

Marcio Celso Fredel

List of Publications by Year in descending order

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129
papers

2,179
citations

236833

25
h-index

315616

38
g-index

132
all docs

132
docs citations

132
times ranked

2365
citing authors

#	ARTICLE	IF	CITATIONS
1	Zirconia surface modifications for implant dentistry. <i>Materials Science and Engineering C</i> , 2019, 98, 1294-1305.	3.8	191
2	The Potential Use of Oyster Shell Waste in New Value-Added By-Product. <i>Resources</i> , 2019, 8, 13.	1.6	104
3	A model for PEG removal from alumina injection moulded parts by solvent debinding. <i>Journal of Materials Processing Technology</i> , 2007, 182, 268-273.	3.1	61
4	Mechanical and biological behavior of biomedical PEEK matrix composites: A focused review. <i>Materials Letters</i> , 2016, 185, 593-597.	1.3	61
5	Stereolithography somos 7110 resin: mechanical behavior and fractography of parts post-cured by different methods. <i>Polymer Testing</i> , 2005, 24, 157-162.	2.3	51
6	Optical influence of the type of illuminant, substrates and thickness of ceramic materials. <i>Dental Materials</i> , 2009, 25, 87-93.	1.6	50
7	Ceramic injection moulding: influence of specimen dimensions and temperature on solvent debinding kinetics. <i>Journal of Materials Processing Technology</i> , 2005, 160, 213-220.	3.1	49
8	Biofilm behavior on sulfonated poly(ether-ether-ketone) (sPEEK). <i>Materials Science and Engineering C</i> , 2017, 70, 456-460.	3.8	49
9	Influence of firing temperature on the color developed by a (Zr,V)SiO ₄ pigmented opaque ceramic glaze. <i>Journal of the European Ceramic Society</i> , 2007, 27, 179-184.	2.8	40
10	Physicochemical and biological assessment of PEEK composites embedding natural amorphous silica fibers for biomedical applications. <i>Materials Science and Engineering C</i> , 2017, 79, 354-362.	3.8	40
11	The bending stress distribution in bilayered and graded zirconia-based dental ceramics. <i>Ceramics International</i> , 2016, 42, 11025-11031.	2.3	36
12	Influence of Nd:YAG Laser Irradiation on an Adhesive Restorative Procedure. <i>Operative Dentistry</i> , 2006, 31, 604-609.	0.6	35
13	Anti-biofilm properties of bioactive glasses embedding organic active compounds. <i>Journal of Biomedical Materials Research - Part A</i> , 2017, 105, 672-679.	2.1	35
14	Pigmented glazed ceramic roof tiles in Brazil: Thermal and optical properties related to solar reflectance index. <i>Solar Energy</i> , 2018, 159, 113-124.	2.9	35
15	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
16	In vitro evaluation of bilayer membranes of PLGA/hydroxyapatite/ β -tricalcium phosphate for guided bone regeneration. <i>Materials Science and Engineering C</i> , 2020, 112, 110849.	3.8	33
17	Rheological properties of alumina injection feedstocks. <i>Materials Research</i> , 2005, 8, 187-189.	0.6	32
18	Color in ceramic glazes: Analysis of pigment and opacifier grain size distribution effect by spectrophotometer. <i>Journal of the European Ceramic Society</i> , 2008, 28, 1777-1781.	2.8	32

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19	Color prediction with simplified Kubelka-Munk model in glazes containing Fe ₂ O ₃ -ZrSiO ₄ coral pink pigments. <i>Dyes and Pigments</i> , 2013, 99, 1029-1035.	2.0	32
20	New perspectives for recycling dental zirconia waste resulting from CAD/CAM manufacturing process. <i>Journal of Cleaner Production</i> , 2017, 152, 454-463.	4.6	32
21	Microstructure, Mechanical and Wear Behaviors of Hot-Pressed Copper-Nickel-Based Materials for Diamond Cutting Tools. <i>Journal of Materials Engineering and Performance</i> , 2017, 26, 4046-4055.	1.2	31
22	Influence of laser structuring of PEEK, PEEK-GF30 and PEEK-CF30 surfaces on the shear bond strength to a resin cement. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 84, 225-234.	1.5	31
23	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
24	Grain size and surface roughness effect on the instability strains in sheet metal stretching. <i>Journal of Materials Processing Technology</i> , 2005, 170, 204-210.	3.1	29
25	On the sulphonated PEEK for implant dentistry: Biological and physicochemical assessment. <i>Materials Chemistry and Physics</i> , 2019, 223, 542-547.	2.0	29
26	Three-dimensional bioactive hydrogel-based scaffolds for bone regeneration in implant dentistry. <i>Materials Science and Engineering C</i> , 2021, 124, 112055.	3.8	28
27	Colouring of opaque ceramic glaze with zircon pigments: Formulation with simplified Kubelka-Munk model. <i>Journal of the European Ceramic Society</i> , 2011, 31, 659-664.	2.8	27
28	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
29	Chemical, microscopic, and microbiological analysis of a functionalized poly-ether-ether-ketone-embedding antibiofilm compounds. <i>Journal of Biomedical Materials Research - Part A</i> , 2016, 104, 3015-3020.	2.1	26
30	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
31	ZrO ₂ fiber-matrix interfaces in alumina fiber-reinforced model composites. <i>Journal of the European Ceramic Society</i> , 2015, 35, 1593-1598.	2.8	25
32	Colour in ceramic glazes: Efficiency of the Kubelka-Munk model in glazes with a black pigment and opacifier. <i>Journal of the European Ceramic Society</i> , 2009, 29, 2685-2690.	2.8	24
33	New PMMA-co-EHA glass-filled composites for biomedical applications: Mechanical properties and bioactivity. <i>Acta Biomaterialia</i> , 2009, 5, 356-362.	4.1	24
34	Materials and Manufacturing Techniques for Polymeric and Ceramic Scaffolds Used in Implant Dentistry. <i>Journal of Composites Science</i> , 2021, 5, 78.	1.4	24
35	Scaffolds of PDLA/bioglass 58S produced via selective laser sintering. <i>Materials Research</i> , 2014, 17, 33-38.	0.6	23
36	Inhibition of multi-species oral biofilm by bromide doped bioactive glass. <i>Journal of Biomedical Materials Research - Part A</i> , 2017, 105, 1994-2003.	2.1	22

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37	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
38	In-vitro mechanical and biological evaluation of novel zirconia reinforced bioglass scaffolds for bone repair. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 114, 104164.	1.5	22
39	Thermal residual stresses in bilayered, trilayered and graded dental ceramics. <i>Ceramics International</i> , 2017, 43, 3670-3678.	2.3	21
40	Direct Laser Interference Patterning of Bioceramics: A Short Review. <i>Ceramics</i> , 2019, 2, 578-586.	1.0	21
41	Paper-derived hydroxyapatite. <i>Ceramics International</i> , 2013, 39, 7179-7183.	2.3	20
42	On the synergistic effect of sulfonic functionalization and acidic adhesive conditioning to enhance the adhesion of PEEK to resin-matrix composites. <i>Dental Materials</i> , 2021, 37, 741-754.	1.6	19
43	Preparation and study of in vitro bioactivity of PMMA-co-EHA composites filled with a $\text{Ca}_3(\text{PO}_4)_2\text{-SiO}_2\text{-MgO}$ glass. <i>Materials Science and Engineering C</i> , 2008, 28, 572-577.	3.8	18
44	Influence of interlayer design on residual thermal stresses in trilayered and graded all-ceramic restorations. <i>Materials Science and Engineering C</i> , 2017, 71, 1037-1045.	3.8	18
45	On the synthesis and characterization of β -tricalcium phosphate scaffolds coated with collagen or poly (D, L-lactic acid) for alveolar bone augmentation. <i>European Journal of Dentistry</i> , 2017, 11, 496-502.	0.8	18
46	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
47	Processing and strengthening of 58S bioactive glass-infiltrated titania scaffolds. <i>Journal of Biomedical Materials Research - Part A</i> , 2017, 105, 590-600.	2.1	17
48	Properties of PLDLA/bioglass scaffolds produced by selective laser sintering. <i>Polymer Bulletin</i> , 2018, 75, 1299-1309.	1.7	17
49	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
50	<i>In vivo</i> human electrochemical properties of a NiTi-based alloy (Nitinol) used for minimally invasive implants. <i>Journal of Biomedical Materials Research - Part A</i> , 2009, 89A, 1072-1078.	2.1	16
51	Copper-nickel-based diamond cutting tools: stone cutting evaluation. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 92, 1339-1348.	1.5	16
52	Nickel-cobalt-based materials for diamond cutting tools. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 95, 1059-1067.	1.5	15
53	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
54	Biomechanical analyses of one-piece dental implants composed of titanium, zirconia, PEEK, CFR-PEEK, or GFR-PEEK: Stresses, strains, and bone remodeling prediction by the finite element method. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2022, 110, 79-88.	1.6	15

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55	Polymer coatings based on sulfonated-poly-ether-ether-ketone films for implant dentistry applications. <i>Journal of Materials Science: Materials in Medicine</i> , 2018, 29, 132.	1.7	14
56	Electrospun fibrous membranes of poly (lactic-co-glycolic acid) with $\hat{1}^2$ -tricalcium phosphate for guided bone regeneration application. <i>Polymer Testing</i> , 2020, 86, 106489.	2.3	14
57	Application of Kubelka-Munk model on the optical characterization of translucent dental zirconia. <i>Materials Chemistry and Physics</i> , 2021, 258, 123994.	2.0	14
58	Wear mechanism and morphologic space in ceramic honing process. <i>Wear</i> , 2016, 362-363, 33-38.	1.5	13
59	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
60	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
61	Biomechanical behavior of functionally graded S53P4 bioglass-zirconia dental implants: Experimental and finite element analyses. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 120, 104565.	1.5	13
62	Properties of chemically treated natural amorphous silica fibers as polyurethane reinforcement. <i>Polymer Composites</i> , 2006, 27, 582-590.	2.3	12
63	Synthesis and Characterization of Calcium Phosphate Compounds with Strontium and Magnesium Ionic Substitutions. <i>International Journal of Morphology</i> , 2015, 33, 1189-1193.	0.1	12
64	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
65	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
66	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
67	Mechanical integrity of cement- and screw-retained zirconium-lithium silicate glass-ceramic crowns to Morse taper implants. <i>Journal of Prosthetic Dentistry</i> , 2018, 120, 721-731.	1.1	11
68	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
69	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
70	Mechanical properties of zirconia periodic open cellular structures. <i>Ceramics International</i> , 2019, 45, 15799-15806.	2.3	10
71	Laser power modulation to grain refinement of SAE 1045 steel welds. <i>Journal of Laser Applications</i> , 2020, 32, .	0.8	10
72	Paper-derived $\hat{1}^2$ -TCP. <i>Materials Letters</i> , 2013, 98, 161-163.	1.3	9

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73	Production and characterization of zirconia structures with a porous surface. <i>Materials Science and Engineering C</i> , 2019, 101, 264-273.	3.8	9
74	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
75	Assessment of power modulation formats on penetration depth for laser welding. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2021, 43, 1.	0.8	9
76	Paperâ€Derived Bioactive Glass Tape. <i>Advanced Engineering Materials</i> , 2013, 15, 230-237.	1.6	8
77	Powder Metallurgical Synthesis of Biodegradable Mg-Hydroxyapatite Composites for Biomedical Applications. <i>Materials Science Forum</i> , 0, 828-829, 165-171.	0.3	8
78	Artificial Aging of Zirconium Dioxide: An Evaluation of Current Knowledge and Clinical Relevance. <i>Current Oral Health Reports</i> , 2016, 3, 193-197.	0.5	8
79	Influence of specimensâ€™ geometry and materials on the thermal stresses in dental restorative materials during thermal cycling. <i>Journal of Dentistry</i> , 2018, 69, 41-48.	1.7	8
80	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
81	Adhesion of PEEK to resin-matrix composites used in dentistry: a short review on surface modification and bond strength. <i>Journal of Adhesion Science and Technology</i> , 0, , 1-12.	1.4	7
82	Chitosan/Î²-TCP composites scaffolds coated with silk fibroin: a bone tissue engineering approach. <i>Biomedical Materials (Bristol)</i> , 2022, 17, 015003.	1.7	7
83	Chemical tempering of feldspathic porcelain for dentistry applications: A review. <i>Open Ceramics</i> , 2022, 9, 100201.	1.0	7
84	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. <i>Scripta Materialia</i> , 1993, 3, 77-84.	0.5	6
85	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
86	Development of a Ti_p/sub> Reinforced Ni-Based Superalloy MMC, with High Creep Resistance and Reduced Weight. <i>Key Engineering Materials</i> , 0, 742, 189-196.	0.4	5
87	Y-TZP/porcelain graded dental restorations design for improved damping behavior â€ 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
88	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
89	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
90	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

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91	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
92	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
93	Self-reinforced bioresorbable polymer P (L/DL) LA 70:30 for the manufacture of craniofacial implant. Polimeros, 2012, 22, 378-383.	0.2	5
94	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
95	Wettability modification of laser textured copper surfaces applied to phase change heat transfer. Journal of Laser Applications, 2020, 32, .	0.8	4
96	Numerical and experimental study of ion exchange in porcelain tiles. International Journal of Applied Ceramic Technology, 2021, 18, 1025-1032.	1.1	4
97	<scp>PLLA</scp>/<scp>HA</scp> Composite Laminates. Advanced Engineering Materials, 2013, 15, 1122-1124.	1.6	3
98	Numerical Evaluation of a Light-Gas Gun Facility for Impact Test. Modelling and Simulation in Engineering, 2014, 2014, 1-6.	0.4	3
99	Particle-Filled Polysilazane Coatings for Steel Protection. Advanced Materials Research, 0, 975, 149-153.	0.3	3
100	Influence of Distinct Manufacturing Processes on the Microstructure of Ni-Based Metal Matrix Composites Submitted to Long Thermal Exposure. Key Engineering Materials, 2019, 809, 79-86.	0.4	3
101	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
102	Effective Fracture Toughness of Brittle Matrix/Ductile Dispersion Composite Materials. Science and Engineering of Composite Materials, 1995, 4, .	0.6	2
103	Nanostructured biocompatible ceramics and glass-ceramics. , 2018, , 97-118.		2
104	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
105	Moldagem por injeção de resinas cerâmicas: remoção da parafina e do polipropileno utilizados como veículo orgânico. Polimeros, 2004, 14, 150-155.	0.2	1
106	Porous Media of LZSA Glass-Ceramic for Burner Applications. Materials Science Forum, 2012, 727-728, 686-690.	0.3	1
107	Determination of Solar Reflectance Index of Ceramic Coatings for Use in outside Surfaces. Materials Science Forum, 0, 881, 251-256.	0.3	1
108	Microtensile bond strength of zirconia after surface treatments and aging. Dental Materials, 2018, 34, e100-e101.	1.6	1

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109	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
110	On the production of novel zirconia-reinforced bioactive glass porous structures for bone repair. <i>Journal of Materials Science</i> , 2021, 56, 11682-11697.	1.7	1
111	Influence of the Addition of Ni-Coated Carbon Nanotubes on the Mechanical Properties of Highly Porous Zirconia Cellular Structures. <i>Advanced Engineering Materials</i> , 2022, 24, 2100624.	1.6	1
112	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
113	Manufacturing of Porous PPLA-HA Composite Scaffolds by Sintering for Bone Tissue Engineering. <i>Ceramic Engineering and Science Proceedings</i> , 0, , 169-177.	0.1	1
114	ASSESSING THE POSSIBILITY OF MACHINING OF THE SELF-REINFORCED BIORESORBABLE POLYMER P(L/DL)LA 70:30. <i>Machining Science and Technology</i> , 2011, 15, 392-414.	1.4	0
115	Characterization of Silicon Carbide Grit for Fickerts Used in Porcelain Tile Honing and Polishing Process. <i>Advanced Materials Research</i> , 2011, 325, 548-554.	0.3	0
116	Effect of Sense and Spacing in Parallel Scratches during Brittle Machining of Stoneware Tiles. <i>Materials Science Forum</i> , 2012, 727-728, 640-645.	0.3	0
117	Mullite Formation in Al ₂ O ₃ /SiO ₂ /SiC Composites for Processing Porous Radiant Burners. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1492, 169-175.	0.1	0
118	Surface morphology and fracture strength analysis of nanosecond ablated alumina. <i>Journal of the Ceramic Society of Japan</i> , 2015, 123, 160-166.	0.5	0
119	Influence of β -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. <i>Materials Science Forum</i> , 0, 899, 418-423.	0.3	0
120	Functionally graded nanostructured biomaterials (FGNB). , 2018, , 159-180.		0
121	Nanostructured biomaterials embedding bioactive molecules. , 2018, , 143-158.		0
122	Powder Metallurgical Synthesis of Biodegradable Mg-Hydroxyapatite Composites for Biomedical Applications. , 2015, , 425-429.		0
123	PROCESSING AND MORPHOLOGICAL ANALYSIS OF A TWO-LAYER CERAMIC STRUCTURE FOR CAPILLARY EVAPORATORS. , 0, , .		0
124	DETERMINAÇÃO DO ÍNDICE DE REFLECTÂNCIA SOLAR DE TELHAS COMERCIALIZADAS NA REGIÃO DO MÊDIO VALE DO ITAJAÍ-SC. <i>Cerâmica Industrial</i> , 2016, 21, 18-22.	0.1	0
125	Yb-fiber powder laser cladding of Inconel 625. , 2017, , .		0
126	The freeze casting method as a production alternative for ceramic capillary evaporators. , 2017, , .		0

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127	Novel strategies for the enhancement of zirconia behavior. , 2017, , 11-13.		0
128	Freeze-Casting Method as an Alternative for Ceramic Capillary Evaporator Manufacturing. , 2020, , .		0
129	Evaluation of magnesium chloride waste recovery: A case study in nanofertilizers. Revista Brasileira De Gesto Ambiental E Sustentabilidade, 2022, 9, 419-437.	0.0	0