Oscar Carvalho

List of Publications by Year
in descending order

112 papers	2,355 citations	218381 26 h-index	276539 41 g-index
113 all docs	113 docs citations	113 times ranked	2316 citing authors

#	Article	IF	Citations
1	Laser surface treatment on Yttriaâ€stabilized zirconia dental implants: Influence on cell behavior. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, 110, 249-258.	1.6	4
2	Surface modification of glass fiber-reinforcedÂcompositeÂposts to enhance their bond strength to resin-matrix cements: an integrative review. Clinical Oral Investigations, 2022, 26, 95-107.	1.4	16
3	A New Tribometer for the Automotive Industry: Development and Experimental Validation. Experimental Mechanics, 2022, 62, 483-492.	1.1	2
4	Understanding drop spreading behaviour on WC-10wt%Co cutting tools â€“ an experimental and numerical study. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 637, 128268.	2.3	8
5	Surface modification of zirconia dental implants by laser texturing. Lasers in Medical Science, 2022, 37, 77-93.	1.0	21
6	NiTi laser textured implants with improved in vivo osseointegration: An experimental study in rats. Journal of Materials Science and Technology, 2022, 114, 120-130.	5.6	10
7	Peri-implant cell response on groove and pore-textured zirconia surfaces. Journal of Oral Biosciences, 2022, 64, 100-107.	0.8	2
8	Complex Fluid Flow in Microchannels and Heat Pipes with Enhanced Surfaces for Advanced Heat Conversion and Recovery Systems. Energies, 2022, 15, 1478.	1.6	5
9	Porous Zirconia Blocks for Bone Repair: An Integrative Review on Biological and Mechanical Outcomes. Ceramics, 2022, 5, 161-172.	1.0	7
10	Human Gingival Fibroblast and Osteoblast Behavior on Groove-Milled Zirconia Implant Surfaces. Materials, 2022, 15, 2481.	1.3	2
11	Effect of lower limb orthoses on cartilage in patients with knee osteoarthritis: a narrative review. Prosthetics and Orthotics International, 2022, Publish Ahead of Print, .	0.5	0
12	Modification of Zirconia Implant Surfaces by Nd:YAG Laser Grooves: Does It Change Cell Behavior?. Biomimetics, 2022, 7, 49.	1.5	0
13	Relationship between the inorganic content and the polymerization of the organic matrix of resin composites for dentistry: a narrative review. , 2022, 4, .	0.0	3
14	Predictive models on the influence of laser texturing parameters on the Inconel 718 surface by using Nd: YVO4 laser. Optics and Laser Technology, 2022, 154, 108320.	2.2	5
15	Periodontal In Vitro Cells Response on Zirconia Implant Surfaces Textured with Milled Machining Micropores. World Journal of Dentistry, 2022, 13, 307-315.	0.1	0
16	The influence of inorganic fillers on the light transmission through resin-matrix composites during the light-curing procedure: an integrative review. Clinical Oral Investigations, 2022, 26, 5575-5594.	1.4	13
17	Assessment of an Exhaust Thermoelectric Generator Incorporating Thermal Control Applied to a Heavy Duty Vehicle. Energies, 2022, 15, 4787.	1.6	4
18	Laser powder bed fusion of the steels used in the plastic injection mould industry: a review of the influence of processing parameters on the final properties. International Journal of Advanced Manufacturing Technology, 2022, 121, 4255-4287.	1.5	8

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19	Pure magnesium laser surface modification using Nd:YAG laser. Materials Technology, 2021, 36, 811-815.	1.5	5
20	Effect of laser irradiation on the adhesion of resin-based materials to zirconia: a systematic review and meta-analysis. Journal of Adhesion Science and Technology, 2021, 35, 1035-1056.	1.4	5
21	Review on current limits and potentialities of technologies for biomedical ceramic scaffolds production. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 377-393.	1.6	45
22	Current Perspectives on the Biomechanical Modelling of the Human Lower Limb: A Systematic Review. Archives of Computational Methods in Engineering, 2021, 28, 601-636.	6.0	9
23	Antibiofilm effects of titanium surfaces modified by laser texturing and hotâ€pressing sintering with silver. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 1588-1600.	1.6	3
24	The influence of zirconia veneer thickness on the degree of conversion of resin-matrix cements: an integrative review. Clinical Oral Investigations, 2021, 25, 3395-3408.	1.4	25
25	A Preliminary Analysis of the Wear Pathways of Sliding Contacts on Temporomandibular Joint Total Joint Replacement Prostheses. Metals, 2021, 11, 685.	1.0	3
26	Desgaste das prÃ³teses da articulaÃ§Ã£o temporomandibular: uma revisÃ£o narrativa. , 2021, 3, 61-68.	0.0	1
27	In Vitro and In Vivo Effects of Light Therapy on Cartilage Regeneration for Knee Osteoarthritis: A Systematic Review. Cartilage, 2021, 13, 1700S-1719S.	1.4	4
28	Influence of a DLC coating topography in the piston ring/cylinder liner tribological performance. Journal of Manufacturing Processes, 2021, 66, 483-493.	2.8	10
29	Patterned Electroconductive Networks in Agâ€Polyamide 6 Composites by Laser Ablation. Macromolecular Materials and Engineering, 2021, 306, 2100308.	1.7	1
30	The resin-matrix cement layer thickness resultant from the intracanal fitting of teeth root canal posts: an integrative review. Clinical Oral Investigations, 2021, 25, 5595-5612.	1.4	22
31	Wear Pathways of Tooth Occlusal Fissure Sealants: An Integrative Review. Biotribology, 2021, 27, 100190.	0.9	6
32	Multi-mechanical waves against Alzheimerâ€™s disease pathology: a systematic review. Translational Neurodegeneration, 2021, 10, 36.	3.6	10
33	Assessment of zirconia fluorescence after treatment with immersion in liquids, glass infiltration and aging. Ceramics International, 2021, 47, 27511-27523.	2.3	1
34	A novel approach to reduce in-service temperature in WC-Co cutting tools. Ceramics International, 2020, 46, 3002-3008.	2.3	34
35	Novel laser textured surface designs for improved zirconia implants performance. Materials Science and Engineering C, 2020, 108, 110390.	3.8	29
36	Production of a laser textured 316L stainless steel reinforced with CuCoBe + diamond composites by hot pressing: Influence of diamond particle size on the hardness and tribological behaviour. Tribology International, 2020, 146, 106056.	3.0	14

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37	Cell adhesion evaluation of laser-sintered HAp and 45S5 bioactive glass coatings on micro-textured zirconia surfaces using MC3T3-E1 osteoblast-like cells. Materials Science and Engineering C, 2020, 109, 110492.	3.8	29
38	Aunps and AgÎ¼ps-functionalized zirconia surfaces by hybrid laser technology for dental implants. Ceramics International, 2020, 46, 7109-7121.	2.3	13
39	Tribological solutions for engine piston ring surfaces: an overview on the materials and manufacturing. Materials and Manufacturing Processes, 2020, 35, 498-520.	2.7	31
40	Micro-grooved surface laser texturing of zirconia: Surface characterization and artificial soft tissue adhesion evaluation. Ceramics International, 2020, 46, 26136-26146.	2.3	15
41	Bond Strength of Metallic or Ceramic Orthodontic Brackets to Enamel, Acrylic, or Porcelain Surfaces. Materials, 2020, 13, 5197.	1.3	19
42	Tribological Characterization of Dental Restorative Materials. Biotribology, 2020, 23, 100140.	0.9	8
43	Laser printing of silver-based micro-wires in ZrO2 substrate for smart implant applications. Optics and Laser Technology, 2020, 131, 106416.	2.2	9
44	Compressive properties and energy absorption of metal-polymer hybrid cellular structures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 794, 139921.	2.6	11
45	Influence of ns-Nd:YAG laser surface treatment on the tensile bond strength of zirconia to resin-matrix cements. Ceramics International, 2020, 46, 27822-27831.	2.3	11
46	Effect of laser surface texturing on the wettability of WC-Co cutting tools. International Journal of Advanced Manufacturing Technology, 2020, 111, 1991-1999.	1.5	16
47	Laser-assisted production of HAp-coated zirconia structured surfaces for biomedical applications. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 112, 104049.	1.5	20
48	Computational Modelling of the Bioheat Transfer Process in Human Skin Subjected to Direct Heating and/or Cooling Sources: A Systematic Review. Annals of Biomedical Engineering, 2020, 48, 1616-1639.	1.3	11
49	Influence of morphology and microstructure on the tribological behavior of arc deposited CrN coatings for the automotive industry. Surface and Coatings Technology, 2020, 397, 126047.	2.2	27
50	Laser Nd:YAG patterning enhance human osteoblast behavior on zirconia implants. Lasers in Medical Science, 2020, 35, 2039-2048.	1.0	12
51	Reinforcement of a laser-textured 316L steel with CuCoBe-diamond composites through laser sintering. Materials and Manufacturing Processes, 2020, 35, 1032-1039.	2.7	9
52	Laser printing of micro-electronic communication systems for smart implants applications. Optics and Laser Technology, 2020, 128, 106211.	2.2	8
53	Tribological Behavior of 316L Stainless Steel Reinforced with CuCoBeâ€‰+â€‰Diamond Composites by Laser Sintering and Hot Pressing: A Comparative Statistical Study. Lecture Notes in Computer Science, 2020, , 231-246.	1.0	1
54	Electrical potential approaches to inhibit biofilm adhesion on titanium implants. Materials Letters, 2019, 255, 126577.	1.3	6

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55	Evaluation of the color and translucency of glass-infiltrated zirconia based on the concept of functionally graded materials. Journal of Prosthetic Dentistry, 2019, 121, 547.e1-547.e7.	1.1	12
56	Influence of sintering pressure on the microstructure and tribological properties of low temperature fast sintered hot-pressed Y-TZP. Ceramics International, 2019, 45, 5883-5893.	2.3	9
57	Computational Modelling of Human Lower Limb for Reproduction of Walking Dynamics with Muscles: Healthy and Pathological Cases. Mechanisms and Machine Science, 2019, , 3227-3236.	0.3	0
58	Laser surface texturing of Ti-6Al-4V by nanosecond laser: Surface characterization, Ti-oxide layer analysis and its electrical insulation performance. Materials Science and Engineering C, 2019, 104, 109901.	3.8	21
59	Production and tribological characterization of a textured diamond-reinforced copper-beryllium alloy. Tribology International, 2019, 140, 105843.	3.0	6
60	Novel laser surface texturing for improved primary stability of titanium implants. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 98, 26-39.	1.5	45
61	Current investigations on tritiated dust and its impact on tokamak safety. Nuclear Fusion, 2019, 59, 086061.	1.6	14
62	Computational Modelling of Human Lower Limb for Reproduction of Walking Dynamics with Muscles: Healthy and Pathological Cases. , 2019, , .		0
63	Design, Modelling and Control of an Active Weight-Bearing Knee Exoskeleton with a Series Elastic Actuator. , 2019, , .		7
64	Novel design of low modulus high strength zirconia scaffolds for biomedical applications. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 97, 375-384.	1.5	18
65	Laser machining of WC-Co green compacts for cutting tools manufacturing. International Journal of Refractory Metals and Hard Materials, 2019, 81, 316-324.	1.7	20
66	Development of novel zirconia implant's materials gradated design with improved bioactive surface. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 94, 110-125.	1.5	17
67	Surface design using laser technology for Ti6Al4V-hydroxyapatite implants. Optics and Laser Technology, 2019, 109, 488-495.	2.2	32
68	Corrosion and tribocorrosion behaviour of Ti6Al4V produced by selective laser melting and hot pressing in comparison with the commercial alloy. Journal of Materials Processing Technology, 2019, 266, 239-245.	3.1	67
69	Bond strength enhancement of zirconia-porcelain interfaces via Nd:YAG laser surface structuring. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 81, 161-167.	1.5	22
70	HAp-functionalized zirconia surfaces via hybrid laser process for dental applications. Optics and Laser Technology, 2018, 106, 157-167.	2.2	21
71	On the mechanical properties of monolithic and laminated nano-ceramic resin structures obtained by laser printing. Composites Part B: Engineering, 2018, 141, 76-83.	5.9	13
72	Ti6Al4V laser surface preparation and functionalization using hydroxyapatite for biomedical applications. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 1534-1545.	1.6	22

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73	A nanoindentation study on Al₃Ni interface of Ni reinforced aluminum-silicon composite. Mechanics of Advanced Materials and Structures, 2017, 24, 871-874.	1.5	6
74	Effect of sintering pressure on microstructure and mechanical properties of hot-pressed Ti6Al4V-ZrO2 materials. Materials and Design, 2017, 120, 394-403.	3.3	27
75	Wear behavior of Ti6Al4V biomedical alloys processed by selective laser melting, hot pressing and conventional casting. Transactions of Nonferrous Metals Society of China, 2017, 27, 829-838.	1.7	101
76	Laser surface structuring of Ti6Al4V substrates for adhesion enhancement in Ti6Al4V-PEEK joints. Materials Science and Engineering C, 2017, 79, 177-184.	3.8	36
77	316L stainless steel mechanical and tribological behaviorâ€"A comparison between selective laser melting, hot pressing and conventional casting. Additive Manufacturing, 2017, 16, 81-89.	1.7	203
78	Tribological behavior of Ti6Al4V cellular structures produced by Selective Laser Melting. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 69, 128-134.	1.5	58
79	Study on damping capacity and dynamic Young's modulus of aluminium matrix composite reinforced with SiC particles. CiÃªncia & Tecnologia Dos Materiais, 2017, 29, e92-e96.	0.5	12
80	Effect of laser surface texturing on primary stability and surface properties of zirconia implants. Ceramics International, 2017, 43, 15227-15236.	2.3	61
81	Study of the tribocorrosion behaviour of Ti6Al4V â€“ HA biocomposites. Tribology International, 2017, 107, 77-84.	3.0	56
82	Metallic reinforcements role on aluminum silicon composites wear behavior. Journal of Composite Materials, 2017, 51, 2805-2812.	1.2	6
83	Effect of Zirconia and Alumina Fillers on the Microstructure and Mechanical Strength of Dental Glass Ionomer Cements. Open Dentistry Journal, 2016, 10, 58-68.	0.2	19
84	Interface analysis on an eutectic AlSi alloy reinforced with Ni coated MWCNT. Composites Part B: Engineering, 2016, 93, 229-235.	5.9	19
85	Shear bond strength of veneering porcelain to zirconia: Effect of surface treatment by CNC-milling and composite layer deposition on zirconia. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 60, 547-556.	1.5	20
86	Design of Ti6Al4V-HA composites produced by hot pressing for biomedical applications. Materials and Design, 2016, 108, 488-493.	3.3	53
87	Tribological behaviour of glass-ceramics reinforced by Yttria Stabilized Zirconia. Tribology International, 2016, 102, 361-370.	3.0	20
88	Predictive models for physical and mechanical properties of 316L stainless steel produced by selective laser melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 657, 43-56.	2.6	142
89	Pressure and sintering temperature influence on the interface reaction of SiCp/410L stainless steel composites. Journal of Composite Materials, 2016, 50, 2005-2015.	1.2	11
90	Damping capacity and dynamic modulus of hot pressed AlSi composites reinforced with different SiC particle sized. Composites Part B: Engineering, 2016, 90, 399-405.	5.9	28

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91	Predictive models for physical and mechanical properties of Ti6Al4V produced by Selective Laser Melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 663, 181-192.	2.6	101
92	Mechanisms governing the mechanical behavior of an AlSiâ€“CNTsâ€“SiCp hybrid composite. Composites Part B: Engineering, 2016, 90, 443-449.	5.9	20
93	High temperature damping behavior and dynamic Youngâ€™s modulus of AlSiâ€“CNTâ€“SiCp hybrid composite. Composite Structures, 2016, 141, 155-162.	3.1	25
94	The effect of SiCp size on high temperature damping capacity and dynamic Young's modulus of hot-pressed AlSiâ€“SiCp MMCs. Materials and Design, 2016, 93, 409-417.	3.3	31
95	Development of a method to produce FGMs by controlling the reinforcement distribution. Materials and Design, 2016, 92, 233-239.	3.3	22
96	Properties assessment of nickel particulate-reinforced aluminum composites produced by hot pressing. Journal of Composite Materials, 2016, 50, 523-531.	1.2	12
97	Carbon nanotube dispersion in aluminum matrix compositesâ€”Quantification and influence on strength. Mechanics of Advanced Materials and Structures, 2016, 23, 66-73.	1.5	22
98	Mechanisms governing the tensile, fatigue, and wear behavior of carbon nanotube reinforced aluminum alloy. Mechanics of Advanced Materials and Structures, 2016, 23, 917-925.	1.5	21
99	Optimization of AlSiâ€“CNTs functionally graded material composites for engine piston rings. Materials & Design, 2015, 80, 163-173.	5.1	50
100	Improvement on Sliding Wear Behavior of Al/Cast Iron Tribopair by CNT's Reinforcement of an Al Alloy. Tribology Transactions, 2015, 58, 643-653.	1.1	13
101	Hybrid composites â€“ Metallic and ceramic reinforcements influence on mechanical and wear behavior. Composites Part B: Engineering, 2015, 74, 153-165.	5.9	41
102	Mechanical properties of hot pressed CoCrMo alloy compacts for biomedical applications. Materials and Design, 2015, 83, 829-834.	3.3	31
103	Dry sliding wear behaviour of AlSiâ€“CNTsâ€“SiCp hybrid composites. Tribology International, 2015, 90, 148-156.	3.0	54
104	Evaluation of CNT Dispersion Methodology Effect on Mechanical Properties of an AlSi Composite. Journal of Materials Engineering and Performance, 2015, 24, 2535-2545.	1.2	27
105	Interface analysis and wear behavior of Ni particulate reinforced aluminumâ€“silicon composites produced by PM. Composites Part B: Engineering, 2015, 69, 101-110.	5.9	29
106	CNT-reinforced aluminum composites: processing and mechanical properties. CiÃªncia & Tecnologia Dos Materiais, 2013, 25, 75-78.	0.5	18
107	Effect of sintering stage in NiTi short-fibre-reinforced aluminiumâ€“silicon composites interface properties. Journal of Composite Materials, 2013, 47, 1625-1631.	1.2	14
108	Comparative study of tarnishing resistance of several coloured gold based alloys. Corrosion Engineering Science and Technology, 2011, 46, 271-276.	0.7	0

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109	Tarnish and corrosion evaluation of a blue goldâ€based alloy. Materials and Corrosion - Werkstoffe Und Korrosion, 2009, 60, 355-359.	0.8	2
110	Study of a purple goldâ€based alloy resistance to tarnishing in a sulphuric solution. Materials and Corrosion - Werkstoffe Und Korrosion, 2009, 60, 450-454.	0.8	1
111	Osseointegration Assessment of Multiâ€Material Ti6Al4Vâ€Î²â€‰TCP Implants: An Experimental Study in Rats. Advanced Materials Technologies, 0, , 2101117.	3.0	3
112	Effect of carbon nanotubes on the biotribological behavior of hot-pressed PEEK-based composites for biomedical applications. Engineering Research Express, 0, , .	0.8	0