Willi Pabst

List of Publications by Year
in descending order

88
papers

2,491
citations

185998
28
h-index

233125
45
g-index

88
all docs

88
docs citations

88
times ranked

1848
citing authors

#	Article	IF	Citations
1	Quasi-laminate and quasi-columnate modeling of dielectric and piezoelectric properties of cubic-cell metamaterials. Journal of the European Ceramic Society, 2022, 42, 1396-1406.	2.8	2
2	Modeling of elastic properties and conductivity of partially sintered ceramics with duplex microstructure and different grain size ratio. Journal of the European Ceramic Society, 2022, 42, 2946-2956.	2.8	6
3	Magnesium fluoride (MgF2) â€“ A novel sintering additive for the preparation of transparent YAG ceramics via SPS. Journal of the European Ceramic Society, 2022, 42, 3290-3296.	2.8	11
4	Transmittance predictions for transparent alumina ceramics based on the complete grain size distribution or a single mean grain size replacing the whole distribution. Journal of the European Ceramic Society, 2022, 42, 5093-5107.	2.8	8
5	Light scattering models for describing the transmittance of transparent and translucent alumina and zirconia ceramics. Journal of the European Ceramic Society, 2021, 41, 2058-2075.	2.8	26
6	Modeling light scattering by spherical pores for calculating the transmittance of transparent ceramics â€“ All you need to know. Journal of the European Ceramic Society, 2021, 41, 2169-2192.	2.8	30
7	Grain growth of MgAl2O4 ceramics with LiF and NaF addition. Open Ceramics, 2021, 5, 100078.	1.0	3
8	Microstructure and Youngâ€™s modulus evolution during re-sintering of partially sintered alumina-zirconia composites (ATZ ceramics). Journal of the European Ceramic Society, 2021, 41, 3559-3569.	2.8	21
9	Transparent MgAl2O4 spinel ceramics prepared via sinter-forging. Journal of the European Ceramic Society, 2021, 41, 4313-4318.	2.8	13
10	Theoretical study of the influence of carbon contamination on the transparency of spinel ceramics prepared by spark plasma sintering (SPS). Journal of the European Ceramic Society, 2021, 41, 4337-4342.	2.8	15
11	Benchmark polynomials for the porosity dependence of elastic moduli and conductivity of partially sintered ceramics. Journal of the European Ceramic Society, 2021, 41, 7967-7975.	2.8	13
12	Youngâ€™s modulus evolution during sintering and thermal cycling of pure tin oxide ceramics. Journal of the European Ceramic Society, 2021, 41, 7816-7827.	2.8	8
13	Crystallite size of pure tin oxide ceramics and its growth during sintering determined from XRD line broadening â€“ A methodological case study and a practitionersâ€™ guide. Ceramics International, 2021, 47, 35333-35347.	2.3	15
14	Computer modeling of systematic processing defects on the thermal and elastic properties of open Kelvin-cell metamaterials. Journal of the European Ceramic Society, 2021, 41, 7130-7140.	2.8	4
15	The van de Hulst approximation for light scattering and its use for transmittance predictions in transparent ceramics. Journal of the European Ceramic Society, 2020, 40, 2141-2150.	2.8	14
16	Light scattering and extinction in polydisperse systems. Journal of the European Ceramic Society, 2020, 40, 867-880.	2.8	12
17	Light scattering in monodisperse systems â€“ from suspensions to transparent ceramics. Journal of the European Ceramic Society, 2020, 40, 1522-1531.	2.8	11
18	Comparison of the effect of different alkali halides on the preparation of transparent MgAl2O4 spinel ceramics via spark plasma sintering (SPS). Journal of the European Ceramic Society, 2020, 40, 6043-6052.	2.8	27

#	Article	IF	Citations
19	Highly dense spinel ceramics with completely suppressed grain growth prepared via SPS with NaF as a sintering additive. Journal of the European Ceramic Society, 2020, 40, 3354-3357.	2.8	14
20	Temperature dependence of Youngâ€™s modulus and damping of partially sintered and dense zirconia ceramics. Journal of the European Ceramic Society, 2020, 40, 2063-2071.	2.8	27
21	Phase mixture modeling of the grain size dependence of Youngâ€™s modulus and thermal conductivity of alumina and zirconia ceramics. Journal of the European Ceramic Society, 2020, 40, 3181-3190.	2.8	22
22	Poissonâ€™s ratio of porous and cellular materials with randomly distributed isometric pores or cells. Journal of the American Ceramic Society, 2020, 103, 6961-6977.	1.9	20
23	Influence of the heating rate on grain size of alumina ceramics prepared via spark plasma sintering (SPS). Journal of the European Ceramic Society, 2020, 40, 3656-3662.	2.8	39
24	Describing the Effective Conductivity of Two-Phase and Multiphase Materials via Weighted Means of Bounds and General Power Means. Jom, 2019, 71, 4005-4014.	0.9	16
25	Reduction of temperature gradient and carbon contamination in electric current assisted sintering (ECAS/SPS) using a â€œsaw-toothâ€•heating schedule. Ceramics International, 2019, 45, 22987-22990.	2.3	15
26	Conductivity and Young's modulus of porous metamaterials based on Gibson-Ashby cells. Scripta Materialia, 2019, 159, 1-4.	2.6	31
27	Youngâ€™s modulus evolution during heating, re-sintering and cooling of partially sintered alumina ceramics. Journal of the European Ceramic Society, 2019, 39, 1893-1899.	2.8	31
28	Thermal conductivity and Young's modulus of cubic-cell metamaterials. Ceramics International, 2019, 45, 954-962.	2.3	10
29	MEAN VALUES, MOMENTS, MOMENT RATIOS AND A GENERALIZED MEAN VALUE THEOREM FOR SIZE DISTRIBUTIONS. Ceramics - Silikaty, 2019, , 419-425.	0.2	11
30	Temperature dependence of damping in silica refractories measured via the impulse excitation technique. Ceramics International, 2018, 44, 8363-8373.	2.3	13
31	Youngâ€™s modulus and thermal conductivity of model materials with convex or concave pores â€“ from analytical predictions to numerical results. Journal of the European Ceramic Society, 2018, 38, 2694-2707.	2.8	33
32	Shear and bulk moduli of isotropic porous and cellular alumina ceramics predicted from thermal conductivity via cross-property relations. Ceramics International, 2018, 44, 8100-8108.	2.3	17
33	Microstructure characterization of mullite foam by image analysis, mercury porosimetry and X-ray computed microtomography. Ceramics International, 2018, 44, 12315-12328.	2.3	29
34	Youngâ€™s modulus and thermal conductivity of closed-cell, open-cell and inverse ceramic foams â€“ model-based predictions, cross-property predictions and numerical calculations. Journal of the European Ceramic Society, 2018, 38, 2570-2578.	2.8	46
35	Porous cordierite-based ceramics processed by starch consolidation casting â€“ Microstructure and high-temperature mechanical behavior. Ceramics International, 2018, 44, 3893-3903.	2.3	19
36	Modeling of Youngâ€™s modulus and thermal conductivity evolution of partially sintered alumina ceramics with pore shape changes from concave to convex. Journal of the European Ceramic Society, 2018, 38, 3004-3011.	2.8	29

#	Article	IF	Citations
37	Relative Youngâ€™s modulus and thermal conductivity of isotropic porous ceramics with randomly oriented spheroidal pores â€“ Model-based relations, cross-property predictions and numerical calculations. Journal of the European Ceramic Society, 2018, 38, 4026-4034.	2.8	19
38	Elastic properties of porous porcelain stoneware tiles. Ceramics International, 2017, 43, 6919-6924.	2.3	11
39	A GENERALIZED CLASS OF TRANSFORMATION MATRICES FOR THE RECONSTRUCTION OF SPHERE SIZE DISTRIBUTIONS FROM SECTION CIRCLE SIZE DISTRIBUTIONS. Ceramics - Silikaty, 2017, , 147-157.	0.2	17
40	Stereology of dense polycrystalline materialsâ€"from interface density and mean curvature integral density to Rayleigh distributions of grain sizes. Journal of the European Ceramic Society, 2016, 36, 2319-2328.	2.8	12
41	High-temperature Youngâ€™s moduli and dilatation behavior of silica refractories. Journal of the European Ceramic Society, 2016, 36, 209-220.	2.8	16
42	A GENERALIZED CROSS-PROPERTY RELATION BETWEEN THE ELASTIC MODULI AND CONDUCTIVITY OF ISOTROPIC POROUS MATERIALS WITH SPHEROIDAL PORES. Ceramics - Silikaty, 2016, , 74-80.	0.2	0
43	Application of Stereological Relations for the Characterization of Porous Materials via Microscopic Image Analysis. Key Engineering Materials, 2015, 647, 180-187.	0.4	5
44	Starch Consolidation Casting of Cordierite Precursor Mixturesâ€"Rheological Behavior and Green Body Properties. Journal of the American Ceramic Society, 2015, 98, 3014-3021.	1.9	9
45	Critical Assessment 18: Elastic and thermal properties of porous materials â€“ rigorous bounds and cross-property relations. Materials Science and Technology, 2015, 31, 1801-1808.	0.8	54
46	Microstructure characterization via stereological relations â€" A shortcut for beginners. Materials Characterization, 2015, 105, 1-12.	1.9	47
47	Quantitative microstructural characterization of transparent YAG ceramics via microscopic image analysis using stereological relations. , 2015, , .		0
48	Temperature dependence of Young×³s modulus of silica refractories. Ceramics International, 2015, 41, 1129-1138.	2.3	21
49	The thermal conductivity of aluminaâ€“water nanofluids from the viewpoint of micromechanics. Microfluidics and Nanofluidics, 2014, 16, 19-28.	1.0	7
50	Elastic anomalies in tridymite- and cristobalite-based silica materials. Ceramics International, 2014, 40, 4207-4211.	2.3	17
51	Porosity and pore size dependence of the real in-line transmission of YAG and alumina ceramics. Journal of the European Ceramic Society, 2014, 34, 2745-2756.	2.8	41
52	Thermal Properties of Transparent Ybâ€Ðoped <scp>YAG</scp> Ceramics at Elevated Temperatures. Journal of the American Ceramic Society, 2014, 97, 2602-2606.	1.9	20
53	Young's modulus of isotropic porous materials with spheroidal pores. Journal of the European Ceramic Society, 2014, 34, 3195-3207.	2.8	62
54	Isothermal and adiabatic Young's moduli of alumina and zirconia ceramics at elevated temperatures. Journal of the European Ceramic Society, 2013, 33, 3085-3093.	2.8	75

#	Article	IF	Citations
55	Thermal Conductivity of <scp><scp>Al₂O₃â€“ZrO₂</scp></scp> Composite Ceramics. Journal of the American Ceramic Society, 2011, 94, 4404-4409.	1.9	33
56	Porous alumina ceramics prepared with wheat flour. Journal of the European Ceramic Society, 2010, 30, 2871-2880.	2.8	61
57	Lowâ€•and Highâ€•temperature Processes and Mechanisms in the Preparation of Porous Ceramics via Starch Consolidation Casting. Starch/Staerke, 2010, 62, 3-10.	1.1	21
58	Thermal Conductivity of Ceramic Nanocomposites â€“ The Phase Mixture Modeling Approach. Advances in Science and Technology, 2010, 71, 68-73.	0.2	1
59	Anisometric Particle Systemsâ€"from Shape Characterization to Suspension Rheology. , 2009, , .		5
60	Phase Mixture Models for the Thermal Conductivity of Nanofluids and Nanocrystalline Solids. , 2009, , .		4
61	Starch as a Pore-forming and Body-forming Agent in Ceramic Technology. Starch/Staerke, 2009, 61, 495-502.	1.1	47
62	Thermal conductivity of porous alumina ceramics prepared using starch as a pore-forming agent. Journal of the European Ceramic Society, 2009, 29, 347-353.	2.8	202
63	Elastic properties of porous oxide ceramics prepared using starch as a pore-forming agent. Journal of the European Ceramic Society, 2009, 29, 2765-2771.	2.8	51
64	Alumina ceramics prepared with new pore-forming agents. Processing and Application of Ceramics, 2008, 2, 1-8.	0.4	31
65	A cross-property relation between the tensile modulus and the thermal conductivity of porous materials. Ceramics International, 2007, 33, 9-12.	2.3	34
66	Porous ceramics prepared using poppy seed as a pore-forming agent. Ceramics International, 2007, 33, 1385-1388.	2.3	60
67	Size and shape characterization of oblate and prolate particles. Journal of the European Ceramic Society, 2007, 27, 1759-1762.	2.8	14
68	A Simple Approximate Formula for the Aspect Ratio of Oblate Particles. Particle and Particle Systems Characterization, 2007, 24, 458-463.	1.2	3
69	Porosity and pore size control in starch consolidation casting of oxide ceramicsâ€"Achievements and problems. Journal of the European Ceramic Society, 2007, 27, 669-672.	2.8	76
70	Effective properties of suspensions, composites and porous materials. Journal of the European Ceramic Society, 2007, 27, 479-482.	2.8	40
71	A new percolation-threshold relation for the porosity dependence of thermal conductivity. Ceramics International, 2006, 32, 89-91.	2.3	21
72	Particle shape and suspension rheology of short-fiber systems. Journal of the European Ceramic Society, 2006, 26, 149-160.	2.8	111

#	Article	IF	Citations
73	Elasticity of porous ceramicsâ€"A critical study of modulusâˆ'porosity relations. Journal of the European Ceramic Society, 2006, 26, 1085-1097.	2.8	159
74	Viscoelastic behavior of ceramic suspensions with carrageenan. Journal of the European Ceramic Society, 2006, 26, 1185-1194.	2.8	18
75	Size and shape characterization of polydisperse short-fiber systems. Journal of the European Ceramic Society, 2006, 26, 1121-1130.	2.8	31
76	Characterization of different starch types for their application in ceramic processing. Journal of the European Ceramic Society, 2006, 26, 1301-1309.	2.8	124
77	Mooney-type relation for the porosity dependence of the effective tensile modulus of ceramics. Journal of Materials Science, 2004, 39, 3213-3215.	1.7	45
78	New relation for the porosity dependence of the effective tensile modulus of brittle materials. Journal of Materials Science, 2004, 39, 3501-3503.	1.7	48
79	Phase equilibrium in non-fluids and non-fluid mixtures. International Journal of Non-Linear Mechanics, 2004, 39, 247-263.	1.4	6
80	Note on the so-called Coble-Kingery formula for the effective tensile modulus of porous ceramics. Journal of Materials Science Letters, 2003, 22, 959-962.	0.5	28
81	Derivation of the simplest exponential and power-law relations for the effective tensile modulus of porous ceramics via functional equations. Journal of Materials Science Letters, 2003, 22, 1673-1675.	0.5	31
82	Starch swelling and its role in modern ceramic shaping technology. Macromolecular Symposia, 2003, 203, 295-300.	0.4	17
83	A model for the body formation in starch consolidation casting. Journal of Materials Science Letters, 2002, 21, 1101-1103.	0.5	26
84	A note on particle size analyses of kaolins and clays. Journal of the European Ceramic Society, 2000, 20, 1429-1437.	2.8	33
85	The Eshelby relation in mixtures. International Journal of Non-Linear Mechanics, 1997, 32, 227-233.	1.4	11
86	Layered Alumina Ceramics with Porosity Steps. Advances in Science and Technology, 0, , .	0.2	0
87	Elastic Properties of Porous Alumina, Zirconia and Composite Ceramics. Key Engineering Materials, 0, 592-593, 618-621.	0.4	3
88	High-Temperature Elastic Properties of Ceramics in the System MgO-Al₂O₃-SiO₂ Measured by Impulse Excitation. Key Engineering Materials, 0, 592-593, 696-699.	0.4	2