

Elizabeth J Opila

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/12167365/publications.pdf>

Version: 2024-02-01

56
papers

4,632
citations

186265

28
h-index

175258

52
g-index

62
all docs

62
docs citations

62
times ranked

2057
citing authors

#	ARTICLE	IF	CITATIONS
1	High-temperature water-vapor reaction mechanism of barium strontium aluminosilicate (BSAS). Journal of the European Ceramic Society, 2022, 42, 3305-3312.	5.7	7
2	Computational Chemistry Derivation of Cr, Mn, and La Hydroxide and Oxyhydroxide Thermodynamics. Journal of Physical Chemistry A, 2022, 126, 1551-1561.	2.5	2
3	Observation of solid-state bidirectional thermal conductivity switching in antiferroelectric lead zirconate (PbZrO ₃). Nature Communications, 2022, 13, 1573.	12.8	25
4	Viscosity of CaO-MgO-Al ₂ O ₃ -SiO ₂ (CMAS) melts: Experimental measurements and comparison to model calculations. Journal of Non-Crystalline Solids, 2022, 584, 121508.	3.1	16
5	Evolution of microstructure and thermal conductivity of multifunctional environmental barrier coating systems. Materials Today Physics, 2021, 17, 100304.	6.0	16
6	Thermomechanical and thermochemical stability of HfSiO ₄ for environmental barrier coating applications. Journal of the American Ceramic Society, 2021, 104, 3593-3602.	3.8	6
7	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.	3.8	3
8	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.	3.8	6
9	Quantitative Evaluation of (0001) Sapphire Recession in High-Temperature High-Velocity Steamjet Exposures. Journal of the European Ceramic Society, 2021, , .	5.7	0
10	Local thermal conductivity measurements to determine the fraction of $\hat{1}\pm$ -cristobalite in thermally grown oxides for aerospace applications. Scripta Materialia, 2020, 177, 214-217.	5.2	18
11	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.	3.8	21
12	Mixed phase ytterbium silicate environmental-barrier coating materials for improved calcium-magnesium-alumino-silicate resistance. Journal of Materials Research, 2020, 35, 2358-2372.	2.6	11
13	Part I: Theoretical predictions of preferential oxidation in refractory high entropy materials. Acta Materialia, 2020, 197, 20-27.	7.9	94
14	Thermochemical stability of Y ₂ Si ₂ O ₇ in high-temperature water vapor. Journal of the American Ceramic Society, 2020, 103, 4517-4535.	3.8	19
15	Characterization of Thermochemical and Thermomechanical Properties of Eyjafjallajökull Volcanic Ash Glass. Coatings, 2020, 10, 100.	2.6	18
16	Part II: Experimental verification of computationally predicted preferential oxidation of refractory high entropy ultra-high temperature ceramics. Acta Materialia, 2020, 197, 81-90.	7.9	88
17	Anisotropic thermal conductivity tensor of $\hat{1}^2$ -Y ₂ Si ₂ O ₇ for orientational control of heat flow on micrometer scales. Acta Materialia, 2020, 189, 299-305.	7.9	12
18	Thermochemistry of volatile metal hydroxides and oxyhydroxides at elevated temperatures. Journal of Materials Research, 2019, 34, 394-407.	2.6	12

#	ARTICLE	IF	CITATIONS
19	Thermodynamic assessment of the group IV, V and VI oxides for the design of oxidation resistant multi-principal component materials. Journal of the European Ceramic Society, 2019, 39, 1796-1802.	5.7	63
20	High-temperature oxidation of yttrium silicides. Journal of Materials Science, 2018, 53, 3981-4000.	3.7	17
21	Silicon carbide fiber oxidation behavior in the presence of boron nitride. Journal of the American Ceramic Society, 2018, 101, 5534-5551.	3.8	27
22	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.	3.8	5
23	Borosilicate Glass-Induced Fiber Degradation of SiC/BN/SiC Composites Exposed in Combustion Environments. International Journal of Applied Ceramic Technology, 2016, 13, 434-442.	2.1	39
24	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.	3.1	4
25	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.	5.7	39
26	High-temperature Na ₂ SO ₄ Deposit-Assisted Corrosion of Silicon Carbide I: Temperature and Time Dependence. Journal of the American Ceramic Society, 2015, 98, 1275-1284.	3.8	13
27	Water Vapor-Mediated Volatilization of High-Temperature Materials. Annual Review of Materials Research, 2013, 43, 559-588.	9.3	108
28	Oxidation of Carbon Fiber-Reinforced Silicon Carbide Matrix Composites at Reduced Oxygen Partial Pressures. Journal of the American Ceramic Society, 2011, 94, 2185-2192.	3.8	29
29	Theoretical and Experimental Investigation of the Thermochemistry of CrO ₂ (OH) ₂ (g). Journal of Physical Chemistry A, 2007, 111, 1971-1980.	2.5	189
30	Predicting oxide stability in high-temperature water vapor. Jom, 2006, 58, 22-28.	1.9	168
31	Thermodynamics of gas phase species in the Si-O-H system. Journal of Chemical Thermodynamics, 2005, 37, 1130-1137.	2.0	88
32	Effect of Environment on the Stress-Rupture Behavior of a Carbon-Reinforced Silicon Carbide Ceramic Matrix Composite. Journal of the American Ceramic Society, 2004, 87, 1536-1542.	3.8	65
33	Alumina Volatility in Water Vapor at Elevated Temperatures. Journal of the American Ceramic Society, 2004, 87, 1701-1705.	3.8	120
34	Oxidation of Ultrahigh Temperature Ceramics in Water Vapor. Journal of the Electrochemical Society, 2004, 151, B558.	2.9	53
35	Oxidation and Volatilization of Silica Formers in Water Vapor. Journal of the American Ceramic Society, 2003, 86, 1238-1248.	3.8	278
36	Paralinear Oxidation of Silicon Nitride in a Water Vapor/Oxygen Environment. Journal of the American Ceramic Society, 2003, 86, 1256-1261.	3.8	73

#	ARTICLE	IF	CITATIONS
37	Additive Effects on Si ₃ N ₄ Oxidation/Volatilization in Water Vapor. Journal of the American Ceramic Society, 2003, 86, 1262-1271.	3.8	39
38	Evaluation of ultra-high temperature ceramics for aeropropulsion use. Journal of the European Ceramic Society, 2002, 22, 2757-2767.	5.7	710
39	Oxidation and corrosion of ceramics and ceramic matrix composites. Current Opinion in Solid State and Materials Science, 2001, 5, 301-309.	11.5	124
40	Oxidation Behavior of Prospective Silicon Nitride Materials for Advanced Microturbine Applications. , 2001, , .		8
41	Paralinear Oxidation of CVD SiC in Simulated Fuel-Rich Combustion. Journal of the American Ceramic Society, 2000, 83, 1761-1767.	3.8	18
42	SiC and Si ₃ N ₄ recession due to SiO ₂ scale volatility under combustor conditions. Advanced Composite Materials, 1999, 8, 33-45.	1.9	148
43	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.	3.8	296
44	Variation of the Oxidation Rate of Silicon Carbide with Water Vapor Pressure. Journal of the American Ceramic Society, 1999, 82, 625-636.	3.8	295
45	Oxidation of Chemically Vapor-Deposited Silicon Carbide in Carbon Dioxide. Journal of the American Ceramic Society, 1998, 81, 1949-1952.	3.8	52
46	Paralinear Oxidation of CVD SiC in Water Vapor. Journal of the American Ceramic Society, 1997, 80, 197-205.	3.8	433
47	Mass Spectrometric Identification of Si-O-H Species from the Reaction of Silica with Water Vapor at Atmospheric Pressure. Journal of the American Ceramic Society, 1997, 80, 1009-1012.	3.8	160
48	A Comparison of the Oxidation Kinetics of SiC and Si ₃ N ₄ . Journal of the Electrochemical Society, 1995, 142, 925-930.	2.9	194
49	Thermogravimetric Analysis and Defect Models of the Oxygen Nonstoichiometry in La _{2-x} Sr _x CuO _{4-y} . Journal of the American Ceramic Society, 1994, 77, 2727-2737.	3.8	31
50	Oxidation Kinetics of Chemically Vapor-Deposited Silicon Carbide in Wet Oxygen. Journal of the American Ceramic Society, 1994, 77, 730-736.	3.8	187
51	Oxygen Tracer Diffusion in La _{2-x} Sr _x CuO _{4-y} Single Crystals. Journal of the American Ceramic Society, 1993, 76, 2363-2369.	3.8	80
52	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
53	The Transport Properties and Defect Chemistry of La _{2-x} Sr _x CuO _{4-δ} . Materials Research Society Symposia Proceedings, 1989, 169, 65.	0.1	5
54	Oxidation of ZrB ₂ -SiC. , 0, , 221-228.		59

#	ARTICLE	IF	CITATIONS
55	Oxidation of SiC Fiber-Reinforced SiC Matrix Composites with a BN Interphase. Materials Science Forum, 0, 696, 342-347.	0.3	17
56	Cyclic Oxidation of Monolithic SiC and Si ₃ N ₄ Materials. , 0, , 367-374.		12