

Rajendra K Bordia

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

82

papers

2,221

citations

28

h-index

46

g-index

84

ext. papers

2,568

ext. citations

4.2

avg, IF

5.13

L-index

#	Paper	IF	Citations
82	Crack Growth and Damage in Constrained Sintering Films. <i>Journal of the American Ceramic Society</i> , 1993 , 76, 2475-2485	3.8	136
81	Current understanding and future research directions at the onset of the next century of sintering science and technology. <i>Journal of the American Ceramic Society</i> , 2017 , 100, 2314-2352	3.8	129
80	Polymeric and ceramic silicon-based coatings: A review. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 1936-1963	3.8	108
79	Sintering of TiO ₂ /Al ₂ O ₃ Composites: A Model Experimental Investigation. <i>Journal of the American Ceramic Society</i> , 1988 , 71, 302-310	3.8	100
78	Ceramic Fibers Based on SiC and SiCN Systems: Current Research, Development, and Commercial Status. <i>Advanced Engineering Materials</i> , 2014 , 16, 621-636	3.5	93
77	High performance environmental barrier coatings, Part I: Passive filler loaded SiCN system for steel. <i>Journal of the European Ceramic Society</i> , 2011 , 31, 3003-3010	6	90
76	Conversion behaviour and resulting mechanical properties of polysilazane-based coatings. <i>Journal of the European Ceramic Society</i> , 2012 , 32, 1883-1892	6	83
75	Anisotropic constitutive laws for sintering bodies. <i>Acta Materialia</i> , 2006 , 54, 111-118	8.4	81
74	Evolution of defect size and strength of porous alumina during sintering. <i>Journal of the European Ceramic Society</i> , 2000 , 20, 2561-2568	6	81
73	Isotropic Constitutive Model for Sintering Particle Packings. <i>Journal of the American Ceramic Society</i> , 1990 , 73, 2266-2273	3.8	70
72	Processing of Polymer-Derived Ceramic Composite Coatings on Steel. <i>Journal of the American Ceramic Society</i> , 2007 , 91, 41-45	3.8	68
71	High performance environmental barrier coatings, Part II: Active filler loaded SiOC system for superalloys. <i>Journal of the European Ceramic Society</i> , 2011 , 31, 3011-3020	6	66
70	Evolution of Defects During Sintering: Discrete Element Simulations. <i>Journal of the American Ceramic Society</i> , 2009 , 92, 1435-1441	3.8	59
69	Impact Strength of High Density Solid-State Microcellular Polycarbonate Foams. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2001 , 123, 229-233	1.8	53
68	Challenges in Ceramic Science: A Report from the Workshop on Emerging Research Areas in Ceramic Science. <i>Journal of the American Ceramic Society</i> , 2012 , 95, 3699-3712	3.8	51
67	Analysis of Sintering of a Composite with a Glass or Ceramic Matrix. <i>Journal of the American Ceramic Society</i> , 1986 , 69, C-55-C-57	3.8	48
66	Effect of Macropore Anisotropy on the Mechanical Response of Hierarchically Porous Ceramics. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 979-987	3.8	47

65	Composite polymer derived ceramic system for oxidizing environments. <i>Journal of Materials Science</i> , 2006 , 41, 4617-4622	4.3	47
64	Fracture of Alumina with Controlled Pores. <i>Journal of the American Ceramic Society</i> , 2005 , 81, 2449-2457	3.8	46
63	Mechanical properties of polymer-derived ceramic composite coatings on steel. <i>Journal of the European Ceramic Society</i> , 2008 , 28, 253-257	6	45
62	Corrosion resistant polymer derived ceramic composite environmental barrier coatings. <i>Journal of the European Ceramic Society</i> , 2014 , 34, 3597-3606	6	43
61	Sintering, Phase Stability, and Properties of Calcium Phosphate-Mullite Composites. <i>Journal of the American Ceramic Society</i> , 2010 , 93, 1639	3.8	42
60	Critical Evaluation of Hot Forging Experiments: Case Study in Alumina. <i>Journal of the American Ceramic Society</i> , 2003 , 86, 1099-1105	3.8	42
59	Constrained Sintering of Alumina Thin Films: Comparison Between Experiment and Modeling. <i>Journal of the American Ceramic Society</i> , 2007 , 90, 1733-1737	3.8	40
58	Planar, Polysilazane-Derived Porous Ceramic Supports for Membrane and Catalysis Applications. <i>Journal of the American Ceramic Society</i> , 2015 , 98, 3047-3053	3.8	36
57	A novel processing approach for free-standing porous non-oxide ceramic supports from polycarbosilane and polysilazane precursors. <i>Journal of the European Ceramic Society</i> , 2015 , 35, 2679-2683	6	30
56	Evolution of Young's Modulus, Strength, and Microstructure during Liquid-Phase Sintering. <i>Journal of the American Ceramic Society</i> , 2005 , 81, 1852-1860	3.8	30
55	Processing of Hierarchical and Anisotropic Porosity LSM-YSZ Composites. <i>Journal of the American Ceramic Society</i> , 2013 , 96, 2745-2753	3.8	29
54	Effect of Green-State Processing on the Sintering Stress and Viscosity of Alumina Compacts. <i>Journal of the American Ceramic Society</i> , 2007 , 90, 1637-1640	3.8	25
53	Phase and microstructural evolution in polymer-derived composite systems and coatings. <i>Journal of Materials Research</i> , 2007 , 22, 1959-1966	2.5	24
52	Simulation of the toughness of partially sintered ceramics with realistic microstructures. <i>Acta Materialia</i> , 2012 , 60, 4685-4694	8.4	22
51	Freeze Tape Cast Thick Mo Doped Li ₄ Ti ₅ O ₁₂ Electrodes for Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A2603-A2610	3.9	21
50	Simulation of the elastic properties of porous ceramics with realistic microstructure. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2012 , 20, 045009	2	21
49	Strength of hierarchically porous ceramics: Discrete simulations on X-ray nanotomography images. <i>Scripta Materialia</i> , 2016 , 113, 250-253	5.6	19
48	Thermoelectric Properties of Reduced Polycrystalline Sr _{0.5} Ba _{0.5} Nb ₂ O ₆ Fabricated Via Solution Combustion Synthesis. <i>Journal of the American Ceramic Society</i> , 2013 , 96, 2230-2237	3.8	19

47	Asymmetric polysilazane-derived ceramic structures with multiscale porosity for membrane applications. <i>Microporous and Mesoporous Materials</i> , 2016 , 232, 196-204	5.3	19
46	Microstructural Evolution and Anisotropic Shrinkage in Constrained Sintering and Sinter Forging. <i>Journal of the American Ceramic Society</i> , 2012 , 95, 2389-2397	3.8	18
45	Sintered ceramics with controlled microstructures: numerical investigations with the Discrete Element Method. <i>Journal of the Ceramic Society of Japan</i> , 2016 , 124, 340-345	1	16
44	Effect of Rigid Inclusions on the Densification and Constitutive Parameters of Liquid-Phase-Sintered YBa ₂ Cu ₃ O _{6+x} Powder Compacts. <i>Journal of the American Ceramic Society</i> , 2003 , 86, 883-892	3.8	16
43	Photoluminescent electrospun submicron fibers of hybrid organosiloxane and derived silica. <i>RSC Advances</i> , 2013 , 3, 7591	3.7	15
42	Anisotropic sintering behavior of freeze-cast ceramics by optical dilatometry and discrete-element simulations. <i>Acta Materialia</i> , 2018 , 155, 343-349	8.4	14
41	Fabricating ceramics with embedded microchannels using an integrated additive manufacturing and laser machining method. <i>Journal of the American Ceramic Society</i> , 2019 , 102, 1071-1082	3.8	13
40	The Conversion of Perhydropolysilazane into SiON Films Characterized by X-Ray Photoelectron Spectroscopy. <i>Journal of the American Ceramic Society</i> , 2012 , 95, 3722-3725	3.8	13
39	Site occupancy and cation binding states in reduced polycrystalline Sr _x Ba _{1-x} Nb ₂ O ₆ . <i>Applied Physics Letters</i> , 2014 , 104, 101607	3.4	12
38	Magnetic behavior of Ni and Co doped CuMn ₂ O ₄ spinels. <i>Journal of Applied Physics</i> , 2012 , 111, 07E149	2.5	11
37	Thick Er-doped silica films sintered using CO ₂ laser for scintillation applications. <i>Optical Materials</i> , 2017 , 68, 63-69	3.3	9
36	The effect of gelation on statically and dynamically freeze-cast structures. <i>Journal of the American Ceramic Society</i> , 2019 , 102, 5796-5806	3.8	9
35	Evolution of anisotropy in hierarchical porous ceramics during sinter-forging. <i>Journal of the European Ceramic Society</i> , 2016 , 36, 2937-2945	6	9
34	An optimized process for in situ formation of multi-walled carbon nanotubes in templated pores of polymer-derived silicon oxycarbide. <i>Ceramics International</i> , 2017 , 43, 3854-3860	5.1	8
33	Effective transport properties of 3D multi-component microstructures with interface resistance. <i>Computational Materials Science</i> , 2015 , 96, 277-283	3.2	8
32	Densification and Microstructural Evolution of Hierarchically Porous Ceramics During Sintering. <i>Journal of the American Ceramic Society</i> , 2015 , 98, 3424-3430	3.8	8
31	Effect of drying conditions on patterned ceramic films processed by soft micromolding. <i>Journal of the Ceramic Society of Japan</i> , 2010 , 118, 321-325	1	8
30	In Situ Carbon Nanotube Formation in Templated Pores of Polymer-Derived Ceramics. <i>Advanced Engineering Materials</i> , 2011 , 13, 906-912	3.5	6

29	Reaction kinetics to infer the effect of dopants on ion transport - A case study for Mo ⁺⁶ doped lithium titanates (Li ₂ TiO ₃ -[and Li ₄ Ti ₅ O ₁₂ -]) <i>Ceramics International</i> , 2018 , 44, 12580-12592	5.1	5
28	FEM Modeling of In-Plane Stress Distribution in Thick Brittle Coatings/Films on Ductile Substrates Subjected to Tensile Stress to Determine Interfacial Strength. <i>Materials</i> , 2018 , 11,	3.5	5
27	Effect of isotropic and anisotropic porous microstructure on electrochemical performance of Li ion battery cathodes: An experimental and computational study. <i>Journal of Power Sources</i> , 2020 , 474, 228490	8.9	5
26	A semi-empirical power-law model for the dip-coating of a substrate into a particle-containing, non-Newtonian, complex fluid system. <i>Ceramics International</i> , 2019 , 45, 6655-6664	5.1	5
25	The effect of laser sintering on the microstructure, relative density, and cracking of sol-gel-derived silica thin films. <i>Journal of the American Ceramic Society</i> , 2020 , 103, 70-81	3.8	5
24	Feasibility of in-situ de-agglomeration during powder consolidation. <i>Journal of the American Ceramic Society</i> , 2019 , 102, 628-643	3.8	4
23	High temperature oxidation behaviors of SiON coated AISI 441 in Ar + O ₂ , Ar+H ₂ O, and Ar + CO ₂ atmospheres. <i>Corrosion Science</i> , 2020 , 166, 108429	6.8	4
22	Role of carbon on the thermal and electrical properties of graphene- enriched silicon oxycarbides. <i>Ceramics International</i> , 2020 , 46, 28156-28164	5.1	4
21	Ultra-fast, selective, non-melting, laser sintering of alumina with anisotropic and size-suppressed grains. <i>Journal of the American Ceramic Society</i> , 2021 , 104, 1997-2006	3.8	4
20	Ceramics for Sustainable Energy Technologies with a Focus on Polymer-Derived Ceramics 2014 , 501-533		3
19	Sintering: Fundamentals and Practice 2012 , 1-42		3
18	Advances in Sintering Science and Technology. <i>Journal of the American Ceramic Society</i> , 2009 , 92, 1383-1383	3.8	3
17	Finite Element Modelling of Microwave Sintering. <i>Ceramic Transactions</i> , 171-180	0.1	3
16	Interfacial-shear strength of the perfluorocyclobutane films on silicon. <i>Journal of Materials Research</i> , 2006 , 21, 1759-1769	2.5	2
15	Fabrication of Porous Carbon Films and Their Impact on Carbon/Polypropylene Interfacial Bonding. <i>Journal of Composites Science</i> , 2021 , 5, 108	3	2
14	Direct inkjet printing of mullite nano-ribbons from the sol-gel precursor. <i>Journal of Sol-Gel Science and Technology</i> , 2020 , 95, 66-76	2.3	1
13	Advances in Sintering Research. <i>Journal of the American Ceramic Society</i> , 2012 , 95, 2357-2357	3.8	1
12	Progress in research on sintering and microstructural development. <i>Journal of Materials Science</i> , 2012 , 47, 7035-7035	4.3	1

11	Influence of TiO ₂ on the densification behaviour of Yb ₂ O ₃ . <i>Journal of the European Ceramic Society</i> , 2021 ,	6	1
10	Low/intermediate temperature pyrolyzed polysiloxane derived ceramics with increased carbon for electrical applications. <i>Journal of the European Ceramic Society</i> , 2021 , 41, 5882-5889	6	1
9	The Effect of a Substrate on the Microstructure of Particulate Films. <i>Ceramic Transactions</i> , 125-133	0.1	1
8	Stress-induced anisotropy during sintering of hierarchical porosity ceramics. <i>Journal of the American Ceramic Society</i> , 2018 , 102, 768	3.8	0
7	Macrostructural design of highly porous SiOC ceramic foams by preceramic polymer viscosity tailoring. <i>Ceramics International</i> , 2021 , 48, 224-224	5.1	0
6	Simultaneous three-dimensional elemental mapping of Hollandite and Pyrochlore material phases in ceramic waste form materials. <i>Journal of the American Ceramic Society</i> , 2019 , 102, 5620-5631	3.8	
5	Hollow Spheres 2006 , 177-192		
4	Emerging challenges in solid-state sintering science and technology. <i>Izvestiya Vuzov Poroshkovaya Metallurgiya I Funktsionalnye Pokrytiya</i> , 2018 , 28-31	0.2	
3	Preface for the special section of the JACerS on sintering. <i>Journal of the American Ceramic Society</i> , 2018 , 102, 537	3.8	
2	Ultra-Fast Laser Fabrication of Alumina Micro-Sample Array and High-Throughput Characterization of Microstructure and Hardness. <i>Crystals</i> , 2021 , 11, 890	2.3	
1	Constrained sintering of alumina micro-ring films on stiff and compliant substrates: Constriction or dilation?. <i>Acta Materialia</i> , 2021 , 216, 117159	8.4	