Manuel Belmonte

List of Publications by Year
in descending order

121 papers	3,716 citations	136885 32 h-index	155592 55 g-index
124 all docs	124 docs citations	124 times ranked	3407 citing authors

#	Article	IF	Citations
1	Multifunctional performance of Ti₂AlC MAX phase/2D braided alumina fiber laminates. Journal of the American Ceramic Society, 2022, 105, 120-130.	1.9	3
2	Kinetic study of phenol hydroxylation by H2O2 in 3D Fe/SiC honeycomb monolithic reactors: Enabling the sustainable production of dihydroxybenzenes. Chemical Engineering Journal, 2022, 428, 131128.	6.6	16
3	Monolithic Stirrer Reactors for the Sustainable Production of Dihydroxybenzenes over 3D Printed Fe/Î³-Al2O3 Monoliths: Kinetic Modeling and CFD Simulation. Catalysts, 2022, 12, 112.	1.6	3
4	3D-Printed Fe/Î³-Al₂O₃ Monoliths from MOF-Based Boehmite Inks for the Catalytic Hydroxylation of Phenol. ACS Applied Materials & Interfaces, 2022, 14, 920-932.	4.0	16
5	Enhanced Thermal and Mechanical Properties of 3D Printed Highly Porous Structures Based on Î³â€Al₂O₃Âby Adding Graphene Nanoplatelets. Advanced Materials Technologies, 2022, 7, .	3.0	9
6	The effect of rod orientation on the strength of highly porous filament printed 3D SiC ceramic architectures. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2021, 60, 119-127.	0.9	6
7	Robust and conductive mesoporous reduced graphene oxide-silica hybrids achieved by printing and the sol gel route. Journal of the European Ceramic Society, 2021, 41, 2908-2917.	2.8	10
8	Heat dissipation in 3D printed cellular aluminum nitride structures. Journal of the European Ceramic Society, 2021, 41, 2407-2414.	2.8	13
9	Iron-based metal-organic frameworks integrated into 3D printed ceramic architectures. Open Ceramics, 2021, 5, 100047.	1.0	14
10	The influence of the catalyst on the CO formation during catalytic wet peroxide oxidation process. Catalysis Today, 2021, 361, 30-36.	2.2	6
11	Contact Damage Resistance and Tribological Behavior of Ceramic/Carbon Nanostructure Composites. , 2021, , 733-744.		0
12	Reinforced 3D Composite Structures of Î³-, Î±-Al2O3 with Carbon Nanotubes and Reduced GO Ribbons Printed from Boehmite Gels. Materials, 2021, 14, 2111.	1.3	11
13	Thermal Transport and Thermoelectric Effect in Composites of Alumina and Graphene-Augmented Alumina Nanofibers. Materials, 2021, 14, 2242.	1.3	5
14	Applications of Ceramic/Graphene Composites and Hybrids. Materials, 2021, 14, 2071.	1.3	26
15	3D honeycomb monoliths with interconnected channels for the sustainable production of dihydroxybenzenes: towards the intensification of selective oxidation processes. Chemical Engineering and Processing: Process Intensification, 2021, 165, 108437.	1.8	10
16	Enhanced Fluid Dynamics in 3D Monolithic Reactors to Improve the Chemical Performance: Experimental and Numerical Investigation. Industrial & Engineering Chemistry Research, 2021, 60, 14701-14712.	1.8	7
17	In Situ Graded Ceramic/Reduced Graphene Oxide Composites Manufactured by Spark Plasma Sintering. Ceramics, 2021, 4, 12-19.	1.0	2
18	Graphene-based nanostructures as catalysts for wet peroxide oxidation treatments: From nanopowders to 3D printed porous monoliths. Catalysis Today, 2020, 356, 197-204.	2.2	11

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19	Frequency-dependent acoustic energy focusing in hexagonal ceramic micro-scaffolds. Wave Motion, 2020, 92, 102417.	1.0	7
20	Rolled and twisted graphene flakes as self-lubricant and wear protecting fillers into ceramic composites. Carbon, 2020, 159, 45-50.	5.4	15
21	Improved crack resistance and thermal conductivity of cubic zirconia containing graphene nanoplatelets. Journal of the European Ceramic Society, 2020, 40, 1557-1565.	2.8	18
22	Two-step strategy for improving the tribological performance of Si3N4 ceramics: Controlled addition of SiC nanoparticles and graphene-based nanostructures. Journal of the European Ceramic Society, 2020, 40, 5298-5304.	2.8	7
23	Thermal conduction in three-dimensional printed porous samples by high resolution infrared thermography. Open Ceramics, 2020, 4, 100028.	1.0	8
24	Remarkable Effects of an Electrodeposited Copper Skin on the Strength and the Electrical and Thermal Conductivities of Reduced Graphene Oxide-Printed Scaffolds. ACS Applied Materials & Interfaces, 2020, 12, 24209-24217.	4.0	7
25	Protein adsorption and in vitro behavior of additively manufactured 3D-silicon nitride scaffolds intended for bone tissue engineering. Materials Science and Engineering C, 2020, 115, 110734.	3.8	32
26	Direct Hydroxylation of Phenol to Dihydroxybenzenes by H2O2 and Fe-based Metal-Organic Framework Catalyst at Room Temperature. Catalysts, 2020, 10, 172.	1.6	21
27	Multifunctional 3Dâ€Printed Cellular MAXâ€Phase Architectures. Advanced Materials Technologies, 2019, 4, 1900375.	3.0	10
28	Face dependent footprints of carpet-like graphene films grown on polycrystalline silicon carbide. Carbon, 2019, 153, 417-427.	5.4	3
29	Strong and light cellular silicon carbonitride â€" Reduced graphene oxide material with enhanced electrical conductivity and capacitive response. Additive Manufacturing, 2019, 30, 100849.	1.7	13
30	High graphene fillers content for improving the tribological performance of silicon nitride-based ceramics. Wear, 2019, 430-431, 183-190.	1.5	26
31	Filament printing of graphene-based inks into self-supported 3D architectures. Carbon, 2019, 151, 94-102.	5.4	26
32	Highly-porous hierarchical SiC structures obtained by filament printing and partial sintering. Journal of the European Ceramic Society, 2019, 39, 688-695.	2.8	41
33	Mixed-ionic and electronic conduction and stability of YSZ-graphene composites. Journal of the European Ceramic Society, 2019, 39, 389-395.	2.8	33
34	Friction and wear behaviour of silicon carbide/graphene composites under isooctane lubrication. Journal of the European Ceramic Society, 2018, 38, 3441-3446.	2.8	32
35	Direct in situ observation of toughening mechanisms in nanocomposites of silicon nitride and reduced graphene-oxide. Scripta Materialia, 2018, 149, 40-43.	2.6	33
36	Polymer-derived ceramic/graphene oxide architected composite with high electrical conductivity and enhanced thermal resistance. Journal of the European Ceramic Society, 2018, 38, 2265-2271.	2.8	31

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37	3D-Printed Fe-doped silicon carbide monolithic catalysts for wet peroxide oxidation processes. Applied Catalysis B: Environmental, 2018, 235, 246-255.	10.8	64
38	Ultrasonic bandgaps in 3D-printed periodic ceramic microlattices. Ultrasonics, 2018, 82, 91-100.	2.1	27
39	Contact damage resistant SiC/graphene nanofiller composites. Journal of the European Ceramic Society, 2018, 38, 41-45.	2.8	14
40	Low percolation threshold in highly conducting graphene nanoplatelets/glass composite coatings. Carbon, 2018, 139, 556-563.	5.4	29
41	Anisotropic Elasticity of Ceramic Micro-Scaffolds Fabricated by Robocasting. Acta Physica Polonica A, 2018, 134, 799-803.	0.2	2
42	From bulk to cellular structures: A review on ceramic/graphene filler composites. Journal of the European Ceramic Society, 2017, 37, 3649-3672.	2.8	128
43	Exceptional micromachining performance of silicon carbide ceramics by adding graphene nanoplatelets. Journal of the European Ceramic Society, 2017, 37, 3813-3821.	2.8	25
44	Novel Cr 2 AlC MAX-phase/SiC fiber composites: Synthesis, processing and tribological response. Journal of the European Ceramic Society, 2017, 37, 467-475.	2.8	33
45	Ceramic phononic crystals with MHz-range frequency band gaps. Proceedings of Meetings on Acoustics, 2017, , .	0.3	2
46	Thermal conductivity of silicon carbide composites with highly oriented graphene nanoplatelets. Journal of the European Ceramic Society, 2016, 36, 3987-3993.	2.8	64
47	Tribological Performance of Aligned Silicon Nitride Ceramics under Isooctaneâ€Lubricated Oscillating Sliding Conditions. Journal of the American Ceramic Society, 2016, 99, 241-248.	1.9	8
48	The decisive role played by graphene nanoplatelets on improving the tribological performance of Y 2 O 3 -Al 2 O 3 -SiO 2 glass coatings. Materials and Design, 2016, 112, 449-455.	3.3	13
49	Printing of Graphene Nanoplatelets into Highly Electrically Conductive Three-Dimensional Porous Macrostructures. Chemistry of Materials, 2016, 28, 6321-6328.	3.2	53
50	Prominent local transport in silicon carbide composites containing in-situ synthesized three-dimensional graphene networks. Journal of the European Ceramic Society, 2016, 36, 3073-3081.	2.8	10
51	Electrically functional 3D-architectured graphene/SiC composites. Carbon, 2016, 100, 318-328.	5.4	89
52	Toughened and strengthened silicon carbide ceramics by adding graphene-based fillers. Scripta Materialia, 2016, 113, 127-130.	2.6	84
53	Tribological performance under dry sliding conditions of graphene/silicon carbide composites. Journal of the European Ceramic Society, 2016, 36, 429-435.	2.8	102
54	Directional Electrical Transport in Tough Multifunctional Layered Ceramic/Graphene Composites. Advanced Electronic Materials, 2015, 1, 1500132.	2.6	10

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55	Effects of Current Confinement on the Spark Plasma Sintering of Silicon Carbide Ceramics. Journal of the American Ceramic Society, 2015, 98, 2745-2753.	1.9	13
56	3D Nanocomposites of Covalently Interconnected Multiwalled Carbon Nanotubes with SiC with Enhanced Thermal and Electrical Properties. Advanced Functional Materials, 2015, 25, 4985-4993.	7.8	18
57	Smart electroconductive bioactive ceramics to promote in situ electrostimulation of bone. Journal of Materials Chemistry B, 2015, 3, 1831-1845.	2.9	20
58	Graphene nanoribbon ceramic composites. Carbon, 2015, 90, 207-214.	5.4	28
59	Enhanced electrical conductivity of silicon carbide ceramics by addition of graphene nanoplatelets. Journal of the European Ceramic Society, 2015, 35, 2723-2731.	2.8	96
60	Elastic properties of silicon nitride ceramics reinforced with graphene nanofillers. Materials and Design, 2015, 87, 675-680.	3.3	37
61	Enhanced microstructural and mechanical gradients on silicon nitride ceramics. Ceramics International, 2015, 41, 2594-2598.	2.3	15
62	The Effective Role Played by Graphene Fillers for Improving the Tribological Properties of Ceramics. , 2015, , .		0
63	Acoustic metamaterial behavior of three-dimensional periodic architectures assembled by robocasting. Applied Physics Letters, 2014, 105, 211904.	1.5	14
64	Robust and wear resistant in-situ carbon nanotube/Si3N4 nanocomposites with a high loading of nanotubes. Carbon, 2014, 72, 338-347.	5.4	23
65	Contact-mechanical properties at pre-creep temperatures of fine-grained graphene/SiC composites prepared in situ by spark-plasma sintering. Journal of the European Ceramic Society, 2014, 34, 1433-1438.	2.8	25
66	Carbon nanotube-based bioceramic grafts for electrotherapy of bone. Materials Science and Engineering C, 2014, 34, 360-368.	3.8	15
67	Extraordinary toughening enhancement and flexural strength in Si3N4 composites using graphene sheets. Journal of the European Ceramic Society, 2014, 34, 161-169.	2.8	122
68	Aligned carbon nanotube/silicon carbide hybrid materials with high electrical conductivity, superhydrophobicity and superoleophilicity. Carbon, 2014, 80, 120-126.	5.4	22
69	Nitrogen-doped-CNTs/Si3N4 nanocomposites with high electrical conductivity. Journal of the European Ceramic Society, 2014, 34, 1097-1104.	2.8	15
70	Carbon nanotubes/silicon nitride nanocomposites for gasoline lubricated high pressure pumps. Composites Part B: Engineering, 2014, 64, 168-174.	5.9	8
71	Microstructural designs of spark-plasma sintered silicon carbide ceramic scaffolds. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2014, 53, 93-100.	0.9	16
72	Synthesis of conducting graphene/Si3N4 composites by spark plasma sintering. Carbon, 2013, 57, 425-432.	5.4	80

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73	Anisotropic elastic moduli and internal friction of graphene nanoplatelets/silicon nitride composites. Composites Science and Technology, 2013, 75, 93-97.	3.8	40
74	Electrical Discharge Machining of Ceramic/Carbon Nanostructure Composites. Procedia CIRP, 2013, 6, 95-100.	1.0	41
75	The beneficial effect of graphene nanofillers on the tribological performance of ceramics. Carbon, 2013, 61, 431-435.	5.4	146
76	In situ processing of electrically conducting graphene/SiC nanocomposites. Journal of the European Ceramic Society, 2013, 33, 1665-1674.	2.8	105
77	Sensitivity of the resonant ultrasound spectroscopy to weak gradients of elastic properties. Journal of the Acoustical Society of America, 2012, 131, 3775-3785.	0.5	16
78	Geometrically Complex Silicon Carbide Structures Fabricated by Robocasting. Journal of the American Ceramic Society, 2012, 95, 2660-2666.	1.9	103
79	Anisotropic thermal conductivity of silicon nitride ceramics containing carbon nanostructures. Journal of the European Ceramic Society, 2012, 32, 1847-1854.	2.8	76
80	Carbon nanotubes functionalization process for developing ceramic matrix nanocomposites. Journal of Materials Chemistry, 2011, 21, 6063.	6.7	13
81	Enhanced Tribological Performance of Silicon Nitride-Based Materials by Adding Carbon Nanotubes. Journal of the American Ceramic Society, 2011, 94, 2542-2548.	1.9	40
82	Modeling the effect of pulsing on the spark plasma sintering of silicon nitride materials. Scripta Materialia, 2011, 65, 273-276.	2.6	16
83	Carbon nanotubes growth on silicon nitride substrates. Materials Letters, 2011, 65, 1479-1481.	1.3	7
84	Carbon nanofillers for machining insulating ceramics. Materials Today, 2011, 14, 496-501.	8.3	65
85	Multi-scale electrical response of silicon nitride/multi-walled carbon nanotubes composites. Composites Science and Technology, 2011, 71, 60-66.	3.8	32
86	Enhanced particle rearrangement during liquid phase spark plasma sintering of silicon nitride-based ceramics. Ceramics International, 2011, 37, 159-166.	2.3	41
87	Spark plasma sintering: A powerful tool to develop new silicon nitride-based materials. Journal of the European Ceramic Society, 2010, 30, 2937-2946.	2.8	115
88	Processing Route to Disentangle Multi-Walled Carbon Nanotube Towards Ceramic Composite. Journal of Nanoscience and Nanotechnology, 2009, 9, 6164-6170.	0.9	3
89	Wear of aligned silicon nitride under dry sliding conditions. Wear, 2009, 266, 6-12.	1.5	25
90	Continuous in situ functionally graded silicon nitride materials. Acta Materialia, 2009, 57, 2607-2612.	3.8	50

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91	Dense and Homogenous Silicon Nitride Composites Containing Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2009, 9, 6188-6194.	0.9	21
92	A method for disentangling Î²-Si3N4 seeds obtained by SHS. Powder Technology, 2008, 182, 364-367.	2.1	3
93	Effects of seeding and amounts of Y2O3:Al2O3 additives on grain growth in Si3N4 ceramics. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 475, 185-189.	2.6	19
94	MPCVD diamond coating of Si3N4â€"TiN electroconductive composite substrates. Diamond and Related Materials, 2007, 16, 978-982.	1.8	13
95	Mechanical Properties and Contact Damage Behavior in Aligned Silicon Nitride Materials. Journal of the American Ceramic Society, 2007, 90, 1157-1163.	1.9	13
96	Effect of the type of flame on the microstructure of CaZrO3 combustion flame sprayed coatings. Surface and Coatings Technology, 2006, 201, 3307-3313.	2.2	43
97	CVD diamond coated silicon nitride self-mated systems: tribological behaviour under high loads. Tribology Letters, 2006, 21, 141-151.	1.2	43
98	Influence of the SiC grain size on the wear behaviour of Al2O3/SiC composites. Journal of the European Ceramic Society, 2006, 26, 1273-1279.	2.8	45
99	Advanced Ceramic Materials for High Temperature Applications. Advanced Engineering Materials, 2006, 8, 693-703.	1.6	181
100	In-Situ Friction Monitoring of Self-Mated CVD Diamond Coatings Using Acoustic Emission. Materials Science Forum, 2006, 514-516, 749-753.	0.3	0
101	Grain size effect on self-mated CVD diamond dry tribosystems. Wear, 2005, 259, 771-778.	1.5	31
102	Diamond coating of coloured Si3N4 ceramics. Diamond and Related Materials, 2005, 14, 54-59.	1.8	17
103	Turning of CFRC Composites Using Si₃N₄ and Thin CVD Diamond Coated Si₃N₄ Tools. Materials Science Forum, 2004, 455-456, 609-613.	0.3	5
104	Hot-filament chemical vapour deposition of nanodiamond on silicon nitride substrates. Diamond and Related Materials, 2004, 13, 643-647.	1.8	32
105	Cutting forces evolution with tool wear in sintered hardmetal turning with CVD diamond. Diamond and Related Materials, 2004, 13, 843-847.	1.8	29
106	Thermal conductivity of Al2O3/SiC platelet composites. Journal of the European Ceramic Society, 2003, 23, 1773-1778.	2.8	49
107	Surface Pretreatments of Silicon Nitride for CVD Diamond Deposition. Journal of the American Ceramic Society, 2003, 86, 749-754.	1.9	20
108	Acoustic emission detection of macro-indentation cracking of diamond coated silicon. Diamond and Related Materials, 2003, 12, 1744-1749.	1.8	2

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109	Adhesion behaviour assessment on diamond coated silicon nitride by acoustic emission. Diamond and Related Materials, 2003, 12, 733-737.	1.8	50
110	Wear resistant CVD diamond tools for turning of sintered hardmetals. Diamond and Related Materials, 2003, 12, 738-743.	1.8	39
111	Low incident angle and classical x-ray diffraction analysis of residual stresses in diamond coated Si3N4. Journal of Applied Physics, 2003, 94, 5633-5638.	1.1	10
112	Tailored Si3N4Ceramic Substrates for CVD Diamond Coating. Surface Engineering, 2003, 19, 410-416.	1.1	20
113	Nanorobotic Manipulation of Microspheres for On-Chip Diamond Architectures. Advanced Materials, 2002, 14, 1144.	11.1	170
114	Contact damage in alumina reinforced with silicon carbide platelets. Journal of Materials Science Letters, 1997, 16, 379-381.	0.5	2
115	platelet composites. Effect of sintering conditions. Journal of the European Ceramic Society, 1997, 17, 1253-1258.	2.8	5
116	Slow crack growth in SiC platelet reinforced Al2O3 composite. Scripta Materialia, 1996, 34, 1621-1626.	2.6	4
117	Role of triboelectrification mechanism in the wear behaviour of Al2O3î—¸SiC platelet composites. Wear, 1996, 199, 54-59.	1.5	9
118	Fracture behavior of Al₂O₃/SiC-platelet composites. Journal of Materials Research, 1996, 11, 2528-2535.	1.2	14
119	Bimodal Sintering of Al2O3/Al2O3 Platelet Ceramic Composites. Journal of the American Ceramic Society, 1995, 78, 1661-1667.	1.9	18
120	Obtention of highly dispersed platelet-reinforced Al2O3 composites. Journal of Materials Science, 1994, 29, 179-183.	1.7	11
121	Finite Elements Modeling of Mechanical and Acoustic Properties of a Ceramic Metamaterial Assembled by Robocasting. Applied Mechanics and Materials, 0, 821, 364-371.	0.2	4