

# Carmen Baudin

## List of Publications by Year in descending order

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125  
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citations

172457

29  
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254184

43  
g-index

132  
all docs

132  
docs citations

132  
times ranked

1912  
citing authors

#	ARTICLE	IF	CITATIONS
1	High-Temperature Mechanical Behavior of Stoichiometric Magnesium Spinel. Journal of the American Ceramic Society, 1995, 78, 1857-1862.	3.8	185
2	Residual stresses, strength and toughness of laminates with different layer thickness ratios. Acta Materialia, 2006, 54, 4745-4757.	7.9	119
3	Mechanical properties of mullite materials. Journal of the European Ceramic Society, 1996, 16, 217-224.	5.7	99
4	The high-temperature strength of some Fe <sub>3</sub> Al alloys. Acta Materialia, 2004, 52, 2827-2836.	7.9	94
5	Processing optimisation and fracture behaviour of layered ceramic composites with highly compressive layers. Composites Science and Technology, 2007, 67, 1930-1938.	7.8	73
6	Threshold strength evaluation on an Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> multilayered system. Journal of the European Ceramic Society, 2007, 27, 1443-1448.	5.7	70
7	Strengthening at high temperatures by precipitates in Fe-Al-Nb alloys. Intermetallics, 2006, 14, 1204-1207.	3.9	51
8	Influence of a Dispersion of Aluminum Titanate Particles of Controlled Size on the Thermal Shock Resistance of Alumina. Journal of the American Ceramic Society, 2003, 86, 846-850.	3.8	49
9	Influence of Chemical Reactions in Magnesia-Graphite Refractories: I, Effects on Texture and High-Temperature Mechanical Properties. Journal of the American Ceramic Society, 1999, 82, 3529-3538.	3.8	48
10	Mechanical properties of solid oxide fuel cell glass-ceramic sealants in the system BaO/SrO-MgO-B <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> . Journal of the European Ceramic Society, 2017, 37, 3579-3594.	5.7	48
11	Statistical analysis of the fracture behaviour of porous ceramic Raschig rings. Journal of the European Ceramic Society, 2004, 24, 589-594.	5.7	46
12	Fracture behaviour of alumina-calcium hexaluminate composites obtained by colloidal processing. Journal of the European Ceramic Society, 2000, 20, 2575-2583.	5.7	43
13	Reaction sintered Al <sub>2</sub> O <sub>3</sub> /Al <sub>2</sub> TiO <sub>5</sub> microcrack-free composites obtained by colloidal filtration. Journal of the European Ceramic Society, 2004, 24, 2785-2791.	5.7	43
14	High-temperature mechanical behaviour of flaw tolerant alumina-zirconia multilayered ceramics. Acta Materialia, 2007, 55, 4891-4901.	7.9	43
15	Fracture behaviour of microcrack-free alumina-aluminium titanate ceramics with second phase nanoparticles at alumina grain boundaries. Journal of the European Ceramic Society, 2008, 28, 1961-1971.	5.7	41
16	Improvement in the thermal shock resistance of alumina through the addition of submicron-sized aluminium nitride particles. Journal of the European Ceramic Society, 2004, 24, 2293-2301.	5.7	40
17	Joining green ceramic tapes made from water-based slurries by applying low pressures at ambient temperature. Journal of the European Ceramic Society, 2005, 25, 3403-3411.	5.7	36
18	Structural characterization of bulk ZrTiO <sub>4</sub> and its potential for thermal shock applications. Journal of the European Ceramic Society, 2012, 32, 299-306.	5.7	36

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19	Synthesis of monoclinic Celsian from Coal Fly Ash by using a one-step solid-state reaction process. <i>Ceramics International</i> , 2010, 36, 661-672.	4.8	35
20	Layered materials with high strength and flaw tolerance based on alumina and aluminium titanate. <i>Journal of the European Ceramic Society</i> , 2007, 27, 1455-1462.	5.7	34
21	Young's modulus and hardness of multiphase CaZrO <sub>3</sub> -MgO ceramics by micro and nanoindentation. <i>Journal of the European Ceramic Society</i> , 2018, 38, 2194-2201.	5.7	34
22	Determination of mechanical properties of Al <sub>2</sub> O <sub>3</sub> /Y-TZP ceramic composites: Influence of testing method and residual stresses. <i>Ceramics International</i> , 2016, 42, 18700-18710.	4.8	33
23	MgO-CaZrO <sub>3</sub> -based refractories for cement kilns. <i>Journal of the European Ceramic Society</i> , 2011, 31, 61-74.	5.7	32
24	Effect of Mg and Si co-substitution on microstructure and strength of tricalcium phosphate ceramics. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 30, 1-15.	3.1	32
25	Thermogelling polysaccharides for aqueous gelcasting" part III: mechanical and microstructural characterization of green alumina bodies. <i>Journal of the European Ceramic Society</i> , 2002, 22, 2223-2230.	5.7	31
26	Design and processing of Al <sub>2</sub> O <sub>3</sub> -Al <sub>2</sub> TiO <sub>5</sub> layered structures. <i>Journal of the European Ceramic Society</i> , 2005, 25, 847-856.	5.7	31
27	Fracture behaviour of an Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> multilayered ceramic with residual stresses due to phase transformations*. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2006, 29, 71-78.	3.4	31
28	Assessment of natural and synthetic wollastonite as source for bioceramics preparation. <i>Journal of Biomedical Materials Research - Part A</i> , 2007, 83A, 484-495.	4.0	31
29	Alumina-zirconia layered ceramics fabricated by stacking water processed green ceramic tapes. <i>Journal of the European Ceramic Society</i> , 2007, 27, 1389-1394.	5.7	31
30	Multilayer coatings with improved reliability produced by aqueous electrophoretic deposition. <i>Journal of the European Ceramic Society</i> , 2006, 26, 27-36.	5.7	29
31	Effect of mullite additions on the fracture mode of alumina. <i>Journal of the European Ceramic Society</i> , 2010, 30, 857-863.	5.7	28
32	CaZrO <sub>3</sub> -MgO structural ceramics obtained by reaction sintering of dolomite-zirconia mixtures. <i>Journal of the European Ceramic Society</i> , 2016, 36, 2611-2626.	5.7	28
33	Improved green properties of gelcast alumina through multiple synergistic interaction of polysaccharides. <i>Journal of the European Ceramic Society</i> , 2003, 23, 1785-1793.	5.7	27
34	Mechanical behaviour of directionally solidified alumina/aluminium titanate ceramics. <i>Acta Materialia</i> , 2006, 54, 3835-3841.	7.9	26
35	Influence of Chemical Reactions in Magnesia-Graphite Refractories: II, Effects of Aluminum and Graphite Contents in Generic Products. <i>Journal of the American Ceramic Society</i> , 2004, 82, 3539-3548.	3.8	25
36	Al <sub>2</sub> O <sub>3</sub> /Y-TZP and Y-TZP materials fabricated by stacking layers obtained by aqueous tape casting. <i>Journal of the European Ceramic Society</i> , 2006, 26, 1489-1496.	5.7	25

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37	Relationships between phase constitution and mechanical behaviour in MgO-CaZrO <sub>3</sub> -calcium silicate materials. Journal of the European Ceramic Society, 2004, 24, 669-679.	5.7	24
38	Processing of Al <sub>2</sub> O <sub>3</sub> /Y-TZP laminates from water-based cast tapes. Composites Part B: Engineering, 2006, 37, 499-508.	12.0	24
39	Sandwich materials formed by thick alumina tapes and thin-layered alumina-aluminium titanate structures shaped by EPD. Journal of the European Ceramic Society, 2009, 29, 1083-1092.	5.7	23
40	Improved Green Strength of Ceramics Through Aqueous Gelcasting. Advanced Engineering Materials, 2004, 6, 672-676.	3.5	22
41	Design and processing of a ceramic laminate with high toughness and strong interfaces. Composites Part A: Applied Science and Manufacturing, 2009, 40, 137-143.	7.6	22
42	Non-destructive characterisation of alumina/aluminium titanate composites using a micromechanical model and ultrasonic determinations. Ceramics International, 2008, 34, 181-188.	4.8	21
43	Work of fracture of a composite resin: Fracture-toughening mechanisms. Journal of Biomedical Materials Research - Part A, 2009, 89A, 751-758.	4.0	21
44	Dynamic corrosion of Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> -SiO <sub>2</sub> and Cr <sub>2</sub> O <sub>3</sub> -containing refractories by molten frits. Part II: Microstructural study. Journal of the European Ceramic Society, 2011, 31, 705-714.	5.7	21
45	Nanoindentation of Al <sub>2</sub> O <sub>3</sub> /Al <sub>2</sub> TiO <sub>5</sub> composites: Small-scale mechanical properties of Al <sub>2</sub> TiO <sub>5</sub> as reinforcement phase. Journal of the European Ceramic Society, 2012, 32, 3723-3731.	5.7	21
46	Solid solution of TiO <sub>2</sub> in mullite. Journal of Materials Science Letters, 1983, 2, 185-187.	0.5	19
47	Instrumented Vickers microindentation of alumina-based materials. Journal of Materials Research, 2006, 21, 161-173.	2.6	19
48	Effect of graphene on setting and mechanical behaviour of tricalcium phosphate bioactive cements. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 89, 33-47.	3.1	18
49	Influence of Thermal Aging on Microstructural Development of Mullite Containing Alkalis. Journal of the American Ceramic Society, 1998, 81, 2741-2745.	3.8	17
50	Indentation Damage and Residual Stress Field in Alumina <sub>2</sub> O <sub>3</sub> -Stabilized Zirconia Composites. Journal of the American Ceramic Society, 2009, 92, 152-160.	3.8	17
51	Dynamic corrosion of Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> -SiO <sub>2</sub> and Cr <sub>2</sub> O <sub>3</sub> -containing refractories by molten frits. Part I: Macroscopic analysis. Journal of the European Ceramic Society, 2011, 31, 697-703.	5.7	17
52	Influence of microstructural characteristics on fracture toughness of refractory materials. Journal of the European Ceramic Society, 2015, 35, 1955-1970.	5.7	16
53	Nurse's Phase: Synthesis and Characterization in the Binary System Ca <sub>2</sub> SiO <sub>4</sub> -Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> . Journal of the American Ceramic Society, 2015, 98, 3042-3046.	3.8	16
54	Processing and in vitro bioactivity of a $\hat{1}$ -Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> -CaMg(SiO <sub>3</sub> ) <sub>2</sub> ceramic with the eutectic composition. Boletín De La Sociedad Española De Cerámica Y Vidrio, 2016, 55, 1-12.	1.9	16

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55	Phase evolution in reaction sintered zirconium titanate based materials. Journal of the European Ceramic Society, 2010, 30, 981-991.	5.7	15
56	Tape casting of Y-TZP with low binder content. Ceramics International, 2007, 33, 1099-1103.	4.8	14
57	Thermal expansion of zirconia/zirconium titanate materials obtained by slip casting of mixtures of Y-TZP/TiO <sub>2</sub> . Journal of the European Ceramic Society, 2009, 29, 3219-3225.	5.7	14
58	Synthesis of Zirconium Titanate Based Materials by Colloidal Filtration and Reaction Sintering. International Journal of Applied Ceramic Technology, 2008, 5, 394-400.	2.1	13
59	Residual stress and diffraction line-broadening analysis of Al <sub>2</sub> O <sub>3</sub> /Y-TZP ceramic composites by neutron diffraction measurement. International Journal of Refractory Metals and Hard Materials, 2017, 64, 122-134.	3.8	13
60	<i>In vitro</i> study of the proliferation and growth of human fetal osteoblasts on Mg and Si co-substituted tricalcium phosphate ceramics. Journal of Biomedical Materials Research - Part A, 2017, 105, 2266-2275.	4.0	13
61	Sliding wear of CaZrO <sub>3</sub> -MgO composites against ZrO <sub>2</sub> and steel. Journal of the European Ceramic Society, 2017, 37, 297-303.	5.7	13
62	Oxidation of Mullite-Zirconia-Alumina-Silicon Carbide Composites. Journal of the American Ceramic Society, 1990, 73, 1417-1420.	3.8	12
63	Crack mouth opening displacement controlled fracture tests of brittle ceramics. Journal of the European Ceramic Society, 2010, 30, 3297-3302.	5.7	12
64	Elastic behaviour of zirconium titanate bulk material at room and high temperature. Journal of the European Ceramic Society, 2012, 32, 4083-4089.	5.7	12
65	The main role of silica based cement free binders on the microstructural evolution and mechanical behaviour of high alumina castables. Journal of the European Ceramic Society, 2018, 38, 4137-4148.	5.7	12
66	Sub-micron sized Al <sub>2</sub> TiO <sub>5</sub> powders prepared by high-energy ball milling. Journal of Materials Science, 2001, 36, 5105-5113.	3.7	11
67	Strength Analysis of Self-Supported Films Produced by Aqueous Electrophoretic Deposition. Journal of the American Ceramic Society, 2005, 88, 2645-2648.	3.8	11
68	Piezo-spectroscopic characterization of alumina-aluminium titanate laminates. Journal of the European Ceramic Society, 2006, 26, 2699-2705.	5.7	11
69	Forming of Ceramic Laminates Comprising Thin Layers of a Few Particles. Journal of the American Ceramic Society, 2008, 91, 2124-2129.	3.8	11
70	Creep damage in different 3Al <sub>2</sub> O <sub>3</sub> ·2SiO <sub>2</sub> mullites tested in 4-point bending. Journal of the European Ceramic Society, 2001, 21, 2243-2251.	5.7	10
71	Neutron diffraction investigation for possible anisotropy within monolithic Al <sub>2</sub> O <sub>3</sub> /Y-TZP composites fabricated by stacking together cast tapes. Scripta Materialia, 2006, 54, 1133-1137.	5.2	10
72	Influence of experimental variables on fracture toughness determined on SEVNB in three points bending. Mullite a case study. Journal of the European Ceramic Society, 2012, 32, 4241-4248.	5.7	10

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73	Reaction sintered zirconium titanate zirconia bulk materials from 3Y2O3-stabilized zirconia and TiO2. Phase composition and their potential for thermal shock applications. Journal of the European Ceramic Society, 2012, 32, 1205-1211.	5.7	10
74	Ceramic materials characterization using miniature mechanical tests: comparison between B3B and SPT tests. Journal of the European Ceramic Society, 2019, 39, 4113-4121.	5.7	10
75	Titanato de circonio: estabilidad termodinámica y expansión térmica. Boletín De La Sociedad Española De Cerámica Y Vidrio, 2011, 50, 169-178.	1.9	10
76	Processing and sintering of a 3 : 2 alumina silica gel. Ceramics International, 1992, 18, 365-372.	4.8	9
77	Processing of alumina-coated tetragonal zirconia materials and their response to sliding wear. Ceramics International, 2010, 36, 1545-1552.	4.8	9
78	Reaction sintering of colloidal processed mixtures of sub-micrometric alumina and nano-titania. Ceramics International, 2011, 37, 1085-1092.	4.8	9
79	Improved resistance of alumina to mild wear by aluminium titanate additions. Journal of the European Ceramic Society, 2014, 34, 69-80.	5.7	9
80	Property characterization and numerical modelling of the thermal conductivity of CaZrO3-MgO ceramic composites. Journal of the European Ceramic Society, 2021, 41, 7241-7252.	5.7	9
81	Fractographic and acoustic emission of mullite-alumina-zirconia composites prepared by reaction sintering. Journal of Materials Science, 1987, 22, 4398-4402.	3.7	8
82	Fracture mechanisms in a stoichiometric 3Al2O3·2SiO2 mullite. Journal of Materials Science, 1997, 32, 2077-2086.	3.7	8
83	Microstructural and microchemical analysis of the creep damage in mullite tested in flexure. Journal of the European Ceramic Society, 2002, 22, 2647-2655.	5.7	8
84	Failure Mechanisms in Directionally Solidified Alumina-Titania Composites. Key Engineering Materials, 2005, 290, 199-202.	0.4	8
85	Flaw Tolerant Ceramic Laminates with Negligible Residual Stresses between Layers. Key Engineering Materials, 2007, 333, 17-26.	0.4	8
86	Elastic behaviour of zirconium titanate-zirconia bulk composite materials at room and high temperature. Journal of the European Ceramic Society, 2013, 33, 3195-3200.	5.7	8
87	The potential of La-containing spent catalysts from fluid catalytic cracking as feedstock of mullite based refractories. Journal of the European Ceramic Society, 2020, 40, 6162-6170.	5.7	8
88	Effect of Al2TiO5 Content and Sintering Temperature on the Microstructure and Residual Stress of Al2O3-Al2TiO5 Ceramic Composites. Materials, 2021, 14, 7624.	2.9	8
89	In situ developed laminates with large microstructural differences between layers of similar composition. Journal of Materials Science, 2006, 41, 3695-3700.	3.7	7
90	Reduced strength degradation of alumina-aluminium titanate composite subjected to low-velocity impact loading. Journal of the European Ceramic Society, 2008, 28, 2923-2931.	5.7	7

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91	Processing of Alumina and Corresponding Composites. , 2014, , 31-72.		7
92	Neutron diffraction residual stress analysis of Al <sub>2</sub> O <sub>3</sub> /Y-TZP ceramic composites. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2016, 55, 13-23.	1.9	7
93	Influence of porosity on the mechanical behaviour of single phase $\hat{t}$ -TCP ceramics. Ceramics International, 2017, 43, 6048-6053.	4.8	7
94	Modelling of elastic modulus of a biphasic ceramic microstructure using 3D representative volume elements. Journal of the European Ceramic Society, 2020, 40, 901-910.	5.7	7
95	Influence of Titanium Dioxide on the Sintering and Microstructural Evolution of Mullite. Journal of the American Ceramic Society, 1984, 67, C-134.	3.8	6
96	Alumina Porous Ceramics Obtained by Freeze Casting: Structure and Mechanical Behaviour under Compression. Ceramics, 2018, 1, 83-97.	2.6	6
97	Influence of mullite additions on thermal shock resistance of dense alumina materials. Part 2: Thermal properties and thermal shock behaviour. Advances in Applied Ceramics, 2001, 100, 246-250.	0.4	6
98	Extraction of Lanthanum Oxide from Different Spent Fluid Catalytic Cracking Catalysts by Nitric Acid Leaching and Cyanex 923 Solvent Extraction Methods. Metals, 2022, 12, 378.	2.3	6
99	Effect of lanthanum content on physicochemical properties and thermal evolution of spent and beneficiated spent FCC catalysts. Ceramics International, 2022, 48, 17691-17702.	4.8	6
100	Non-destructive characterisation of alumina/aluminium titanate composites using a micromechanical model and ultrasonic determinations. Ceramics International, 2008, 34, 189-195.	4.8	5
101	Controlled Fracture Test for Brittle Ceramics. Journal of Strain Analysis for Engineering Design, 2011, 46, 27-32.	1.8	5
102	Fracture strength and fracture toughness of zirconium titanate-zirconia bulk composite materials. Journal of the European Ceramic Society, 2015, 35, 277-283.	5.7	5
103	Microstructural design of ceramics for bone regeneration. Journal of the European Ceramic Society, 2020, 40, 2555-2565.	5.7	5
104	Modelling of elastic modulus of CaZrO <sub>3</sub> -MgO composites using isotropic elastic and anisotropic models. Journal of the European Ceramic Society, 2020, 40, 5882-5890.	5.7	5
105	Processing, nanoindentation and scratch testing of alumina-coated YTZP. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2015, 54, 133-141.	1.9	4
106	Diopside-tricalcium phosphate bioactive ceramics for osteogenic differentiation of human adipose stem cells. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 819-833.	3.4	4
107	Aluminum Titanate, Structure and Properties. , 2021, , 76-92.		4
108	Colloidal Processing of Laminates in the System Alumina - Titania. Key Engineering Materials, 2004, 264-268, 61-64.	0.4	3

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109	Influence of the Processing Route on Reliability of Raschig Rings for Wastewater Treatments. Key Engineering Materials, 2004, 264-268, 2437-2440.	0.4	3
110	Laminated Ceramic Structures within Alumina / YTZP System Obtained by Low Pressure Joining. Key Engineering Materials, 2007, 333, 219-222.	0.4	3
111	Improved wear behaviour of alumina-aluminium titanate laminates with low residual stresses and large grained interfaces. Journal of the European Ceramic Society, 2011, 31, 475-483.	5.7	3
112	Influence of phase composition on the sliding wear of composites in the system $\text{CaZrO}_3\text{-MgO-ZrO}_2$ against $\text{ZrO}_2$ and steel. Theoretical and Applied Fracture Mechanics, 2016, 85, 125-133.	4.7	3
113	Alumina, Structure and Properties. , 2021, , 25-46.		2
114	The main role of the $\text{ZrO}_2\text{-MgO-CaO}$ and $\text{ZrO}_2\text{-MgO-CaO-SiO}_2$ systems in the field refractories. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2021, , .	1.9	2
115	Fracture Mechanisms in Laminates in the Alumina - Titania System. Key Engineering Materials, 2005, 290, 208-213.	0.4	1
116	Fracture of Monoliths Fabricated by Stacking Water Processed Green Ceramic Tapes. Key Engineering Materials, 2005, 290, 203-207.	0.4	1
117	Piezo-spectroscopic characterization of alumina-zirconia layered composites. Journal of Materials Science, 2006, 41, 3781-3785.	3.7	1
118	Reaction Sintering. , 2021, , 278-285.		1
119	Alumina-Aluminium Titanate Composites with Improved Thermal Shock Resistance. Key Engineering Materials, 2002, 206-213, 1041-1044.	0.4	0
120	Influence of Gelling Additives in the Green Properties of $\text{Al}_2\text{O}_3\text{-MgO}$ Bodies Obtained by Aqueous Gel Casting. Key Engineering Materials, 2002, 206-213, 413-416.	0.4	0
121	Gelcasting of Dense Alumina Bodies Using Concentrated Agarose Gels. Key Engineering Materials, 2004, 264-268, 193-196.	0.4	0
122	Residual Strain Profiles in Alumina-Zirconia Ceramic Composites. Materials Science Forum, 0, 652, 57-62.	0.3	0
123	Residual strain scanning of alumina-based ceramic composites by neutron diffraction. Journal of Physics: Conference Series, 2014, 549, 012027.	0.4	0
124	Thermal Shock Behavior of Ceramics: Fundamentals and Thermal Shock Resistance Parameters. , 2021, , 867-878.		0
125	Relaciones microestructura-comportamiento mecánico en materiales de almina-hexaluminato cálcico. Revista De Metalurgia, 2001, 37, 155-160.	0.5	0