Diego GÃ³mez-GarcÃ-a

List of Publications by Year
in descending order

92 papers	1,820 citations	257450 24 h-index	289244 40 g-index
96 all docs	96 docs citations	96 times ranked	1543 citing authors

#	Article	IF	Citations
1	Towards physical properties tailoring of carbon nanotubes-reinforced ceramic matrix composites. Journal of the European Ceramic Society, 2012, 32, 3001-3020.	5.7	193
2	Toughening of super-hard ultra-fine grained B4C densified by spark-plasma sintering via SiC addition. Journal of the European Ceramic Society, 2013, 33, 1395-1401.	5.7	110
3	Effect of spark plasma sintering parameters on microstructure and room-temperature hardness and toughness of fine-grained boron carbide (B4C). Journal of the European Ceramic Society, 2013, 33, 361-369.	5.7	106
4	Grain size dependence of hardness and fracture toughness in pure near fully-dense boron carbide ceramics. Journal of the European Ceramic Society, 2016, 36, 1829-1834.	5.7	102
5	Dislocation Patterns and the Similitude Principle: 2.5D Mesoscale Simulations. Physical Review Letters, 2006, 96, 125503.	7.8	72
6	Additive-free superhard B4C with ultrafine-grained dense microstructures. Journal of the European Ceramic Society, 2014, 34, 841-848.	5.7	71
7	Ultra-fast and energy-efficient sintering of ceramics by electric current concentration. Scientific Reports, 2015, 5, 8513.	3.3	69
8	Densification of B4C nanopowder with nanograin retention by spark-plasma sintering. Journal of the European Ceramic Society, 2015, 35, 1991-1998.	5.7	48
9	Mechanisms of Highâ€Temperature Creep of Fully Stabilized Zirconia Single Crystals as a Function of the Yttria Content. Journal of the American Ceramic Society, 1997, 80, 1668-1672.	3.8	43
10	Correlation between yttrium segregation at the grain boundaries and the threshold stress for plasticity in yttria-stabilized tetragonal zirconia polycrystals. Philosophical Magazine, 2003, 83, 93-108.	1.6	39
11	A Molecular Dynamics study of grain boundaries in YSZ: Structure, energetics and diffusion of oxygen. Solid State Ionics, 2012, 219, 1-10.	2.7	39
12	Creep-resistant composites of alumina and single-wall carbon nanotubes. Applied Physics Letters, 2008, 92, .	3.3	36
13	High-temperature creep deformation of coarse-grained boron carbide ceramics. Journal of the European Ceramic Society, 2015, 35, 1423-1429.	5.7	36
14	Spark plasma sintering of fine-grained alumina ceramics reinforced with alumina whiskers. Ceramics International, 2017, 43, 658-663.	4.8	36
15	Basal slip in sapphire (Î±-Al2O3). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 233, 121-125.	5.6	35
16	Making ceramics ductile at low homologous temperatures. Scripta Materialia, 2007, 56, 89-91.	5.2	35
17	High temperature creep behaviour of 4 mol% yttria tetragonal zirconia polycrystals (4-YTZP) with grain sizes between 0.38 and 1.15 Î¼m. Journal of the European Ceramic Society, 2007, 27, 3325-3329.	5.7	30
18	Deformation mechanisms for high-temperature creep of high yttria content stabilized zirconia single crystals. Acta Materialia, 1996, 44, 991-999.	7.9	29

#	Article	IF	Citations
19	Spark plasma sintering of titanium nitride in nitrogen: Does it affect the sinterability and the mechanical properties?. Journal of the European Ceramic Society, 2018, 38, 1190-1196.	5.7	28
20	High temperature plasticity in yttria stabilised tetragonal zirconia polycrystals (Y-TZP). International Materials Reviews, 2013, 58, 399-417.	19.3	25
21	Graphene or carbon nanofiber-reinforced zirconia composites: Are they really worthwhile for structural applications?. Journal of the European Ceramic Society, 2018, 38, 3994-4002.	5.7	25
22	Diffusion-driven superplasticity in ceramics: Modeling and comparison with available data. Physical Review B, 2009, 80, .	3.2	24
23	Cation diffusion in yttria-zirconia by molecular dynamics. Solid State Ionics, 2011, 204-205, 1-6.	2.7	24
24	Abrasive wear rate of boron carbide ceramics: Influence of microstructural and mechanical aspects on their tribological response. Journal of the European Ceramic Society, 2016, 36, 3925-3928.	5.7	24
25	Microwave sintering of nanocrystalline Ytzp (3ÂMol%). Journal of Materials Science, 2006, 41, 5231-5234.	3.7	23
26	Enhancing the spark-plasma sinterability of B4C nanopowders via room-temperature methylation induced purification. Journal of the European Ceramic Society, 2016, 36, 2843-2848.	5.7	23
27	High-temperature plastic deformation of spark plasma sintered boron carbide-based composites: The case study of B4Câ€“SiC with/without graphite (g). Journal of the European Ceramic Society, 2016, 36, 1127-1134.	5.7	23
28	High temperature creep of 20 vol%. SiC-HfB2 UHTCs up to 2000 Â°C and the effect of La2O3 addition. Journal of the European Ceramic Society, 2018, 38, 47-56.	5.7	23
29	Segregation to the grain boundaries in YSZ bicrystals: A Molecular Dynamics study. Solid State Ionics, 2013, 237, 8-15.	2.7	22
30	A critical assessment of the dislocation-driven model for superplasticity in yttria tetragonal zirconia polycrystals. Journal of the European Ceramic Society, 2008, 28, 571-575.	5.7	21
31	High-temperature deformation of fully-dense fine-grained boron carbide ceramics: Experimental facts and modeling. Materials and Design, 2015, 88, 287-293.	7.0	21
32	High-temperature creep of carbon nanofiber-reinforced and graphene oxide-reinforced alumina composites sintered by spark plasma sintering. Ceramics International, 2017, 43, 7136-7141.	4.8	21
33	Influence of the yttrium segregation at grain boundaries in the superplasticity of yttria tetragonal zirconia polycrystals. Journal of the European Ceramic Society, 2003, 23, 2969-2973.	5.7	18
34	Microstructural Effects on the Creep Deformation of Alumina/Singleâ€Wall Carbon Nanotubes Composites. Journal of the American Ceramic Society, 2010, 93, 2042-2047.	3.8	18
35	Carbon nanofibers replacing graphene oxide in ceramic composites as a reinforcing-phase: Is it feasible?. Journal of the European Ceramic Society, 2017, 37, 3791-3796.	5.7	16
36	An explanation of the high temperature creep of yttria tetragonal zirconia nanocrystals. Scripta Materialia, 2004, 50, 1151-1155.	5.2	15

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37	Ceramics of Ta-doping stabilized orthorhombic ZrO2 densified by spark plasma sintering and the effect of post-annealing in air. Scripta Materialia, 2017, 130, 128-132.	5.2	14
38	High temperature plastic anisotropy of Y2O3 partiallystabilized ZrO2 single crystals. Journal of the European Ceramic Society, 2002, 22, 2609-2613.	5.7	13
39	On the microstructure of single wall carbon nanotubes reinforced ceramic matrix composites. Journal of Materials Science, 2010, 45, 2258-2263.	3.7	13
40	Is an alumina-whisker-reinforced alumina composite the most efficient choice for an oxidation-resistant high-temperature ceramic?. Journal of the European Ceramic Society, 2018, 38, 1812-1818.	5.7	13
41	Zirconium Nitride Precipitation in Nominally Pure Yttria-Stabilized Zirconia. Journal of the American Ceramic Society, 1996, 79, 487-490.	3.8	12
42	Mechanical behaviour of yttria tetragonal zirconia polycrystalline nanoceramics: dependence on the glassy phase content. Journal of the European Ceramic Society, 2002, 22, 2603-2607.	5.7	12
43	A first study of the high-temperature plasticity of ceria-doped zirconia polycrystals. Journal of the European Ceramic Society, 2010, 30, 3357-3362.	5.7	12
44	Experimental Assessment of Plasticity of Nanocrystalline 1.7 mol% Yttria Tetragonal Zirconia Polycrystals. Journal of the American Ceramic Society, 2005, 88, 1529-1535.	3.8	10
45	Grain-boundary diffusion coefficient in Î±-Al2O3 from spark plasma sintering tests: Evidence of collective motion of charge disconnections. Ceramics International, 2018, 44, 19044-19048.	4.8	10
46	Pore channel closure in sintering of a ring of three spheres. Journal of the European Ceramic Society, 2007, 27, 3365-3370.	5.7	9
47	Superplasticity in nanocrystalline ceramics: pure grain boundary phenomena or not?. International Journal of Materials Research, 2010, 101, 1215-1221.	0.3	9
48	A new approach to the grain-size dependent transition of stress exponents in yttria tetragonal zirconia polycrystals. The theoretical limit for superplasticity in ceramics. Ceramics International, 2016, 42, 4918-4923.	4.8	9
49	Sintering kinetics, defect chemistry and room-temperature mechanical properties of titanium nitride prepared by spark plasma sintering. Journal of Alloys and Compounds, 2019, 807, 151666.	5.5	9
50	Does grain size have an influence on intrinsic mechanical properties and conduction mechanism of near fully-dense boron carbide ceramics?. Journal of Alloys and Compounds, 2019, 795, 408-415.	5.5	9
51	A critical analysis and a recent improvement of the two-dimensional model for solutionâ€“precipitation creep: application to silicon nitride ceramics. Philosophical Magazine, 2004, 84, 2305-2316.	1.6	8
52	High temperature plastic deformation of 24â€“32 mol% yttria cubic stabilized zirconia (YCSZ) single crystals. Journal of the European Ceramic Society, 2003, 23, 2183-2191.	5.7	7
53	Segregation-induced grain boundary electrical potential in ionic oxide materials: A first principles model. Acta Materialia, 2010, 58, 6404-6410.	7.9	7
54	Grain-boundary cation diffusion in ceria tetragonal zirconia determined by constant-strain-rate deformation tests. Journal of the European Ceramic Society, 2014, 34, 4469-4472.	5.7	7

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55	A phase-field model of 2D grain size distribution in ceramics. Journal of the European Ceramic Society, 2014, 34, 2731-2736.	5.7	7
56	Mechanical instability of stressed grain boundaries during plastic deformation of zirconium carbide. Journal of the European Ceramic Society, 2016, 36, 2235-2240.	5.7	7
57	The influence of oxygen partial pressure on recovery creep in magnetite single crystals. Journal of Physics and Chemistry of Solids, 2002, 63, 185-191.	4.0	6
58	Creep mechanism of gas-pressure-sintered silicon nitride polycrystals I. Macroscopic and microscopic experimental study. Philosophical Magazine, 2004, 84, 3375-3386.	1.6	6
59	Electronâ€Beamâ€Induced Loop Formation on Dislocations in Yttriaâ€Fullyâ€Stabilized Zirconia. Journal of the American Ceramic Society, 1996, 79, 2733-2738.	3.8	6
60	Exotic grain growth law in twinned boron carbide under electric fields. Journal of the European Ceramic Society, 2018, 38, 4590-4596.	5.7	6
61	Portevin?Le Chatelier effect in Y2O3?ZrO2 single crystals. Scripta Materialia, 2004, 51, 203-207.	5.2	5
62	High-temperature mechanical behavior of Al2O3/graphite composites. Journal of the European Ceramic Society, 2009, 29, 3205-3209.	5.7	5
63	High-temperature compressive creep of novel fine-grained orthorhombic ZrO 2 ceramics stabilized with 12â€¯mol% Ta doping. Journal of the European Ceramic Society, 2018, 38, 2445-2448.	5.7	5
64	Elusive super-hard B6C accessible through the laser-floating zone method. Scientific Reports, 2019, 9, 13340.	3.3	5
65	The role of metalâ€“ceramic interfaces on the high temperature mechanical response of nanostructured nickelâ€“yttria tetragonal zirconia polycrystals (Niâ€“YTZP). Journal of Materials Science, 2006, 41, 5190-5193.	3.7	4
66	On the High-Temperature Plasticity of Ceria-Doped Zirconia Nanostructured Polycrystals. Key Engineering Materials, 0, 423, 61-66.	0.4	4
67	The Possible Detriment of Oxygen in Creep of Alumina and Zirconia Ceramic Composites Reinforced with Graphene. Materials, 2021, 14, 984.	2.9	4
68	Recent advances in electron-beam-induced damage models in yttria fully stabilized zirconia single crystals. Philosophical Magazine Letters, 2001, 81, 173-178.	1.2	3
69	Anomalous high activation energy for creep in nanostructured 3YTZP/Ni cermets. Journal of the European Ceramic Society, 2007, 27, 3295-3299.	5.7	3
70	A general law for liquid metal-onto-ceramic wetting: An electrostatic approach. Journal of the European Ceramic Society, 2007, 27, 3307-3310.	5.7	3
71	Grain growth kinetics and segregation in yttria tetragonal zirconia polycrystals. International Journal of Materials Research, 2010, 101, 84-87.	0.3	3
72	Deformation mechanisms in yttria-stabilized cubic zirconia single crystals. International Journal of Materials Research, 2010, 101, 1211-1214.	0.3	3

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73	High temperature internal friction measurements of 3YTZP zirconia polycrystals. High temperature background and creep. Journal of the European Ceramic Society, 2014, 34, 3859-3863.	5.7	3
74	Disclination dipoles are the Holy Grail for high temperature superplasticity in ceramics. Scripta Materialia, 2020, 185, 21-24.	5.2	3
75	Cation-driven electrical conductivity in Ta-doped orthorhombic zirconia ceramics. Ceramics International, 2021, 47, 7248-7252.	4.8	3
76	Fluencia a alta temperatura de policristales con tamaÃ±o de grano nanomÃ©trico de YTZP dopados con diferentes cantidades de fase vÃtrea. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2004, 43, 521-523.	1.9	3
77	Influence of strain rate on the plastic deformation of high yttria content YCSZ single crystals at 1400â€"1500 Â°C. Scripta Materialia, 2003, 48, 1295-1300.	5.2	2
78	Creep mechanism of gas-pressure-sintered silicon nitride polycrystals II. Deformation mechanism. Philosophical Magazine, 2004, 84, 3387-3395.	1.6	2
79	Superplasticity in Ceramics: Applications and New Trends. Key Engineering Materials, 0, 423, 3-13.	0.4	2
80	Processing of Swnt-Reinforced Yttria Stabilized Zirconia by Spark Plasma Sintering and Microstructure Characterization. Journal of Nano Research, 2012, 18-19, 317-323.	0.8	2
81	Mg2SiO4-MgAl2O4 directionally solidified eutectics: Hardness dependence modelled through an array of screw dislocations. Journal of the European Ceramic Society, 2020, 40, 4171-4176.	5.7	2
82	Recent Insights on the Superplastic Behaviour of Ceramics. Materials Science Forum, 2012, 735, 120-129.	0.3	1
83	High-Temperature Plasticity in Super Hard Boron Carbide Ceramics. Materials Science Forum, 2016, 838-839, 166-170.	0.3	1
84	Ceramic-matrix composites. , 2006, , .		1
85	Inestabilidades dinÃ¡micas en cerÃ¡micas monocristalinas a base de circona. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2005, 44, 95-100.	1.9	1
86	High Temperature Plasticity in the ZrO2-Y2O3 System. Ceramic Engineering and Science Proceedings, 0, , 395-406.	0.1	0
87	Recovery Creep and Diffusion in Magnetite (Fe₃O₄) Single Crystals. Defect and Diffusion Forum, 2001, 194-199, 1057-1062.	0.4	0
88	The Future of Research in Ceramics in the XXI Century. Key Engineering Materials, 0, 663, 127-132.	0.4	0
89	The Role of a Threshold Stress on the Superplasticity of Ceramics Revisited. Materials Science Forum, 0, 838-839, 95-99.	0.3	0
90	Recientes avances en simulaciÃ³n mesoscÃ³pica de la dinÃ¡mica de dislocaciones. Revista De Metalurgia, 2001, 37, 273-276.	0.5	0

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91	CavitaciÃ³n durante la fluencia de policristales de Si₃N₄. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2005, 44, 324-327.	1.9	0
92	Primera evidencia experimental mediante microscopÃa electrÃ³nica de transmisiÃ³n de la disociaciÃ³n de dislocaciones en el sistema TeO₂. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2005, 44, 297-300.	1.9	0