

Daniel Roper

List of Publications by Year in descending order

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121
papers

5,024
citations

136740

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136
all docs

136
docs citations

136
times ranked

3728
citing authors

#	ARTICLE	IF	CITATIONS
1	Understanding the relationship between geopolymer composition, microstructure and mechanical properties. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2005, 269, 47-58.	2.3	1,274
2	Formation of Ceramics from Metakaolin-Based Geopolymers. Part II: K-Based Geopolymer. <i>Journal of the American Ceramic Society</i> , 2009, 92, 607-615.	1.9	228
3	Formation of Ceramics from Metakaolin-Based Geopolymers: Part I—Cs-Based Geopolymer. <i>Journal of the American Ceramic Society</i> , 2009, 92, 1-8.	1.9	146
4	Possible Alternative Transformation Tougheners to Zirconia: Crystallographic Aspects. <i>Journal of the American Ceramic Society</i> , 1988, 71, 1021-1030.	1.9	123
5	Synthesis of oxide powders by way of a polymeric steric entrapment precursor route. <i>Journal of Materials Research</i> , 1999, 14, 3417-3426.	1.2	122
6	Chemical Synthesis and Characterization of Calcium Aluminate Powders. <i>Journal of the American Ceramic Society</i> , 1994, 77, 531-539.	1.9	108
7	Thermal Expansion of HfO_2 and ZrO_2 . <i>Journal of the American Ceramic Society</i> , 2014, 97, 2213-2222.	1.9	108
8	Physical Stabilization of the beta gamma Transformation in Dicalcium Silicate. <i>Journal of the American Ceramic Society</i> , 1992, 75, 1621-1627.	1.9	106
9	Atomic Structure of a Cesium Aluminosilicate Geopolymer: A Pair Distribution Function Study. <i>Chemistry of Materials</i> , 2008, 20, 4768-4776.	3.2	106
10	Geopolymer-bamboo composite – A novel sustainable construction material. <i>Construction and Building Materials</i> , 2016, 123, 501-507.	3.2	103
11	Phase Transformations in Dicalcium Silicate: II, TEM Studies of Crystallography, Microstructure, and Mechanisms. <i>Journal of the American Ceramic Society</i> , 1992, 75, 2407-2419.	1.9	102
12	X-Ray pair distribution function analysis of a metakaolin-based, $\text{KAlSi}_2\text{O}_6 \cdot 5\text{H}_2\text{O}$ inorganic polymer (geopolymer). <i>Journal of Materials Chemistry</i> , 2008, 18, 5974.	6.7	99
13	Crystallization and Densification of Nano-Size Amorphous Cordierite Powder Prepared by a PVA Solution-Polymerization Route. <i>Journal of the American Ceramic Society</i> , 1998, 81, 2605-2612.	1.9	96
14	Emergence and Extinction of a New Phase During On-Off Experiments Related to Flash Sintering of 3YSZ . <i>Journal of the American Ceramic Society</i> , 2015, 98, 1493-1497.	1.9	91
15	High-Temperature Properties and Ferroelastic Phase Transitions in Rare-Earth Niobates (LnNbO_4). <i>Journal of the American Ceramic Society</i> , 2014, 97, 3307-3319.	1.9	82
16	Preparation of Portland Cement Components by Poly(vinyl alcohol) Solution Polymerization. <i>Journal of the American Ceramic Society</i> , 1999, 82, 2049-2055.	1.9	77
17	High-entropy, phase-constrained, lanthanide sesquioxide. <i>Journal of the American Ceramic Society</i> , 2020, 103, 569-576.	1.9	77
18	In-situ determination of the HfO_2 - Ta_2O_5 temperature phase diagram up to 3000°C . <i>Journal of the American Ceramic Society</i> , 2019, 102, 4848-4861.	1.9	76

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19	Development of mechanical properties in dental resin composite: Effect of filler size and filler aggregation state. <i>Materials Science and Engineering C</i> , 2019, 101, 274-282.	3.8	67
20	Fabrication of Structural Leucite Glass-Ceramics from Potassium-Based Geopolymer Precursors. <i>Journal of the American Ceramic Society</i> , 2010, 93, 2644-2649.	1.9	64
21	Control of Interfacial Properties through Fiber Coatings: Monazite Coatings in Oxide-Oxide Composites. <i>Journal of the American Ceramic Society</i> , 1997, 80, 2987-2996.	1.9	59
22	Crystallization kinetics of yttrium aluminum garnet ($Y_3Al_5O_{12}$). <i>Journal of Materials Research</i> , 2001, 16, 1795-1805.	1.2	56
23	Characterization of Yttrium Phosphate and a Yttrium Phosphate/Yttrium Aluminate Laminate. <i>Journal of the American Ceramic Society</i> , 1995, 78, 3121-3124.	1.9	55
24	Phase Transformations in Dicalcium Silicate: I, Fabrication and Phase Stability of Fine-Grained beta Phase. <i>Journal of the American Ceramic Society</i> , 1992, 75, 2400-2406.	1.9	54
25	<i>In Situ</i> Mechanical Properties of Chamotte Particulate Reinforced, Potassium Geopolymer. <i>Journal of the American Ceramic Society</i> , 2014, 97, 907-915.	1.9	54
26	Porous Biphasic Calcium Phosphate Scaffolds from Cuttlefish Bone. <i>Journal of the American Ceramic Society</i> , 2011, 94, 2362-2370.	1.9	50
27	In-situ investigation of Hf ₆ Ta ₂ O ₁₇ anisotropic thermal expansion and topotactic, peritectic transformation. <i>Acta Materialia</i> , 2018, 161, 127-137.	3.8	48
28	Weakening of Alkali-Activated Metakaolin During Aging Investigated by the Molybdate Method and Infrared Absorption Spectroscopy. <i>Journal of the American Ceramic Society</i> , 2010, 93, 2585-2590.	1.9	42
29	A Strong and Damage-Tolerant Oxide Laminate. <i>Journal of the American Ceramic Society</i> , 1997, 80, 2421-2424.	1.9	34
30	Properties of Geopolymer Composites Reinforced with Basalt Chopped Strand Mat or Woven Fabric. <i>Journal of the American Ceramic Society</i> , 2016, 99, 1192-1199.	1.9	34
31	Analytical Electron Microscopic Studies of Doped Dicalcium Silicates. <i>Journal of the American Ceramic Society</i> , 1988, 71, 713-719.	1.9	33
32	Experimental study of nonlinear acoustic bands and propagating breathers in ordered granular media embedded in matrix. <i>Granular Matter</i> , 2015, 17, 49-72.	1.1	33
33	Crystal structure solution for the $A_6B_2O_{17}$ ($A = Zr, Hf; B = Nb, Ta$) superstructure. <i>Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials</i> , 2019, 75, 227-234.	0.5	32
34	Alumina and spinel react into single-phase high-alumina spinel in 3 s during flash sintering. <i>Journal of the American Ceramic Society</i> , 2019, 102, 644-653.	1.9	30
35	Slag-fly ash and slag-metakaolin binders: Part II—Properties of precursors and NMR study of poorly ordered phases. <i>Journal of the American Ceramic Society</i> , 2019, 102, 3204-3227.	1.9	30
36	Potassium-Based Geopolymer Composites Reinforced with Chopped Bamboo Fibers. <i>Journal of the American Ceramic Society</i> , 2017, 100, 49-55.	1.9	29

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37	Phase Stability of Chemically Derived Enstatite (MgSiO ₃) Powders. Journal of the American Ceramic Society, 1994, 77, 2625-2631.	1.9	28
38	Highly Porous Geopolymers Through Templating and Surface Interactions. Journal of the American Ceramic Society, 2015, 98, 2052-2059.	1.9	28
39	Broadening of Diffraction Peak Widths and Temperature Nonuniformity During Flash Experiments. Journal of the American Ceramic Society, 2016, 99, 3429-3434.	1.9	27
40	Complete Elastic Tensor for Mullite ($\frac{1}{2}Al_2O_3 \cdot SiO_2$) to High Temperatures Measured from Textured Fibers. Journal of the American Ceramic Society, 2002, 85, 2005-2012.	1.9	26
41	A Forming Technique to Produce Spherical Ceramic Beads Using Sodium Alginate as a Precursor Binder Phase. Journal of the American Ceramic Society, 2013, 96, 3379-3388.	1.9	26
42	Sodium silicate activated slag fly ash binders: Part I – Processing, microstructure, and mechanical properties. Journal of the American Ceramic Society, 2018, 101, 2228-2244.	1.9	26
43	5.9 Geopolymer-Based Composites. , 2018, , 269-280.		25
44	Mechanical Properties and Microstructure of Ca ₂ SiO ₄ -CaZrO ₃ Composites. Journal of the American Ceramic Society, 1994, 77, 65-72.	1.9	23
45	On the role of deformation twinning in domain reorganization and grain reorientation in ferroelastic crystals. Journal of Materials Research, 1997, 12, 1771-1776.	1.2	23
46	Interfacial structure and chemistry in a ceramic/polymer composite material. Journal of Materials Research, 1992, 7, 1545-1552.	1.2	22
47	Sintering Behavior of Gehlenite. Part I: Self-Forming, Macro-/Mesoporous Gehlenite?Pore-Forming Mechanism, Microstructure, Mechanical, and Physical Properties. Journal of the American Ceramic Society, 2007, 90, 1760-1773.	1.9	22
48	Optimization of Gas Adsorption Porosimetry for Geopolymer Analysis. Journal of the American Ceramic Society, 2013, 96, 3643-3649.	1.9	21
49	Toughened Oxide Composites Based on Porous Alumina-Platelet Interphases. Journal of the American Ceramic Society, 2001, 84, 767-774.	1.9	20
50	Toughening of Mullite/Cordierite Laminated Composites by Transformation Weakening of beta-Cristobalite Interphases. Journal of the American Ceramic Society, 2005, 88, 1521-1528.	1.9	20
51	Phase Transformations in the High-Temperature Form of Pure and TiO ₂ -Stabilized Ta ₂ O ₅ . Journal of the American Ceramic Society, 2007, 90, 2947-2953.	1.9	20
52	Synthesis and Characterization of Silicon Carbide Powders Converted from Metakaolin-Based Geopolymer. Journal of the American Ceramic Society, 2016, 99, 2521-2530.	1.9	20
53	<i>In Situ</i> Synchrotron X-Ray Diffraction Study of the Cubic to Rhombohedral Phase Transformation in Ln_6WO_{12} ($Ln = Y, Ho, Er, Yb$) Journal of the American Ceramic Society, 2013, 96, 987-994.	1.9	19
54	Geopolymer reinforced with E-glass leno weaves. Journal of the American Ceramic Society, 2017, 100, 2492-2501.	1.9	19

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55	Processing and Characterization of Multiphase Ceramic Composites Part II: Triplex Composites with a Wide Sintering Temperature Range. <i>Journal of the American Ceramic Society</i> , 2008, 91, 793-798.	1.9	18
56	Mullite-Aluminum Phosphate Laminated Composite Fabricated by Tape Casting. <i>Journal of the American Ceramic Society</i> , 2003, 86, 1962-1964.	1.9	17
57	Sodium silicate activated slag fly ash binders: Part III—Composition of soft gel and calorimetry. <i>Journal of the American Ceramic Society</i> , 2019, 102, 3175-3190.	1.9	17
58	Properties and Microstructure of Molybdenum Disilicide $_{2}$ -SiAlON Particulate Ceramic Composites. <i>Journal of the American Ceramic Society</i> , 1997, 80, 2837-2843.	1.9	16
59	Indentation-Induced Amorphization in Mullite Single Crystals. <i>Journal of the American Ceramic Society</i> , 2003, 86, 1821-1822.	1.9	16
60	Temperature gradients for thermophysical and thermochemical property measurements to 3000 °C for an aerodynamically levitated spheroid. <i>Review of Scientific Instruments</i> , 2019, 90, 015109.	0.6	16
61	X-ray photoelectron spectroscopy studies of bond structure between polyvinyl alcohol and a titanate cross-coupling agent. <i>Journal of Materials Research</i> , 1995, 10, 1565-1571.	1.2	15
62	High Temperature Microhardness of Single Crystal Mullite. <i>Journal of the American Ceramic Society</i> , 2004, 87, 970-972.	1.9	15
63	Carbon-Coated Glass-Fiber-Reinforced Cement Composites: I, Fiber Pushout and Interfacial Properties. <i>Journal of the American Ceramic Society</i> , 1997, 80, 2326-2332.	1.9	15
64	Properties and characterization of alumina platelet reinforced geopolymer composites. <i>Journal of the American Ceramic Society</i> , 2020, 103, 5178-5185.	1.9	15
65	Phase Transformations in Dicalcium Silicate: III, Effects of Barium on the Stability of Fine-Grained α' and β Phases. <i>Journal of the American Ceramic Society</i> , 1993, 76, 2628-2634.	1.9	13
66	Sintering Behavior of Gehlenite, Part II. Microstructure and Mechanical Properties. <i>Journal of the American Ceramic Society</i> , 2007, 90, 2766-2770.	1.9	12
67	Polymer Adhesion to Geopolymer via Silane Coupling Agent Additives. <i>Journal of the American Ceramic Society</i> , 2012, 95, 3758-3762.	1.9	12
68	Bone ash reinforced geopolymer composites. <i>Journal of the American Ceramic Society</i> , 2021, 104, 2767-2779.	1.9	12
69	Amorphous self-healed, chopped basalt fiber-reinforced, geopolymer composites. <i>Journal of the American Ceramic Society</i> , 2021, 104, 3443-3451.	1.9	12
70	Stereological Observations of Platelet-Reinforced Mullite- and Zirconia-Matrix Composites. <i>Journal of the American Ceramic Society</i> , 1996, 79, 3273-3281.	1.9	11
71	Alumina Region of the Lithium Aluminosilicate System: A New Window for Temperature Ultrastable Materials Design. <i>Journal of the American Ceramic Society</i> , 2013, 96, 2039-2041.	1.9	11
72	Geopolymer with Hydrogel Characteristics via Silane Coupling Agent Additives. <i>Journal of the American Ceramic Society</i> , 2014, 97, 295-302.	1.9	11

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73	Synthesis of NaTi ₂ (PO ₄) ₃ by the Inorganic–Organic Steric Entrapment Method and Its Thermal Expansion Behavior. Journal of the American Ceramic Society, 2016, 99, 3586-3593.	1.9	11
74	The Change of X-ray Diffraction Peak Width During <i>in situ</i> Conventional Sintering of Nanoscale Powders. Journal of the American Ceramic Society, 2016, 99, 765-768.	1.9	11
75	Synthesis of LiFePO ₄ powder by the organic–inorganic steric entrapment method. Journal of Materials Research, 2015, 30, 2133-2143.	1.2	10
76	Relationship Between the Orthorhombic and Hexagonal Phases in Dy ₂ TiO ₅ . Journal of the American Ceramic Society, 2016, 99, 3739-3744.	1.9	10
77	Bonding behavior of Cu/CuO thick film on a low-firing ceramic substrate. Journal of Materials Research, 1997, 12, 2411-2418.	1.2	9
78	Crystallography and microstructural studies of phase transformations in the Dy ₂ O ₃ system. Journal of Materials Research, 1998, 13, 2920-2931.	1.2	9
79	Thermal Expansion of the Orthorhombic Phase in the Ln ₂ TiO ₅ System. Journal of the American Ceramic Society, 2015, 98, 4096-4101.	1.9	9
80	Formation of Si ₃ N ₄ nanoparticles by carbothermal reduction and nitridation of geopolymers. Journal of the American Ceramic Society, 2019, 102, 6542-6551.	1.9	9
81	Geopolymers and Geopolymer-Derived Composites. , 2021, , 424-438.		9
82	Chemically Bonded Ceramics as an Alternative to High Temperature Composite Processing. Materials Research Society Symposia Proceedings, 1994, 346, 511.	0.1	8
83	Preparation, Microstructure, and Mechanical Properties of Silicon Carbide–Dysprosia Composites. Journal of the American Ceramic Society, 1997, 80, 2997-3008.	1.9	8
84	Synthetic Aragonite (CaCO ₃) as a Potential Additive in Calcium Phosphate Cements: Evaluation in Tris-Free SBF at 37°C. Journal of the American Ceramic Society, 2014, 97, 3052-3061.	1.9	8
85	Relative importance of Al(V) and reinforcement to the flexural strength of geopolymer composites. Journal of the American Ceramic Society, 2021, 104, 3452-3460.	1.9	8
86	Microstructure and Mechanical Evaluation of Yttrium Phosphate-Containing and Lanthanum Phosphate-Containing Zirconia Laminates. Ceramic Engineering and Science Proceedings, 0, , 129-136.	0.1	7
87	Synthesis of Low-Firing Anorthite Powder by the Steric-Entrapment Route. Ceramic Engineering and Science Proceedings, 0, , 33-40.	0.1	7
88	Investigation of Plasma-Sprayed Dysprosia Coatings. Journal of the American Ceramic Society, 1989, 72, 2023-2026.	1.9	6
89	Mullite (3Al ₂ O ₃ ·2SiO ₂)–Aluminum Phosphate (AlPO ₄), Oxide, Fibrous Monolithic Composites. Journal of the American Ceramic Society, 2004, 87, 794-803.	1.9	6
90	Processing and Characterization of Multiphase Ceramic Composites Part III: Strong, Hard and Tough, High Temperature–Stable Quadruplex and Quintuplex Composites. Journal of the American Ceramic Society, 2008, 91, 799-805.	1.9	6

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91	Geopolymer Refractories for the Glass Manufacturing Industry. Ceramic Engineering and Science Proceedings, 0, , 57-80. Thermal Expansion of	0.1	6
92	$\langle \text{Ln} \rangle_{6} \text{WO}_{12}$ ($\text{Ln} = \text{Y}, \text{Ho}, \text{Er}, \text{Yb}$) and $\langle \text{Ln} \rangle_{2} \text{WO}_{6}$ ($\text{Ln} = \text{Y}, \text{Ho}, \text{Er}, \text{Yb}$) TEM study of synthetic hillebrandite ($\text{Ca}_{2}\text{SiO}_{4} \cdot \text{H}_{2}\text{O}$). Journal of Materials Research, 1993, 8, 2948-2953.	1.9	5
93	Hot-stage Transmission Electron Microscopy Study of Phase Transformations in Hexacelsian ($\text{BaAl}_{2}\text{Si}_{2}\text{O}_{8}$). Journal of Materials Research, 2002, 17, 1287-1297.	1.2	5
94	Processing and Characterization of Multiphase Ceramic Composites Part I: Duplex Composites Formed In Situ from Solution. Journal of the American Ceramic Society, 2008, 91, 784-792.	1.9	5
95	Development of a Gas-Fed Plasma Source for Pulsed High-Density Plasma/Material Interaction Studies. IEEE Transactions on Plasma Science, 2014, 42, 3245-3252.	0.6	5
96	Synthesis and Thermal Expansion of $\text{CaAl}_{2}\text{Si}_{2}\text{O}_{8}$ Powders Produced by the Inorganic-Organic Steric Entrapment Method. Journal of the American Ceramic Society, 2014, 97, 3087-3091.	1.9	5
97	Reply to comments: <i>In situ</i> determination of the $\text{HfO}_{2} \cdot \text{Ca}_{2}\text{O}_{5}$ temperature phase diagram up to 3000°C. Journal of the American Ceramic Society, 2019, 102, 7028-7030.	1.9	5
98	Creep characteristics of alumina, nickel aluminate spinel, zirconia composites. Journal of Materials Research, 2008, 23, 556-564.	1.2	4
99	Amorphous self-glazed, chopped basalt fiber reinforced, geopolymer-based composites. International Journal of Applied Ceramic Technology, 2021, 18, 1097-1105.	1.1	4
100	Ceramic Felt Reinforced Geopolymer Composites. Ceramic Engineering and Science Proceedings, 0, , 11-19.	0.1	4
101	<i>In Situ</i> Synchrotron X-Ray Diffraction Study of the Rhombohedral to HT Cubic Phase Transformation in $\langle \text{Ln} \rangle_{6} \text{WO}_{12}$ ($\text{Ln} = \text{Y}, \text{Ho}, \text{Er}, \text{Yb}$). Journal of the American Ceramic Society, 2014, 97, 1256-1263.	1.9	3
102	Experimental study of embedded and non-embedded ordered granular chains under impulsive excitation. Acta Mechanica, 2016, 227, 2511-2527.	1.1	3
103	Properties of Cork Particle Reinforced Sodium Geopolymer Composites. Ceramic Engineering and Science Proceedings, 2017, , 79-82.	0.1	3
104	Thermal expansion and phase transformation in the rare earth di-titanate ($\text{R}_{2}\text{Ti}_{2}\text{O}_{7}$) system. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2021, 77, 397-407.	0.5	3
105	Lateritic soil geopolymer composites for ceramics and engineering construction applications. International Journal of Applied Ceramic Technology, 2022, 19, 2148-2159.	1.1	3
106	A transmission electron microscopy study on the decomposition of synthetic hillebrandite ($\text{Ca}_{2}\text{SiO}_{4} \cdot \text{H}_{2}\text{O}$). Journal of Materials Research, 1995, 10, 3084-3095.	1.2	2
107	Crystallization Mechanism of Amorphous Mullite and the $\text{Al}_{2}\text{O}_{3}$ - SiO_{2} Phase Diagram. Materials Research Society Symposia Proceedings, 2001, 702, 1.	0.1	2

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109	Thermal Properties and Phase Transition of ZrO_2 — P_2O_5 Studied by In Situ Synchrotron X-ray Diffraction. Journal of the American Ceramic Society, 2013, 96, 1292-1299.	1.9	2
110	Tailorable thermal expansion in leucite-pollucite materials derived from geopolymers for environmental barrier coatings. Journal of the American Ceramic Society, 2021, 104, 3397-3410.	1.9	2
111	A SiC/Combustion-Synthesized α - $SiAlON$ Composite. Ceramic Engineering and Science Proceedings, 0, , 1154-1163.	0.1	2
112	Microstructure and Indentation Fracture of Dysprosium Niobate. Journal of Materials Research, 2005, 20, 1422-1427.	1.2	1
113	Characterization of Tetragonal-Monoclinic, Ferroelastic Transformation and Domain Boundaries in Zirconia-Alloyed Yttrium Tantalate. Microscopy and Microanalysis, 2014, 20, 1930-1931.	0.2	1
114	Comparative study of titanate syntheses by the organic steric entrapment method. International Journal of Applied Ceramic Technology, 0, , .	1.1	1
115	Microstructure and Interfacial Properties of Laser Ablation Coated, Fiber-Reinforced Ceramic Composite. Ceramic Engineering and Science Proceedings, 0, , 105-112.	0.1	1
116	Chemically Bonded Ceramic Matrix Composites: Densification and Conversion to Diffusion Bonding. Materials Research Society Symposia Proceedings, 1994, 365, 67.	0.1	0
117	TEM Characterization of Pseudotetragonal Mullite. Microscopy and Microanalysis, 2001, 7, 426-427.	0.2	0
118	Thermal Expansion and Phase Transitions up to 850 $^{\circ}C$ of a Celsian-Hexacelsian ($BaAl_2Si_2O_8$) Mixture. , 2006, , 257-261.		0
119	Microstructure and Flexure Strengths Of Dolomite Particulate- Reinforced Geopolymer Composites. Ceramic Engineering and Science Proceedings, 2019, , 171-181.	0.1	0
120	Concepts for Energy Absorption and Dissipation in Ceramic Armor. , 0, , 57-70.		0
121	Processing and Microstructure of a Ce-Doped IN SITU O^{+1} α - $SiAlON$ Composite. Ceramic Engineering and Science Proceedings, 0, , 1128-1137.	0.1	0