

Elizabeth

List of Publications by Year in descending order

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86
papers

5,225
citations

147726

31
h-index

88593

70
g-index

92
all docs

92
docs citations

92
times ranked

2267
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of ultra-high temperature ceramics for aer propulsion use. Journal of the European Ceramic Society, 2002, 22, 2757-2767.	2.8	710
2	Paralinear Oxidation of CVD SiC in Water Vapor. Journal of the American Ceramic Society, 1997, 80, 197-205.	1.9	433
3	SiC Recession Caused by SiO ₂ Scale Volatility under Combustion Conditions: II, Thermodynamics and Gaseous Diffusion Model. Journal of the American Ceramic Society, 1999, 82, 1826-1834.	1.9	296
4	Variation of the Oxidation Rate of Silicon Carbide with Water Vapor Pressure. Journal of the American Ceramic Society, 1999, 82, 625-636.	1.9	295
5	Oxidation and Volatilization of Silica Formers in Water Vapor. Journal of the American Ceramic Society, 2003, 86, 1238-1248.	1.9	278
6	A Comparison of the Oxidation Kinetics of SiC and Si ₃ N ₄ . Journal of the Electrochemical Society, 1995, 142, 925-930.	1.3	194
7	Theoretical and Experimental Investigation of the Thermochemistry of CrO ₂ (OH) ₂ (g). Journal of Physical Chemistry A, 2007, 111, 1971-1980.	1.1	189
8	Oxidation Kinetics of Chemically Vapor-Deposited Silicon Carbide in Wet Oxygen. Journal of the American Ceramic Society, 1994, 77, 730-736.	1.9	187
9	Predicting oxide stability in high-temperature water vapor. Jom, 2006, 58, 22-28.	0.9	168
10	Mass Spectrometric Identification of Si ⁺ O ⁺ H(<i>g</i>) Species from the Reaction of Silica with Water Vapor at Atmospheric Pressure. Journal of the American Ceramic Society, 1997, 80, 1009-1012.	1.9	160
11	SiC and Si ₃ N ₄ recession due to SiO ₂ scale volatility under combustor conditions. Advanced Composite Materials, 1999, 8, 33-45.	1.0	148
12	Oxidation and corrosion of ceramics and ceramic matrix composites. Current Opinion in Solid State and Materials Science, 2001, 5, 301-309.	5.6	124
13	Alumina Volatility in Water Vapor at Elevated Temperatures. Journal of the American Ceramic Society, 2004, 87, 1701-1705.	1.9	120
14	Influence of Alumina Reaction Tube Impurities on the Oxidation of Chemically-Vapor-Deposited Silicon Carbide. Journal of the American Ceramic Society, 1995, 78, 1107-1110.	1.9	113
15	Water Vapor-Mediated Volatilization of High-Temperature Materials. Annual Review of Materials Research, 2013, 43, 559-588.	4.3	108
16	Interactions of water vapor with oxides at elevated temperatures. Journal of Physics and Chemistry of Solids, 2005, 66, 471-478.	1.9	95
17	Thermodynamics of gas phase species in the Si ⁺ O ⁺ H system. Journal of Chemical Thermodynamics, 2005, 37, 1130-1137.	1.0	88
18	Part II: Experimental verification of computationally predicted preferential oxidation of refractory high entropy ultra-high temperature ceramics. Acta Materialia, 2020, 197, 81-90.	3.8	88

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19	Oxygen Tracer Diffusion in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_{4-y}$ Single Crystals. Journal of the American Ceramic Society, 1993, 76, 2363-2369.	1.9	80
20	Paralinear Oxidation of Silicon Nitride in a Water Vapor/Oxygen Environment. Journal of the American Ceramic Society, 2003, 86, 1256-1261.	1.9	73
21	Tailoring thermal properties of multi-component rare earth monosilicates. Acta Materialia, 2020, 195, 698-707.	3.8	73
22	Effect of Environment on the Stress-Rupture Behavior of a Carbon-Fiber-Reinforced Silicon Carbide Ceramic Matrix Composite. Journal of the American Ceramic Society, 2004, 87, 1536-1542.	1.9	65
23	Oxidation of $\text{ZrB}_2\text{-SiC}$, 0, , 221-228.		59
24	Oxidation of Ultrahigh Temperature Ceramics in Water Vapor. Journal of the Electrochemical Society, 2004, 151, B558.	1.3	53
25	Oxidation of Chemically Vapor-Deposited Silicon Carbide in Carbon Dioxide. Journal of the American Ceramic Society, 1998, 81, 1949-1952.	1.9	52
26	$\text{SiO}(\text{g})$ formation from SiC in mixed oxidizing-reducing gases. Oxidation of Metals, 1995, 44, 527-544.	1.0	45
27	High temperature oxidation of ceramic matrix composites. Pure and Applied Chemistry, 1998, 70, 493-500.	0.9	44
28	Thermochemical stability and microstructural evolution of $\text{Yb}_2\text{Si}_2\text{O}_7$ in high-velocity high-temperature water vapor. Journal of the European Ceramic Society, 2021, 41, 3141-3149.	2.8	43
29	Additive Effects on Si_3N_4 Oxidation/Volatilization in Water Vapor. Journal of the American Ceramic Society, 2003, 86, 1262-1271.	1.9	39
30	Borosilicate Glass-Induced Fiber Degradation of SiC/BN/SiC Composites Exposed in Combustion Environments. International Journal of Applied Ceramic Technology, 2016, 13, 434-442.	1.1	39
31	A method for assessing the volatility of oxides in high-temperature high-velocity water vapor. Journal of the European Ceramic Society, 2016, 36, 1135-1147.	2.8	39
32	A Review of SiC Fiber Oxidation with a New Study of Hi-Nicalon SiC Fiber Oxidation. Advanced Engineering Materials, 2016, 18, 1698-1709.	1.6	35
33	Determination of Retained B_2O_3 Content in $\text{ZrB}_2 \approx 30$ vol% SiC Oxide Scales. Journal of the American Ceramic Society, 2015, 98, 287-295.	1.9	34
34	Thermogravimetric Analysis and Defect Models of the Oxygen Nonstoichiometry in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_{4-y}$. Journal of the American Ceramic Society, 1994, 77, 2727-2737.	1.9	31
35	Oxidation of Carbon Fiber-Reinforced Silicon Carbide Matrix Composites at Reduced Oxygen Partial Pressures. Journal of the American Ceramic Society, 2011, 94, 2185-2192.	1.9	29
36	SiC Depletion in $\text{ZrB}_2 \approx 30$ vol% SiC at Ultrahigh Temperatures. Journal of the American Ceramic Society, 2015, 98, 1673-1683.	1.9	29

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37	Silicon carbide fiber oxidation behavior in the presence of boron nitride. Journal of the American Ceramic Society, 2018, 101, 5534-5551.	1.9	27
38	Oxygen diffusion mechanisms during high-temperature oxidation of ZrB ₂ -SiC. Journal of the American Ceramic Society, 2018, 101, 1765-1779.	1.9	26
39	Observation of solid-state bidirectional thermal conductivity switching in antiferroelectric lead zirconate (PbZrO ₃). Nature Communications, 2022, 13, 1573.	5.8	25
40	Mechanisms for Variability of ZrB ₂ -SiC Oxidation Kinetics. Journal of the American Ceramic Society, 2014, 97, 2279-2285.	1.9	24
41	The thermal and mechanical properties of hafnium orthosilicate: Experiments and first-principles calculations. Materialia, 2020, 12, 100793.	1.3	23
42	Stability of the Y ₂ O ₃ -SiO ₂ system in high-temperature, high-velocity water vapor. Journal of the American Ceramic Society, 2020, 103, 2715-2726.	1.9	21
43	Initial Stages of ZrB ₂ -SiC Oxidation at 1500°C. Journal of the American Ceramic Society, 2014, 97, 1645-1651.	1.9	19
44	Computational and Experimental Study of Thermodynamics of the Reaction of Titania and Water at High Temperatures. Journal of Physical Chemistry A, 2017, 121, 9508-9517.	1.1	19
45	Thermochemical stability of Y ₂ Si ₂ O ₇ in high-temperature water vapor. Journal of the American Ceramic Society, 2020, 103, 4517-4535.	1.9	19
46	Paralinear Oxidation of CVD SiC in Simulated Fuel-Rich Combustion. Journal of the American Ceramic Society, 2000, 83, 1761-1767.	1.9	18
47	Local thermal conductivity measurements to determine the fraction of $\hat{\pm}$ -cristobalite in thermally grown oxides for aerospace applications. Scripta Materialia, 2020, 177, 214-217.	2.6	18
48	Variable thermochemical stability of RE ₂ Si ₂ O ₇ (RE=Sc, Nd, Er, Yb). Tj ETQq0 0 0 rgBT /Overloc 1330-1342.	1.9	18
49	Oxidation of SiC Fiber-Reinforced SiC Matrix Composites with a BN Interphase. Materials Science Forum, 0, 696, 342-347.	0.3	17
50	High-temperature oxidation of yttrium silicides. Journal of Materials Science, 2018, 53, 3981-4000.	1.7	17
51	The effect of TiO ₂ additions on CaO-MgO-Al ₂ O ₃ -SiO ₂ (CMAS) crystallization behavior from the melt. Journal of the American Ceramic Society, 2019, 102, 3354-3367.	1.9	17
52	Thermodynamics of Si-C-O system. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1993, 24, 1212-1214.	1.4	16
53	Evolution of microstructure and thermal conductivity of multifunctional environmental barrier coating systems. Materials Today Physics, 2021, 17, 100304.	2.9	16
54	Water Vapor Effects on High-Temperature Oxidation and Volatilization of Ceramics. Journal of the American Ceramic Society, 2003, 86, 1237-1237.	1.9	14

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55	Hafnium nitride films for thermoreflectance transducers at high temperatures: Potential based on heating from laser absorption. Applied Physics Letters, 2017, 111, .	1.5	14
56	High-temperature Na ₂ SO ₄ Deposit-Assisted Corrosion of Silicon Carbide : Temperature and Time Dependence. Journal of the American Ceramic Society, 2015, 98, 1275-1284.	1.9	13
57	Thermochemistry of volatile metal hydroxides and oxyhydroxides at elevated temperatures. Journal of Materials Research, 2019, 34, 394-407.	1.2	12
58	Near ultraviolet enhanced 4H-SiC Schottky diode. Applied Physics Letters, 2019, 115, .	1.5	12
59	Anisotropic thermal conductivity tensor of β -Y ₂ Si ₂ O ₇ for orientational control of heat flow on micrometer scales. Acta Materialia, 2020, 189, 299-305.	3.8	12
60	Cyclic Oxidation of Monolithic SiC and Si ₃ N ₄ Materials. , 0, , 367-374.		12
61	Mixed phase ytterbium silicate environmental-barrier coating materials for improved calcium-magnesium-alumino-silicate resistance. Journal of Materials Research, 2020, 35, 2358-2372.	1.2	11
62	Defect chemistry and transport properties in YBa ₂ Cu ₃ O _{6+x} and (La, Sr) ₂ CuO ₄ . Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1992, 13, 165-168.	1.7	10
63	Thermodynamics and kinetics of gaseous metal hydroxide formation from oxides relevant to power and propulsion applications. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2016, 55, 32-40.	0.7	10
64	In-Situ Growth of a Yb ₂ O ₃ Layer for Sublimation Suppression for Yb ₁₄ MnSb ₁₁ Thermoelectric Material for Space Power Applications. Journal of Electronic Materials, 2012, 41, 1267-1273.	1.0	9
65	High Temperature Materials Corrosion Challenges for Energy Conversion Technologies. Electrochemical Society Interface, 2013, 22, 69-73.	0.3	9
66	Feasibility of Using Calcium Silicate Carbonation to Synthesize High-Performance and Low-Carbon Cements. ACS Sustainable Chemistry and Engineering, 2020, 8, 5431-5436.	3.2	9
67	Oxidation Behavior of Prospective Silicon Nitride Materials for Advanced Microturbine Applications. , 2001, , .		8
68	Oxidation of Liquid Silicon in Air Atmospheres Containing Water Vapor. Industrial & Engineering Chemistry Research, 2019, 58, 6785-6795.	1.8	7
69	High-temperature water-vapor reaction mechanism of barium strontium aluminosilicate (BSAS). Journal of the European Ceramic Society, 2022, 42, 3305-3312.	2.8	7
70	Thermomechanical and thermochemical stability of HfSiO ₄ for environmental barrier coating applications. Journal of the American Ceramic Society, 2021, 104, 3593-3602.	1.9	6
71	High-temperature Na ₂ SO ₄ interaction with air plasma sprayed Yb ₂ Si ₂ O ₇ +Si EBC system: Topcoat behavior. Journal of the American Ceramic Society, 2021, 104, 6496-6507.	1.9	6
72	The Transport Properties and Defect Chemistry of La ₂ -XSrXCuO ₄ - δ . Materials Research Society Symposia Proceedings, 1989, 169, 65.	0.1	5

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73	High-temperature Na ₂ SO ₄ deposit-assisted corrosion of silicon carbide II: Effects of B, C, and Si. Journal of the American Ceramic Society, 2017, 100, 761-773.	1.9	5
74	Identification of a new oxidation/ dissolution mechanism for boron-accelerated SiC oxidation. Journal of the American Ceramic Society, 2020, 103, 5214-5231.	1.9	5
75	Sol-gel derived borosilicate glasses and thin film coatings on SiC substrates: Boron loss and carbon retention due to processing and heat treatment. Journal of Non-Crystalline Solids, 2016, 449, 59-69.	1.5	4
76	YbPO ₄ : A novel environmental barrier coating candidate with superior thermochemical stability. Materialia, 2022, 21, 101289.	1.3	4
77	Influence of Oxygen Dopants on the HER Catalytic Activity of Electrodeposited MoO _x S _y Electrocatalysts. ACS Applied Energy Materials, 2021, 4, 13676-13683.	2.5	4
78	Na ₂ SO ₄ deposit-induced hot corrosion of SiC fibers relevant for SiC CMCs. Journal of the American Ceramic Society, 2021, 104, 5908-5922.	1.9	3
79	The Oxygen Defect Chemistry of La _{2-x} Sr _x CuO _{4-x/2+δ} . Materials Research Society Symposia Proceedings, 1990, 209, 867.	0.1	2
80	Interfacial reactions between B ₂ O ₃ and spark plasma sintered Yb ₂ Si ₂ O ₇ . Journal of the American Ceramic Society, 2021, 104, 5392-5401.	1.9	2
81	Computational Chemistry Derivation of Cr, Mn, and La Hydroxide and Oxyhydroxide Thermodynamics. Journal of Physical Chemistry A, 2022, 126, 1551-1561.	1.1	2
82	Investigations into the thermal stability of sol-gel-derived glasses as models for thermally grown oxides. Journal of the American Ceramic Society, 2020, 103, 7041-7055.	1.9	1
83	Na ₂ SO ₄ deposit-induced hot corrosion of BN-coated SiC. Journal of the American Ceramic Society, 2021, 104, 1539-1553.	1.9	1
84	Oxygen Diffusion in La _{2-x} Sr _x CuO _{4-y} . Materials Research Society Symposia Proceedings, 1990, 209, 795.	0.1	0
85	Nonoxide Ceramics. Corrosion Technology, 2001, , .	0.1	0
86	Quantitative Evaluation of (0001) Sapphire Recession in High-Temperature High-Velocity Steamjet Exposures. Journal of the European Ceramic Society, 2021, , .	2.8	0