of Ti-Cu-Ag Thin Films. Nanomaterials, 2021, 11, 435.	4.1	8
6	Effectiveness and Compatibility of Nanoparticle Based Multifunctional Coatings on Natural and Man-Made Stones. Coatings, 2021, 11, 480.	2.6	8
7	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
8	Modeling of Erosion Response of Cold-Sprayed In718-Ni Composite Coating Using Full Factorial Design. Coatings, 2020, 10, 335.	2.6	16
9	Influence of the microstructure on the diffusion barrier performance of Nb-based coatings for cyclotron targets. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, 051510.	2.1	3
10	Fire simulation tests of mineral oil and natural esters transformers. , 2019, , .		6
11	Synchrotron Radiation Applied to Real-Time Studies of the Kinetics of Growth of Aluminum Nitride Thin Multilayers. Journal of Physical Chemistry B, 2019, 123, 1679-1687.	2.6	0
12	Damage progression in thermal barrier coating systems during thermal cycling: A nano-mechanical assessment. Materials and Design, 2019, 166, 107615.	7.0	47
13	Contraintes rÃ©siduelles et comportement mÃ©canique de revÃªtements nickel-bore. Materiaux Et Techniques, 2019, 107, 205.	0.9	1
14	Nanoscale residual stress depth profiling by Focused Ion Beam milling and eigenstrain analysis. Materials and Design, 2018, 145, 55-64.	7.0	54
15	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
16	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
17	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
18	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

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19	Investigation on Failure in Thermal Barrier Coatings on Gas Turbine First-Stage Rotor Blade. Journal of Failure Analysis and Prevention, 2018, 18, 1062-1072.	0.9	6
20	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
21	A method to improve the quality of 2.5 dimensional micro-and nano-structures produced by focused ion beam machining. Micron, 2017, 101, 8-15.	2.2	16
22	Atomic layer deposition of semiconductor oxides on electric sail tethers. Thin Solid Films, 2017, 621, 195-201.	1.8	3
23	Power transformer fire and environmental risk reduction by using natural esters. , 2017, , .		18
24	Packed and Monolithic Reactors for the Dry Reforming of Methane: Ni Supported on Î³-Al2O3 Promoted by Ru. Advanced Science Letters, 2017, 23, 5977-5979.	0.2	3
25	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
26	($ egin{array}{ccc}1& 0& egin{array}{cc}ar{1}& 1end{array}end{array}$) preferential orientation of polycrystalline AlN grown on SiO₂/Si wafers by reactive sputter magnetron technique. EPJ Applied Physics, 2016, 74, 10301.	0.7	2
27	Low temperature degradation resistant nanostructured yttria-stabilized zirconia for dental applications. Ceramics International, 2016, 42, 8190-8197.	4.8	31
28	Toward a Fatigue Life Assessment of Steel Pipes Based on X-Ray Diffraction Measurements. , 2015, , .		3
29	Behavior of nitrided and carburized AISI 904â€‰L stainless steels under severe light ion beam irradiation with plasma focus. Surface and Interface Analysis, 2015, 47, 728-737.	1.8	8
30	Study on the Correlation between Microstructure Corrosion and Wear Resistance of Ag-Cu-Ge Alloys. Coatings, 2015, 5, 78-94.	2.6	7
31	Thin-film deposition and characterization for neutron detection applications. European Physical Journal Plus, 2015, 130, 1.	2.6	0
32	Structural, morphological and mechanical characterization of Mo sputtered coatings. Surface and Coatings Technology, 2015, 266, 14-21.	4.8	15
33	10B enriched film deposited by e-beam technique on Al2O3 substrate for high efficiency thermal neutron detector. Surface and Coatings Technology, 2015, 265, 160-165.	4.8	8
34	Influence of Tiâ€“TiN multilayer PVD-coatings design on residual stresses and adhesion. Materials & Design, 2015, 75, 47-56.	5.1	138
35	Niobiumâ€“niobium oxide multilayered coatings for corrosion protection of proton-irradiated liquid water targets for [18F] production. Thin Solid Films, 2015, 591, 316-322.	1.8	5
36	Prototyping fishnet metamaterials: alumina-silver-based structures. , 2015, , .		0

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37	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
38	The Vortex Path Model Analysis of the Field Angle Dependence of the Critical Current Density in Nanocomposite YBa2Cu3 O 7âˆ'x â€“ BaZrO3 Films Obtained by Low Fluorine Chemical Solution Deposition. Journal of Superconductivity and Novel Magnetism, 2014, 27, 2493-2500.	1.8	15
39	Elastic anisotropy of coatings by AFM analysis of microindentations. Surface Engineering, 2014, 30, 41-47.	2.2	4
40	NanomechanicalÂCharacterization of Brittle Rocks. Solid Mechanics and Its Applications, 2014, , 209-229.	0.2	0
41	A critical comparison between XRD and FIB residual stress measurement techniques in thin films. Thin Solid Films, 2014, 572, 224-231.	1.8	58
42	Investigation of AA2024-T3 surfaces modified by cerium compounds: A localized approach. Corrosion Science, 2014, 78, 215-222.	6.6	51
43	On the use of copper-based substrates for YBCO coated conductors. Journal of Physics: Conference Series, 2014, 507, 022048.	0.4	3
44	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
45	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
46	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
47	Depth profiling and morphological characterization of AlN thin films deposited on Si substrates using a reactive sputter magnetron. EPJ Applied Physics, 2014, 67, 21301.	0.7	3
48	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
49	The fire assay reloaded. Gold Bulletin, 2013, 47, 9.	2.4	1
50	Multi-step anodizing on Ti6Al4V components to improve tribomechanical performances. Surface and Coatings Technology, 2013, 227, 19-27.	4.8	27
51	Optimized coating procedure for the protection of TiAl intermetallic alloy against high temperature oxidation. Intermetallics, 2013, 37, 76-82.	3.9	30
52	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
53	Stability of expanded austenite, generated by ion carburizing and ion nitriding of AISI 316L SS, under high temperature and high energy pulsed ion beam irradiation. Surface and Coatings Technology, 2013, 218, 142-151.	4.8	27
54	X-ray diffraction study of microstructural changes during fatigue damage initiation in pipe steels: Role of the initial dislocation structure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 580, 1-12.	5.6	12

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55	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
56	Influence of mechanical properties of tungsten carbideâ€“cobalt thermal spray coatings on their solid particle erosion behaviour. Surface Engineering, 2012, 28, 237-243.	2.2	37
57	X-Ray Diffraction Study of Microstructural Changes During Fatigue Damage Initiation in Steel Pipes. , 2012, , .		3
58	X-Ray Diffraction Study of Microstructural Changes During Fatigue Damage in Steel Pipelines. , 2012, , .		0
59	High resolution residual stress measurement on amorphous and crystalline plasma-sprayed single-splats. Surface and Coatings Technology, 2012, 206, 4872-4880.	4.8	37
60	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
61	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
62	Growth and Characterization of La2Zr2O7 Buffer Layers Deposited by Chemical Solution Deposition. Physics Procedia, 2012, 36, 1552-1557.	1.2	3
63	An easy way to measure surface free energy by drop shape analysis. Measurement: Journal of the International Measurement Confederation, 2012, 45, 317-324.	5.0	16
64	X-ray diffraction study of microstructural changes during fatigue damage initiation in steel pipes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 532, 158-166.	5.6	17
65	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
66	Wear mechanisms and in-service surface modifications of a Stellite 6B Coâ€“Cr alloy. Wear, 2012, 290-291, 10-17.	3.1	35
67	Surface Analysis and Osteoblasts Response of a Titanium Oxi-Carbide Film Deposited on Titanium by Ion Plating Plasma Assisted (IPPA). Journal of Nanoscience and Nanotechnology, 2011, 11, 8754-8762.	0.9	13
68	Decentralized Hybrid Model Predictive Control of a Formation of Unmanned Aerial Vehicles. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 11900-11906.	0.4	16
69	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
70	Flame treatment on plastic: A new surface free energy statistical prediction model and characterization of treated surfaces. Applied Surface Science, 2011, 257, 2148-2158.	6.1	16
71	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
72	Effect of composition on mechanical behaviour of diamond-like carbon coatings modified with titanium. Thin Solid Films, 2011, 519, 3061-3067.	1.8	25

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73	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
74	Focused ion beam and transmission electron microscopy as a powerful tool to understand localized corrosion phenomena. Corrosion Reviews, 2011, 29, .	2.0	2
75	Residual stress measurement at the micrometer scale: focused ion beam (FIB) milling and nanoindentation testing. Philosophical Magazine, 2011, 91, 1121-1136.	1.6	27
76	A New Methodology For In-Situ Residual Stress Measurement In MEMS Structures. AIP Conference Proceedings, 2010, , .	0.4	10
77	F-substituted hydroxyapatite nanopowders: Thermal stability, sintering behaviour and mechanical properties. Ceramics International, 2010, 36, 313-322.	4.8	114
78	Austenite modification of AISI 316L SS by pulsed nitrogen ion beams generated in dense plasma focus discharges. Surface and Coatings Technology, 2010, 204, 1193-1199.	4.8	29
79	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
80	Depth-sensing indentation modeling for determination of Elastic modulus of thin films. Mechanics of Materials, 2010, 42, 166-174.	3.2	35
81	Characterization of expanded austenite developed on AISI 316L stainless steel by plasma carburization. Surface and Coatings Technology, 2010, 204, 3750-3759.	4.8	34
82	Structural characterisation of High Velocity Suspension Flame Sprayed (HVSFS) TiO2 coatings. Surface and Coatings Technology, 2010, 204, 3902-3910.	4.8	24
83	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
84	Focused ion beam ring drilling for residual stress evaluation. Materials Letters, 2009, 63, 1961-1963.	2.6	146
85	Complex wear measurement on thin coatings by the cratering method. Lubrication Science, 2009, 21, 269-288.	2.1	0
86	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
87	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
88	Hydrothermal N-doped TiO2: Explaining photocatalytic properties by electronic and magnetic identification of N active sites. Applied Catalysis B: Environmental, 2009, 93, 149-155.	20.2	55
89	Graded selective coatings based on zirconium and titanium oxynitride. Journal Physics D: Applied Physics, 2009, 42, 115406.	2.8	10
90	Tribological studies on PVD/HVOF duplex coatings on Ti6Al4V substrate. Surface and Coatings Technology, 2008, 203, 566-571.	4.8	63

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91	Preparation and characterization of nano cobalt oxide. Journal of Nanoparticle Research, 2008, 10, 59-67.	1.9	105
92	Characterization and residual stresses of WCâ€“Co thermally sprayed coatings. Surface and Coatings Technology, 2008, 202, 4560-4565.	4.8	78
93	Analysis of data from various indentation techniques for thin films intrinsic hardness modelling. Thin Solid Films, 2008, 516, 1964-1971.	1.8	11
94	Superconducting and microstructural studies on sputtered niobium thin films for accelerating cavity applications. Superconductor Science and Technology, 2008, 21, 125026.	3.5	18
95	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
96	Titanium carbide films obtained by conversion of sputtered titanium on high carbon steel. Surface and Coatings Technology, 2006, 200, 5447-5454.	4.8	11
97	High thickness Ti/TiN multilayer thin coatings for wear resistant applications. Surface and Coatings Technology, 2006, 201, 2155-2165.	4.8	105
98	Measurement of residual stress in thermal spray coatings by the incremental hole drilling method. Surface and Coatings Technology, 2006, 201, 2092-2098.	4.8	59
99	Production and characterization of duplex coatings (HVOF and PVD) on Tiâ€“6Alâ€“4V substrate. Thin Solid Films, 2006, 515, 186-194.	1.8	43
100	Laser-assisted welding of transparent polymers for microchemical engineering and life science. , 2005, , .		12
101	Parametric Study of an HVOF Process for the Deposition of Nanostructured WC-Co Coatings. Journal of Thermal Spray Technology, 2005, 14, 187-195.	3.1	89
102	Multifaceted Approach for Characterization of Solid Residues from Sludge Incineration. Water, Air, and Soil Pollution, 2004, 158, 193-205.	2.4	1
103	Characterisation and wear properties of industrially produced nanoscaled CrN/NbN multilayer coating. Surface and Coatings Technology, 2004, 188-189, 319-330.	4.8	32
104	Rapid solidification of plasma sprayed advanced materials: nanostructure characterisation. International Journal of Materials and Product Technology, 2004, 20, 377.	0.2	2
105	Characterization of vanadium oxide on ZrO2-based catalyst precursors. Physical Chemistry Chemical Physics, 2003, 5, 4974.	2.8	7
106	Influence of Si, Ni and Co additions on gold alloy for investment cast process. Journal of Alloys and Compounds, 2001, 325, 252-258.	5.5	4
107	Characterization and hardness modelling of alternate TIN/TICN multilayer cathodic arc PVD coating on tool steel. Surface and Coatings Technology, 2001, 146-147, 363-370.	4.8	38
108	Verification of Layered Structures in SnO2/Metal-based Gas Sensors by X-ray Microanalysis: Comparison with X-ray Photoelectron Spectroscopy. Microscopy and Microanalysis, 2001, 7, 518-525.	0.4	0

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109	Verification of Layered Structures in SnO2/Metal-based Gas Sensors by X-ray Microanalysis: Comparison with X-ray Photoelectron Spectroscopy. Microscopy and Microanalysis, 2001, 7, 518-525.	0.4	0
110	Tensile experiments and SEM fractography on bovine subchondral bone. Journal of Biomechanics, 2000, 33, 1153-1157.	2.1	39
111	EB/UV treatment of protective coatings for porous materials. Radiation Physics and Chemistry, 2000, 57, 393-397.	2.8	4
112	Laser-induced crystallization of amorphous siliconâ€“carbon alloys studied by Raman microspectroscopy. Applied Surface Science, 1999, 138-139, 24-28.	6.1	21
113	Thermal and microchemical characterisations of CaSO4â€“SiO2 investment materials for casting jewellery alloys. Thermochimica Acta, 1998, 321, 175-183.	2.7	18
114	Surface analysis of biocompatible coatings on titanium. Journal of Electron Spectroscopy and Related Phenomena, 1998, 95, 61-69.	1.7	92
115	Interaction of mercury vapour with thin films of gold. Applied Surface Science, 1996, 103, 107-111.	6.1	49
116	The role of chemistry in the research on advanced materials in Italy (I). The ZIC paradigm. Materials Technology, 1996, 3, 85-109.	0.3	0
117	Structural, optical and electronic properties of wide band gap amorphous carbon-silicon alloys. Diamond and Related Materials, 1993, 2, 773-777.	3.9	29
118	Development of a Duplex Coating Procedure (HVOF and PVD) on TI-6AL-4V Substrate for Automotive Applications.. , 0, , 145-158.		0
119	Load Bearing Capacity And Failure Modes Analysis Of PVD/HVOF Duplex Coatings. , 0, , 25-34.		0
120	Pure And Substituted Hydroxyapatite Nanopowders By Precipitation. , 0, , 65-74.		0