Rajendra K Bordia

List of Publications by Year
in descending order

80 papers	2,928 citations	159585 30 h-index	175258 52 g-index
84 all docs	84 docs citations	84 times ranked	2269 citing authors

#	Article	IF	Citations
1	Macrostructural design of highly porous SiOC ceramic foams by preceramic polymer viscosity tailoring. Ceramics International, 2022, 48, 224-231.	4.8	5
2	Laser pyrolyzed organosilazaneâ€based Al/ZrO₂ composite coating on stainless steel: Resulting microstructure and mechanical properties. International Journal of Applied Ceramic Technology, 2022, 19, 856-865.	2.1	6
3	Ultraâ€fast, selective, nonâ€melting, laser sintering of alumina with anisotropic and sizeâ€suppressed grains. Journal of the American Ceramic Society, 2021, 104, 1997-2006.	3.8	10
4	Fabrication of Porous Carbon Films and Their Impact on Carbon/Polypropylene Interfacial Bonding. Journal of Composites Science, 2021, 5, 108.	3.0	4
5	Ultra-Fast Laser Fabrication of Alumina Micro-Sample Array and High-Throughput Characterization of Microstructure and Hardness. Crystals, 2021, 11, 890.	2.2	1
6	Influence of TiO2 on the densification behaviour of Yb2O3. Journal of the European Ceramic Society, 2021, , .	5.7	2
7	Constrained sintering of alumina micro-ring films on stiff and compliant substrates: Constriction or dilation?. Acta Materialia, 2021, 216, 117159.	7.9	0
8	Low/intermediate temperature pyrolyzed polysiloxane derived ceramics with increased carbon for electrical applications. Journal of the European Ceramic Society, 2021, 41, 5882-5889.	5.7	10
9	The effect of laser sintering on the microstructure, relative density, and cracking of solâ€gelâ€“derived silica thin films. Journal of the American Ceramic Society, 2020, 103, 70-81.	3.8	8
10	High temperature oxidation behaviors of SiON coated AISI 441 in Arâ€¯+â€¯O2, Ar+H2O, and Arâ€¯+â€¯CO2 atmospheres. Corrosion Science, 2020, 166, 108429.	6.6	15
11	Role of carbon on the thermal and electrical properties of graphene- enriched silicon oxycarbides. Ceramics International, 2020, 46, 28156-28164.	4.8	23
12	Effect of isotropic and anisotropic porous microstructure on electrochemical performance of Li ion battery cathodes: An experimental and computational study. Journal of Power Sources, 2020, 474, 228490.	7.8	11
13	Direct inkjet printing of mullite nano-ribbons from the solâ€“gel precursor. Journal of Sol-Gel Science and Technology, 2020, 95, 66-76.	2.4	2
14	Feasibility of inÂsitu deâ€agglomeration during powder consolidation. Journal of the American Ceramic Society, 2019, 102, 628-643.	3.8	7
15	Fabricating ceramics with embedded microchannels using an integrated additive manufacturing and laser machining method. Journal of the American Ceramic Society, 2019, 102, 1071-1082.	3.8	18
16	Polymeric and ceramic silicon-based coatings â€“ a review. Journal of Materials Chemistry A, 2019, 7, 1936-1963.	10.3	205
17	The effect of gelation on statically and dynamically freezeâ€cast structures. Journal of the American Ceramic Society, 2019, 102, 5796-5806.	3.8	12
18	Simultaneous threeâ€dimensional elemental mapping of Hollandite and Pyrochlore material phases in ceramic waste form materials. Journal of the American Ceramic Society, 2019, 102, 5620-5631.	3.8	0

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19	A semi-empirical power-law model for the dip-coating of a substrate into a particle-containing, non-Newtonian, complex fluid system. Ceramics International, 2019, 45, 6655-6664.	4.8	9
20	Reaction kinetics to infer the effect of dopants on ion transport - A case study for Mo+6 doped lithium titanates (Li2TiO3-Î´ and Li4Ti5O12-Î´). Ceramics International, 2018, 44, 12580-12592.	4.8	5
21	Preface for the special section of the JACerS on sintering. Journal of the American Ceramic Society, 2018, 102, 537.	3.8	0
22	Stressâ€induced anisotropy during sintering of hierarchical porosity ceramics. Journal of the American Ceramic Society, 2018, 102, 768.	3.8	4
23	FEM Modeling of In-Plane Stress Distribution in Thick Brittle Coatings/Films on Ductile Substrates Subjected to Tensile Stress to Determine Interfacial Strength. Materials, 2018, 11, 497.	2.9	8
24	Anisotropic sintering behavior of freeze-cast ceramics by optical dilatometry and discrete-element simulations. Acta Materialia, 2018, 155, 343-349.	7.9	24
25	Emerging challenges in solid-state sintering science and technology. Izvestiya Vuzov Poroshkovaya Metallurgiya I Funktsionalâ€™nye Pokrytiya, 2018, , 28-31.	0.2	0
26	An optimized process for in situ formation of multi-walled carbon nanotubes in templated pores of polymer-derived silicon oxycarbide. Ceramics International, 2017, 43, 3854-3860.	4.8	12
27	Thick Er-doped silica films sintered using CO2 laser for scintillation applications. Optical Materials, 2017, 68, 63-69.	3.6	9
28	Current understanding and future research directions at the onset of the next century of sintering science and technology. Journal of the American Ceramic Society, 2017, 100, 2314-2352.	3.8	222
29	Freeze Tape Cast Thick Mo Doped Li₄Ti₅O₁₂Electrodes for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A2603-A2610.	2.9	32
30	Asymmetric polysilazane-derived ceramic structures with multiscalar porosity for membrane applications. Microporous and Mesoporous Materials, 2016, 232, 196-204.	4.4	22
31	Evolution of anisotropy in hierarchical porous ceramics during sinter-forging. Journal of the European Ceramic Society, 2016, 36, 2937-2945.	5.7	14
32	Sintered ceramics with controlled microstructures: numerical investigations with the Discrete Element Method. Journal of the Ceramic Society of Japan, 2016, 124, 340-345.	1.1	22
33	Effect of Macropore Anisotropy on the Mechanical Response of Hierarchically Porous Ceramics. Journal of the American Ceramic Society, 2016, 99, 979-987.	3.8	62
34	Strength of hierarchically porous ceramics: Discrete simulations on X-ray nanotomography images. Scripta Materialia, 2016, 113, 250-253.	5.2	20
35	Planar, Polysilazaneâ€Derived Porous Ceramic Supports for Membrane and Catalysis Applications. Journal of the American Ceramic Society, 2015, 98, 3047-3053.	3.8	41
36	Densification and Microstructural Evolution of Hierarchically Porous Ceramics During Sintering. Journal of the American Ceramic Society, 2015, 98, 3424-3430.	3.8	13

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37	A novel processing approach for free-standing porous non-oxide ceramic supports from polycarbosilane and polysilazane precursors. Journal of the European Ceramic Society, 2015, 35, 2679-2683.	5.7	39
38	Effective transport properties of 3D multi-component microstructures with interface resistance. Computational Materials Science, 2015, 96, 277-283.	3.0	13
39	Site occupancy and cation binding states in reduced polycrystalline Sr_xBa_{1â^'}_xNb₂O₆. Applied Physics Letters, 2014, 104, 101607.	3.3	13
40	Ceramics for Sustainable Energy Technologies with a Focus on Polymer-Derived Ceramics. , 2014, , 501-533.		7
41	Ceramic Fibers Based on SiC and SiCN Systems: Current Research, Development, and Commercial Status. Advanced Engineering Materials, 2014, 16, 621-636.	3.5	118
42	Corrosion resistant polymer derived ceramic composite environmental barrier coatings. Journal of the European Ceramic Society, 2014, 34, 3597-3606.	5.7	63
43	Processing of Hierarchical and Anisotropic Porosity <scp>LSM</scp>â€<scp>YSZ</scp> Composites. Journal of the American Ceramic Society, 2013, 96, 2745-2753.	3.8	31
44	Thermoelectric Properties of Reduced Polycrystalline <scp><scp>Sr</scp></scp>_{0.5}<scp><scp>Ba</scp></scp>_{0.5}<scp><scp>Nb</scp></scp>₂<scp Fabricated Via Solution Combustion Synthesis. Journal of the American Ceramic Society, 2013, 96, 2230-2237.	3.8	20
45	Photoluminescent electrospun submicron fibers of hybrid organosiloxane and derived silica. RSC Advances, 2013, 3, 7591.	3.6	20
46	Advances in Sintering Research. Journal of the American Ceramic Society, 2012, 95, 2357-2357.	3.8	3
47	Progress in research on sintering and microstructural development. Journal of Materials Science, 2012, 47, 7035-7035.	3.7	1
48	Simulation of the elastic properties of porous ceramics with realistic microstructure. Modelling and Simulation in Materials Science and Engineering, 2012, 20, 045009.	2.0	22
49	Simulation of the toughness of partially sintered ceramics with realistic microstructures. Acta Materialia, 2012, 60, 4685-4694.	7.9	25
50	Challenges in Ceramic Science: A Report from the Workshop on Emerging Research Areas in Ceramic Science. Journal of the American Ceramic Society, 2012, 95, 3699-3712.	3.8	59
51	The Conversion of Perhydropolysilazane into <scp><scp>SiON</scp></scp> Films Characterized by Xâ€Ray Photoelectron Spectroscopy. Journal of the American Ceramic Society, 2012, 95, 3722-3725.	3.8	20
52	Magnetic behavior of Ni and Co doped CuMn2O4 spinels. Journal of Applied Physics, 2012, 111, .	2.5	17
53	Microstructural Evolution and Anisotropic Shrinkage in Constrained Sintering and Sinter Forging. Journal of the American Ceramic Society, 2012, 95, 2389-2397.	3.8	22
54	Conversion behaviour and resulting mechanical properties of polysilazane-based coatings. Journal of the European Ceramic Society, 2012, 32, 1883-1892.	5.7	112

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55	High performance environmental barrier coatings, Part I: Passive filler loaded SiCN system for steel. Journal of the European Ceramic Society, 2011, 31, 3003-3010.	5.7	115
56	High performance environmental barrier coatings, Part II: Active filler loaded SiOC system for superalloys. Journal of the European Ceramic Society, 2011, 31, 3011-3020.	5.7	87
57	In Situ Carbon Nanotube Formation in Templated Pores of Polymerâ€Derived Ceramics. Advanced Engineering Materials, 2011, 13, 906-912.	3.5	7
58	Effect of drying conditions on patterned ceramic films processed by soft micromolding. Journal of the Ceramic Society of Japan, 2010, 118, 321-325.	1.1	8
59	Sintering, Phase Stability, and Properties of Calcium Phosphateâ€Mullite Composites. Journal of the American Ceramic Society, 2010, 93, 1639-1649.	3.8	49
60	Evolution of Defects During Sintering: Discrete Element Simulations. Journal of the American Ceramic Society, 2009, 92, 1435-1441.	3.8	73
61	Advances in Sintering Science and Technology. Journal of the American Ceramic Society, 2009, 92, 1383-1383.	3.8	6
62	Processing of Polymerâ€Derived Ceramic Composite Coatings on Steel. Journal of the American Ceramic Society, 2008, 91, 41-45.	3.8	87
63	Mechanical properties of polymer-derived ceramic composite coatings on steel. Journal of the European Ceramic Society, 2008, 28, 253-257.	5.7	58
64	Phase and microstructural evolution in polymer-derived composite systems and coatings. Journal of Materials Research, 2007, 22, 1959-1966.	2.6	32
65	Effect of Green-State Processing on the Sintering Stress and Viscosity of Alumina Compacts. Journal of the American Ceramic Society, 2007, 90, 1637-1640.	3.8	28
66	Constrained Sintering of Alumina Thin Films: Comparison Between Experiment and Modeling. Journal of the American Ceramic Society, 2007, 90, 1733-1737.	3.8	46
67	Hollow Spheres. , 2006, , 177-192.		0
68	Anisotropic constitutive laws for sintering bodies. Acta Materialia, 2006, 54, 111-118.	7.9	96
69	Composite polymer derived ceramic system for oxidizing environments. Journal of Materials Science, 2006, 41, 4617-4622.	3.7	52
70	Interfacial-shear strength of the perfluorocyclobutane films on silicon. Journal of Materials Research, 2006, 21, 1759-1769.	2.6	2
71	Effect of Rigid Inclusions on the Densification and Constitutive Parameters of Liquidâ€Phaseâ€Sintered YBa₂Cu₃O_{6+x} Powder Compacts. Journal of the American Ceramic Society, 2003, 86, 883-892.	3.8	16
72	Critical Evaluation of Hot Forging Experiments: Case Study in Alumina. Journal of the American Ceramic Society, 2003, 86, 1099-1105.	3.8	46

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73	Impact Strength of High Density Solid-State Microcellular Polycarbonate Foams. Journal of Engineering Materials and Technology, Transactions of the ASME, 2001, 123, 229-233.	1.4	57
74	Evolution of defect size and strength of porous alumina during sintering. Journal of the European Ceramic Society, 2000, 20, 2561-2568.	5.7	93
75	Evolution of Young's Modulus, Strength, and Microstructure during Liquidâ€Phase Sintering. Journal of the American Ceramic Society, 1998, 81, 1852-1860.	3.8	38
76	Fracture of Alumina with Controlled Pores. Journal of the American Ceramic Society, 1998, 81, 2449-2457.	3.8	63
77	Crack Growth and Damage in Constrained Sintering Films. Journal of the American Ceramic Society, 1993, 76, 2475-2485.	3.8	156
78	Isotropic Constitutive Model for Sintering Particle Packings. Journal of the American Ceramic Society, 1990, 73, 2266-2273.	3.8	79
79	Sintering of TiO2-Al2O3 Composites: A Model Experimental Investigation. Journal of the American Ceramic Society, 1988, 71, 302-310.	3.8	109
80	Analysis of Sintering of a Composite with a Glass or Ceramic Matrix. Journal of the American Ceramic Society, 1986, 69, C-55-C-57.	3.8	53