

# Marcio Celso Fredel

## List of Publications by Year in descending order

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Version: 2024-02-01

129  
papers

2,179  
citations

236833

25  
h-index

315616

38  
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132  
all docs

132  
docs citations

132  
times ranked

2365  
citing authors

#	ARTICLE	IF	CITATIONS
1	Biomechanical analyses of one-piece dental implants composed of titanium, zirconia, <sc>PEEK</sc>, <sc>CFR&PEEK</sc>, or <sc>GFR&PEEK</sc>: Stresses, strains, and bone remodeling prediction by the finite element method. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, 110, 79-88.	1.6	15
2	Influence of the Addition of Ni-Coated Carbon Nanotubes on the Mechanical Properties of Highly Porous Zirconia Cellular Structures. Advanced Engineering Materials, 2022, 24, 2100624.	1.6	1
3	Chitosan/Î²-TCP composites scaffolds coated with silk fibroin: a bone tissue engineering approach. Biomedical Materials (Bristol), 2022, 17, 015003.	1.7	7
4	Chemical tempering of feldspathic porcelain for dentistry applications: A review. Open Ceramics, 2022, 9, 100201.	1.0	7
5	Evaluation of magnesium chloride waste recovery: A case study in nanofertilizers. Revista Brasileira De Gest& Ambiental E Sustentabilidade, 2022, 9, 419-437.	0.0	0
6	Chemical modification of porcelain tile surface to optimize flexural strength and Weibull modulus through the ion exchange process. Journal of Building Engineering, 2022, 56, 104735.	1.6	2
7	In-vitro mechanical and biological evaluation of novel zirconia reinforced bioglass scaffolds for bone repair. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 114, 104164.	1.5	22
8	Effect of dip-coating process on mechanical behavior of 3Y-TZP using different aging-free coatings. Ceramics International, 2021, 47, 6896-6904.	2.3	3
9	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
10	Application of Kubelka-Munk model on the optical characterization of translucent dental zirconia. Materials Chemistry and Physics, 2021, 258, 123994.	2.0	14
11	Numerical and experimental study of ion exchange in porcelain tiles. International Journal of Applied Ceramic Technology, 2021, 18, 1025-1032.	1.1	4
12	Materials and Manufacturing Techniques for Polymeric and Ceramic Scaffolds Used in Implant Dentistry. Journal of Composites Science, 2021, 5, 78.	1.4	24
13	On the production of novel zirconia-reinforced bioactive glass-porous structures for bone repair. Journal of Materials Science, 2021, 56, 11682-11697.	1.7	1
14	On the synergistic effect of sulfonic functionalization and acidic adhesive conditioning to enhance the adhesion of PEEK to resin-matrix composites. Dental Materials, 2021, 37, 741-754.	1.6	19
15	Assessment of power modulation formats on penetration depth for laser welding. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2021, 43, 1.	0.8	9
16	Three-dimensional bioactive hydrogel-based scaffolds for bone regeneration in implant dentistry. Materials Science and Engineering C, 2021, 124, 112055.	3.8	28
17	Reducing processing-induced residual stresses in SAE 4140 steels laser welded using modulated power emission. Optics and Laser Technology, 2021, 140, 107032.	2.2	5
18	Biomechanical behavior of functionally graded S53P4 bioglass-zirconia dental implants: Experimental and finite element analyses. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 120, 104565.	1.5	13

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19	Assessment of zirconia fluorescence after treatment with immersion in liquids, glass infiltration and aging. <i>Ceramics International</i> , 2021, 47, 27511-27523.	2.3	1
20	Effect of power modulation frequency on porosity formation in laser welding of SAE 1020 steels. <i>International Journal of Advanced Manufacturing Technology</i> , 2021, 112, 2509-2517.	1.5	12
21	Influence of laser texturing on surface features, mechanical properties and low-temperature degradation behavior of 3Y-TZP. <i>Ceramics International</i> , 2020, 46, 3502-3512.	2.3	15
22	Micro-CT based finite element modelling and experimental characterization of the compressive mechanical properties of 3-D zirconia scaffolds for bone tissue engineering. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 102, 103516.	1.5	31
23	Wettability modification of laser textured copper surfaces applied to phase change heat transfer. <i>Journal of Laser Applications</i> , 2020, 32, .	0.8	4
24	Influence of calcium phosphates incorporation into poly(lactic-co-glycolic acid) electrospun membranes for guided bone regeneration. <i>Polymer Degradation and Stability</i> , 2020, 179, 109253.	2.7	8
25	Influence of ns-Nd:YAG laser surface treatment on the tensile bond strength of zirconia to resin-matrix cements. <i>Ceramics International</i> , 2020, 46, 27822-27831.	2.3	11
26	Improvement of 3Y-TZP aging behavior by means of zirconia-based protective layers. <i>Journal of the European Ceramic Society</i> , 2020, 40, 4315-4322.	2.8	5
27	In vitro evaluation of bilayer membranes of PLGA/hydroxyapatite/ $\beta$ -tricalcium phosphate for guided bone regeneration. <i>Materials Science and Engineering C</i> , 2020, 112, 110849.	3.8	33
28	Mechanical and tribological performance of Ni-Co-based binders for cubic boron nitride cutting tools. <i>Journal of Composite Materials</i> , 2020, 54, 2753-2760.	1.2	1
29	Laser power modulation to grain refinement of SAE 1045 steel welds. <i>Journal of Laser Applications</i> , 2020, 32, .	0.8	10
30	Electrospun fibrous membranes of poly (lactic-co-glycolic acid) with $\beta$ -tricalcium phosphate for guided bone regeneration application. <i>Polymer Testing</i> , 2020, 86, 106489.	2.3	14
31	Freeze-Casting Method as an Alternative for Ceramic Capillary Evaporator Manufacturing. , 2020, , .		0
32	Direct Laser Interference Patterning of Bioceramics: A Short Review. <i>Ceramics</i> , 2019, 2, 578-586.	1.0	21
33	Low-pressure processing and microstructural evaluation of unidirectional carbon fiber-reinforced aluminum-nickel matrix composites. <i>Journal of Materials Processing Technology</i> , 2019, 269, 10-15.	3.1	17
34	Evaluation of in vitro properties of 3D micro-macro porous zirconia scaffolds coated with 58S bioactive glass using MG-63 osteoblast-like cells. <i>Journal of the European Ceramic Society</i> , 2019, 39, 2545-2558.	2.8	27
35	Mechanical properties of zirconia periodic open cellular structures. <i>Ceramics International</i> , 2019, 45, 15799-15806.	2.3	10
36	Manufacturing and characterization of plates for fracture fixation of bone with biocomposites of poly (lactic acid-co-glycolic acid) (PLGA) with calcium phosphates bioceramics. <i>Materials Science and Engineering C</i> , 2019, 103, 109728.	3.8	18

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37	Adhesion behavior of conventional and high-translucent zirconia: Effect of surface conditioning methods and aging using an experimental methodology. <i>Journal of Esthetic and Restorative Dentistry</i> , 2019, 31, 388-397.	1.8	33
38	Y-TZP/porcelain graded dental restorations design for improved damping behavior – A study on damping capacity and dynamic Young's modulus. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 96, 219-226.	1.5	5
39	Laser metal deposition strategies for repairing flat and notched substrates made of Ni-based single crystalline superalloys. <i>Journal of Laser Applications</i> , 2019, 31, 022513.	0.8	5
40	Production and characterization of zirconia structures with a porous surface. <i>Materials Science and Engineering C</i> , 2019, 101, 264-273.	3.8	9
41	Shear bond strength of PEEK and PEEK-30GF cemented to zirconia or titanium substrates. <i>Journal of Adhesion Science and Technology</i> , 2019, 33, 1090-1101.	1.4	5
42	Influence of Distinct Manufacturing Processes on the Microstructure of Ni-Based Metal Matrix Composites Submitted to Long Thermal Exposure. <i>Key Engineering Materials</i> , 2019, 809, 79-86.	0.4	3
43	Sliding behavior of zirconia porous implant surfaces against bone. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2019, 107, 1113-1121.	1.6	6
44	Ecological footprint of biomaterials for implant dentistry: is the metal-free practice an eco-friendly shift?. <i>Journal of Cleaner Production</i> , 2019, 213, 723-732.	4.6	9
45	On the sulphonated PEEK for implant dentistry: Biological and physicochemical assessment. <i>Materials Chemistry and Physics</i> , 2019, 223, 542-547.	2.0	29
46	Release of simvastatin from scaffolds of poly(lactic-co-glycolic) acid and biphasic ceramic designed for bone tissue regeneration. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2019, 107, 2152-2164.	1.6	13
47	Zirconia surface modifications for implant dentistry. <i>Materials Science and Engineering C</i> , 2019, 98, 1294-1305.	3.8	191
48	The Potential Use of Oyster Shell Waste in New Value-Added By-Product. <i>Resources</i> , 2019, 8, 13.	1.6	104
49	Bond strength enhancement of zirconia-porcelain interfaces via Nd:YAG laser surface structuring. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 81, 161-167.	1.5	22
50	Wear behaviour of tetragonal zirconia polycrystal with a porous surface. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 75, 85-93.	1.7	10
51	Optimized route for the production of zirconia structures with controlled surface porosity for biomedical applications. <i>Ceramics International</i> , 2018, 44, 12496-12503.	2.3	12
52	Mesoporous bioactive glass embedding propolis and cranberry antibiofilm compounds. <i>Journal of Biomedical Materials Research - Part A</i> , 2018, 106, 1614-1625.	2.1	26
53	On the mechanical properties of monolithic and laminated nano-ceramic resin structures obtained by laser printing. <i>Composites Part B: Engineering</i> , 2018, 141, 76-83.	5.9	13
54	Impact of laboratory treatment with coloring and fluorescent liquids on the optical properties of zirconia before and after accelerated aging. <i>Journal of Prosthetic Dentistry</i> , 2018, 120, 276-281.	1.1	11

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55	Properties of PLDLA/bioglass scaffolds produced by selective laser sintering. Polymer Bulletin, 2018, 75, 1299-1309.	1.7	17
56	Influence of specimensâ€™ geometry and materials on the thermal stresses in dental restorative materials during thermal cycling. Journal of Dentistry, 2018, 69, 41-48.	1.7	8
57	Pigmented glazed ceramic roof tiles in Brazil: Thermal and optical properties related to solar reflectance index. Solar Energy, 2018, 159, 113-124.	2.9	35
58	Nickel-cobalt-based materials for diamond cutting tools. International Journal of Advanced Manufacturing Technology, 2018, 95, 1059-1067.	1.5	15
59	Microtensile bond strength of zirconia after surface treatments and aging. Dental Materials, 2018, 34, e100-e101.	1.6	1
60	Functionally graded nanostructured biomaterials (FGNB). , 2018, , 159-180.		0
61	Influence of laser structuring of PEEK, PEEK-GF30 and PEEK-CF30 surfaces on the shear bond strength to a resin cement. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 84, 225-234.	1.5	31
62	Nanostructured biocompatible ceramics and glass-ceramics. , 2018, , 97-118.		2
63	Polymer coatings based on sulfonated-poly-ether-ether-ketone films for implant dentistry applications. Journal of Materials Science: Materials in Medicine, 2018, 29, 132.	1.7	14
64	Nanostructured biomaterials embedding bioactive molecules. , 2018, , 143-158.		0
65	Mechanical integrity of cement- and screw-retained zirconium-lithium silicate glass-ceramic crowns to Morse taper implants. Journal of Prosthetic Dentistry, 2018, 120, 721-731.	1.1	11
66	Copperâ€“nickel-based diamond cutting tools: stone cutting evaluation. International Journal of Advanced Manufacturing Technology, 2017, 92, 1339-1348.	1.5	16
67	Inhibition of multiâ€species oral biofilm by bromide doped bioactive glass. Journal of Biomedical Materials Research - Part A, 2017, 105, 1994-2003.	2.1	22
68	Physicochemical and biological assessment of PEEK composites embedding natural amorphous silica fibers for biomedical applications. Materials Science and Engineering C, 2017, 79, 354-362.	3.8	40
69	Thermal residual stresses in bilayered, trilayered and graded dental ceramics. Ceramics International, 2017, 43, 3670-3678.	2.3	21
70	New perspectives for recycling dental zirconia waste resulting from CAD/CAM manufacturing process. Journal of Cleaner Production, 2017, 152, 454-463.	4.6	32
71	Microstructure, Mechanical and Wear Behaviors of Hot-Pressed Copper-Nickel-Based Materials for Diamond Cutting Tools. Journal of Materials Engineering and Performance, 2017, 26, 4046-4055.	1.2	31
72	Processing and strengthening of 58S bioactive glassâ€infiltrated titania scaffolds. Journal of Biomedical Materials Research - Part A, 2017, 105, 590-600.	2.1	17

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73	Anti-biofilm properties of bioactive glasses embedding organic active compounds. Journal of Biomedical Materials Research - Part A, 2017, 105, 672-679.	2.1	35
74	Biofilm behavior on sulfonated poly(ether-ether-ketone) (sPEEK). Materials Science and Engineering C, 2017, 70, 456-460.	3.8	49
75	Influence of interlayer design on residual thermal stresses in trilayered and graded all-ceramic restorations. Materials Science and Engineering C, 2017, 71, 1037-1045.	3.8	18
76	On the synthesis and characterization of $\beta$ -tricalcium phosphate scaffolds coated with collagen or poly (D, L-lactic acid) for alveolar bone augmentation. European Journal of Dentistry, 2017, 11, 496-502.	0.8	18
77	Yb-fiber powder laser cladding of Inconel 625. , 2017, , .		0
78	The freeze casting method as a production alternative for ceramic capillary evaporators. , 2017, , .		0
79	Novel strategies for the enhancement of zirconia behavior. , 2017, , 11-13.		0
80	Artificial Aging of Zirconium Dioxide: An Evaluation of Current Knowledge and Clinical Relevance. Current Oral Health Reports, 2016, 3, 193-197.	0.5	8
81	The bending stress distribution in bilayered and graded zirconia-based dental ceramics. Ceramics International, 2016, 42, 11025-11031.	2.3	36
82	Wear mechanism and morphologic space in ceramic honing process. Wear, 2016, 362-363, 33-38.	1.5	13
83	Mechanical and biological behavior of biomedical PEEK matrix composites: A focused review. Materials Letters, 2016, 185, 593-597.	1.3	61
84	Chemical, microscopic, and microbiological analysis of a functionalized poly-ether-ether-ketone-embedding antibiofilm compounds. Journal of Biomedical Materials Research - Part A, 2016, 104, 3015-3020.	2.1	26
85	DETERMINAÇÃO DO ÍNDICE DE REFLECTÂNCIA SOLAR DE TELHAS COMERCIALIZADAS NA REGIÃO DO MÊDIO VALE DO ITAJAÍ-SC. Cerâmica Industrial, 2016, 21, 18-22.	0.1	0
86	Surface morphology and fracture strength analysis of nanosecond ablated alumina. Journal of the Ceramic Society of Japan, 2015, 123, 160-166.	0.5	0
87	Synthesis and Characterization of Calcium Phosphate Compounds with Strontium and Magnesium Ionic Substitutions. International Journal of Morphology, 2015, 33, 1189-1193.	0.1	12
88	ZrO <sub>2</sub> fiber-matrix interfaces in alumina fiber-reinforced model composites. Journal of the European Ceramic Society, 2015, 35, 1593-1598.	2.8	25
89	Powder Metallurgical Synthesis of Biodegradable Mg-Hydroxyapatite Composites for Biomedical Applications. , 2015, , 425-429.		0
90	Scaffolds of PDLLA/bioglass 58S produced via selective laser sintering. Materials Research, 2014, 17, 33-38.	0.6	23

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91	Numerical Evaluation of a Light-Gas Gun Facility for Impact Test. Modelling and Simulation in Engineering, 2014, 2014, 1-6.	0.4	3
92	Evaluation of texture distribution during the industrial polishing process of porcelain stoneware tiles. Journal of the European Ceramic Society, 2013, 33, 3369-3378.	2.8	4
93	Color prediction with simplified Kubelka-Munk model in glazes containing Fe <sub>2</sub> O <sub>3</sub> -ZrSiO <sub>4</sub> coral pink pigments. Dyes and Pigments, 2013, 99, 1029-1035.	2.0	32
94	Paper-derived hydroxyapatite. Ceramics International, 2013, 39, 7179-7183.	2.3	20
95	Paper-derived $\beta$ -TCP. Materials Letters, 2013, 98, 161-163.	1.3	9
96	Paper-Derived Bioactive Glass Tape. Advanced Engineering Materials, 2013, 15, 230-237.	1.6	8
97	Mullite Formation in Al <sub>2</sub> O <sub>3</sub> /SiO <sub>2</sub> /SiC Composites for Processing Porous Radiant Burners. Materials Research Society Symposia Proceedings, 2013, 1492, 169-175.	0.1	0
98	PLLA/HA Composite Laminates. Advanced Engineering Materials, 2013, 15, 1122-1124.	1.6	3
99	Porous Media of LZSA Glass-Ceramic for Burner Applications. Materials Science Forum, 2012, 727-728, 686-690.	0.3	1
100	Effect of Sense and Spacing in Parallel Scratches during Brittle Machining of Stoneware Tiles. Materials Science Forum, 2012, 727-728, 640-645.	0.3	0
101	Self-reinforced bioresorbable polymer P (L/DL) LA 70:30 for the manufacture of craniofacial implant. Polimeros, 2012, 22, 378-383.	0.2	5
102	Colouring of opaque ceramic glaze with zircon pigments: Formulation with simplified Kubelka-Munk model. Journal of the European Ceramic Society, 2011, 31, 659-664.	2.8	27
103	ASSESSING THE POSSIBILITY OF MACHINING OF THE SELF-REINFORCED BIORESORBABLE POLYMER P(L/DL)LA 70:30. Machining Science and Technology, 2011, 15, 392-414.	1.4	0
104	Characterization of Silicon Carbide Grit for Fickerts Used in Porcelain Tile Honing and Polishing Process. Advanced Materials Research, 2011, 325, 548-554.	0.3	0
105	Optical influence of the type of illuminant, substrates and thickness of ceramic materials. Dental Materials, 2009, 25, 87-93.	1.6	50
106	<i>In vivo</i> human electrochemical properties of a NiTi-based alloy (Nitinol) used for minimally invasive implants. Journal of Biomedical Materials Research - Part A, 2009, 89A, 1072-1078.	2.1	16
107	Colour in ceramic glazes: Efficiency of the Kubelka-Munk model in glazes with a black pigment and opacifier. Journal of the European Ceramic Society, 2009, 29, 2685-2690.	2.8	24
108	New PMMA-co-EHA glass-filled composites for biomedical applications: Mechanical properties and bioactivity. Acta Biomaterialia, 2009, 5, 356-362.	4.1	24



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109	Color in ceramic glazes: Analysis of pigment and opacifier grain size distribution effect by spectrophotometer. Journal of the European Ceramic Society, 2008, 28, 1777-1781.	2.8	32
110	Preparation and study of in vitro bioactivity of PMMA-co-EHA composites filled with a Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> -SiO <sub>2</sub> -MgO glass. Materials Science and Engineering C, 2008, 28, 572-577.	3.8	18
111	A model for PEG removal from alumina injection moulded parts by solvent debinding. Journal of Materials Processing Technology, 2007, 182, 268-273.	3.1	61
112	Influence of firing temperature on the color developed by a (Zr,V)SiO <sub>4</sub> pigmented opaque ceramic glaze. Journal of the European Ceramic Society, 2007, 27, 179-184.	2.8	40
113	Properties of chemically treated natural amorphous silica fibers as polyurethane reinforcement. Polymer Composites, 2006, 27, 582-590.	2.3	12
114	Influence of Nd:YAG Laser Irradiation on an Adhesive Restorative Procedure. Operative Dentistry, 2006, 31, 604-609.	0.6	35
115	Rheological properties of alumina injection feedstocks. Materials Research, 2005, 8, 187-189.	0.6	32
116	Ceramic injection moulding: influence of specimen dimensions and temperature on solvent debinding kinetics. Journal of Materials Processing Technology, 2005, 160, 213-220.	3.1	49
117	Grain size and surface roughness effect on the instability strains in sheet metal stretching. Journal of Materials Processing Technology, 2005, 170, 204-210.	3.1	29
118	Stereolithography somos 7110 resin: mechanical behavior and fractography of parts post-cured by different methods. Polymer Testing, 2005, 24, 157-162.	2.3	51
119	Moldagem por injeção de resins cerâmicos: remoção da parafina e do polipropileno utilizados como veículo orgânico. Polimeros, 2004, 14, 150-155.	0.2	1
120	Effective Fracture Toughness of Brittle Matrix/Ductile Dispersion Composite Materials. Science and Engineering of Composite Materials, 1995, 4, .	0.6	2
121	Modifications of the sol-gel method for the preparation of ultrafine/ultrapure ceramic oxide powders-properties of the powders and microstructure of the derived ceramic bodies. Scripta Materialia, 1993, 3, 77-84.	0.5	6
122	Particle-Filled Polysilazane Coatings for Steel Protection. Advanced Materials Research, 0, 975, 149-153.	0.3	3
123	Powder Metallurgical Synthesis of Biodegradable Mg-Hydroxyapatite Composites for Biomedical Applications. Materials Science Forum, 0, 828-829, 165-171.	0.3	8
124	Determination of Solar Reflectance Index of Ceramic Coatings for Use in outside Surfaces. Materials Science Forum, 0, 881, 251-256.	0.3	1
125	Development of a Ti<sub>p</sub>-Reinforced Ni-Based Superalloy MMC, with High Creep Resistance and Reduced Weight. Key Engineering Materials, 0, 742, 189-196.	0.4	5
126	Influence of ±-Phase Field Heat Treatment on the Tensile and Primary Creep Resistance of a Powder Metallurgical Processed Ti-45Al-5Nb-0.2B-0.2C Titanium Aluminide Alloy. Materials Science Forum, 0, 899, 418-423.	0.3	0



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127	Adhesion of PEEK to resin-matrix composites used in dentistry: a short review on surface modification and bond strength. Journal of Adhesion Science and Technology, 0, , 1-12.	1.4	7
128	PROCESSING AND MORPHOLOGICAL ANALYSIS OF A TWO-LAYER CERAMIC STRUCTURE FOR CAPILLARY EVAPORATORS. , 0, , .		0
129	Manufacturing of Porous PPLA-HA Composite Scaffolds by Sintering for Bone Tissue Engineering. Ceramic Engineering and Science Proceedings, 0, , 169-177.	0.1	1