

Elizabeth J Opila

List of Publications by Year in Descending Order

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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.

56
papers

3,566
citations

25
h-index

59
g-index

62
ext. papers

4,064
ext. citations

4.7
avg, IF

5.54
L-index

#	Paper	IF	Citations
56	Observation of solid-state bidirectional thermal conductivity switching in antiferroelectric lead zirconate (PbZrO) ₂ . <i>Nature Communications</i> , 2022 , 13, 1573	17.4	2
55	Viscosity of CaO-MgO-Al ₂ O ₃ -SiO ₂ (CMAS) melts: Experimental measurements and comparison to model calculations. <i>Journal of Non-Crystalline Solids</i> , 2022 , 584, 121508	3.9	0
54	Thermomechanical and thermochemical stability of HfSiO ₄ for environmental barrier coating applications. <i>Journal of the American Ceramic Society</i> , 2021 , 104, 3593-3602	3.8	0
53	Na ₂ SO ₄ deposit-induced hot corrosion of SiC fibers relevant for SiC CMCs. <i>Journal of the American Ceramic Society</i> , 2021 , 104, 5908-5922	3.8	0
52	Evolution of microstructure and thermal conductivity of multifunctional environmental barrier coating systems. <i>Materials Today Physics</i> , 2021 , 17, 100304	8	6
51	High-temperature Na ₂ SO ₄ interaction with air plasma sprayed Yb ₂ Si ₂ O ₇ -HfSi EBC system: Topcoat behavior. <i>Journal of the American Ceramic Society</i> , 2021 , 104, 6496	3.8	0
50	Thermochemical stability of Y ₂ Si ₂ O ₇ in high-temperature water vapor. <i>Journal of the American Ceramic Society</i> , 2020 , 103, 4517-4535	3.8	7
49	Characterization of Thermochemical and Thermomechanical Properties of Eyjafjallajökull Volcanic Ash Glass. <i>Coatings</i> , 2020 , 10, 100	2.9	9
48	Part II: Experimental verification of computationally predicted preferential oxidation of refractory high entropy ultra-high temperature ceramics. <i>Acta Materialia</i> , 2020 , 197, 81-90	8.4	25
47	Anisotropic thermal conductivity tensor of Y ₂ Si ₂ O ₇ for orientational control of heat flow on micrometer scales. <i>Acta Materialia</i> , 2020 , 189, 299-305	8.4	9
46	Local thermal conductivity measurements to determine the fraction of cristobalite in thermally grown oxides for aerospace applications. <i>Scripta Materialia</i> , 2020 , 177, 214-217	5.6	10
45	Stability of the Y ₂ O ₃ -Bi ₂ O ₃ system in high-temperature, high-velocity water vapor. <i>Journal of the American Ceramic Society</i> , 2020 , 103, 2715-2726	3.8	8
44	Mixed phase ytterbium silicate environmental-barrier coating materials for improved calcium-magnesium-lumino-silicate resistance. <i>Journal of Materials Research</i> , 2020 , 35, 2358-2372	2.5	3
43	Part I: Theoretical predictions of preferential oxidation in refractory high entropy materials. <i>Acta Materialia</i> , 2020 , 197, 20-27	8.4	30
42	Thermochemistry of volatile metal hydroxides and oxyhydroxides at elevated temperatures. <i>Journal of Materials Research</i> , 2019 , 34, 394-407	2.5	9
41	Thermodynamic assessment of the group IV, V and VI oxides for the design of oxidation resistant multi-principal component materials. <i>Journal of the European Ceramic Society</i> , 2019 , 39, 1796-1802	6	25
40	High-temperature oxidation of yttrium silicides. <i>Journal of Materials Science</i> , 2018 , 53, 3981-4000	4.3	11

39	Silicon carbide fiber oxidation behavior in the presence of boron nitride. <i>Journal of the American Ceramic Society</i> , 2018 , 101, 5534-5551	3.8	16
38	High-temperature Na ₂ SO ₄ deposit-assisted corrosion of silicon carbide: Effects of B, C, and Si. <i>Journal of the American Ceramic Society</i> , 2017 , 100, 761-773	3.8	4
37	Sol-gel derived borosilicate glasses and thin film coatings on SiC substrates: Boron loss and carbon retention due to processing and heat treatment. <i>Journal of Non-Crystalline Solids</i> , 2016 , 449, 59-69	3.9	4
36	A method for assessing the volatility of oxides in high-temperature high-velocity water vapor. <i>Journal of the European Ceramic Society</i> , 2016 , 36, 1135-1147	6	31
35	Borosilicate Glass-Induced Fiber Degradation of SiC/BN/SiC Composites Exposed in Combustion Environments. <i>International Journal of Applied Ceramic Technology</i> , 2016 , 13, 434-442	2	23
34	High-Temperature Na ₂ SO ₄ Deposit-Assisted Corrosion of Silicon Carbide: Temperature and Time Dependence. <i>Journal of the American Ceramic Society</i> , 2015 , 98, 1275-1284	3.8	7
33	Oxidation and Corrosion of Ceramics 2014 , 1-93		
32	Water Vapor-Mediated Volatilization of High-Temperature Materials. <i>Annual Review of Materials Research</i> , 2013 , 43, 559-588	12.8	80
31	Oxidation and Corrosion of Ceramics 2013 , 1-93		0
30	Oxidation of Carbon Fiber-Reinforced Silicon Carbide Matrix Composites at Reduced Oxygen Partial Pressures. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 2185-2192	3.8	23
29	Oxidation of SiC Fiber-Reinforced SiC Matrix Composites with a BN Interphase. <i>Materials Science Forum</i> , 2011 , 696, 342-347	0.4	10
28	Theoretical and experimental investigation of the thermochemistry of CrO ₂ (OH) ₂ (g). <i>Journal of Physical Chemistry A</i> , 2007 , 111, 1971-80	2.8	153
27	Predicting oxide stability in high-temperature water vapor. <i>Jom</i> , 2006 , 58, 22-28	2.1	135
26	Thermodynamics of gas phase species in the SiO ₂ -H ₂ O system. <i>Journal of Chemical Thermodynamics</i> , 2005 , 37, 1130-1137	2.9	73
25	Mass Spectrometric Identification of SiO ₂ (g) Species from the Reaction of Silica with Water Vapor at Atmospheric Pressure. <i>Journal of the American Ceramic Society</i> , 2005 , 80, 1009-1012	3.8	124
24	Oxidation of Chemically-Vapor-Deposited Silicon Carbide in Carbon Dioxide. <i>Journal of the American Ceramic Society</i> , 2005 , 81, 1949-1952	3.8	45
23	Variation of the Oxidation Rate of Silicon Carbide with Water-Vapor Pressure. <i>Journal of the American Ceramic Society</i> , 2004 , 82, 625-636	3.8	232
22	Paralinear Oxidation of CVD SiC in Simulated Fuel-Rich Combustion. <i>Journal of the American Ceramic Society</i> , 2004 , 83, 1761-1767	3.8	11

21	Effect of Environment on the Stress-Rupture Behavior of a Carbon-Fiber-Reinforced Silicon Carbide Ceramic Matrix Composite. <i>Journal of the American Ceramic Society</i> , 2004 , 87, 1536-1542	3.8	55
20	Alumina Volatility in Water Vapor at Elevated Temperatures. <i>Journal of the American Ceramic Society</i> , 2004 , 87, 1701-1705	3.8	98
19	Oxidation of Ultrahigh Temperature Ceramics in Water Vapor. <i>Journal of the Electrochemical Society</i> , 2004 , 151, B558	3.9	50
18	Oxidation and Volatilization of Silica Formers in Water Vapor. <i>Journal of the American Ceramic Society</i> , 2003 , 86, 1238-1248	3.8	202
17	Paralinear Oxidation of Silicon Nitride in a Water-Vapor/Oxygen Environment. <i>Journal of the American Ceramic Society</i> , 2003 , 86, 1256-1261	3.8	62
16	Additive Effects on Si ₃ N ₄ Oxidation/Volatilization in Water Vapor. <i>Journal of the American Ceramic Society</i> , 2003 , 86, 1262-1271	3.8	34
15	Evaluation of ultra-high temperature ceramics for aer propulsion use. <i>Journal of the European Ceramic Society</i> , 2002 , 22, 2757-2767	6	616
14	Oxidation Behavior of Prospective Silicon Nitride Materials for Advanced Microturbine Applications 2001 ,		6
13	Oxidation and corrosion of ceramics and ceramic matrix composites. <i>Current Opinion in Solid State and Materials Science</i> , 2001 , 5, 301-309	12	107
12	SiC and Si ₃ N ₄ recession due to SiO ₂ scale volatility under combustor conditions. <i>Advanced Composite Materials</i> , 1999 , 8, 33-45	2.8	119
11	SiC Recession Caused by SiO ₂ Scale Volatility under Combustion Conditions: II, Thermodynamics and Gaseous-Diffusion Model. <i>Journal of the American Ceramic Society</i> , 1999 , 82, 1826-1834	3.8	241
10	Paralinear Oxidation of CVD SiC in Water Vapor. <i>Journal of the American Ceramic Society</i> , 1997 , 80, 197-208		357
9	A Comparison of the Oxidation Kinetics of SiC and Si ₃ N ₄ . <i>Journal of the Electrochemical Society</i> , 1995 , 142, 925-930	3.9	165
8	Thermogravimetric Analysis and Defect Models of the Oxygen Nonstoichiometry in La _{2-x} Sr _x CuO _{4-y} . <i>Journal of the American Ceramic Society</i> , 1994 , 77, 2727-2737	3.8	27
7	Oxidation Kinetics of Chemically Vapor-Deposited Silicon Carbide in Wet Oxygen. <i>Journal of the American Ceramic Society</i> , 1994 , 77, 730-736	3.8	162
6	Oxygen Tracer Diffusion in La _{2-x} Sr _x CuO _{4-y} Single Crystals. <i>Journal of the American Ceramic Society</i> , 1993 , 76, 2363-2369	3.8	67
5	The Oxygen Defect Chemistry of La _{2-x} Sr _x CuO _{4-x/2} . <i>Materials Research Society Symposia Proceedings</i> , 1990 , 209, 867		1
4	The Transport Properties and Defect Chemistry of La _{2-x} Sr _x CuO ₄ . <i>Materials Research Society Symposia Proceedings</i> , 1989 , 169, 65		4

3	Oxidation of Zrb2-Sic221-228	54
2	Corrosion of Ceramic Materials327-388	1
1	Cyclic Oxidation of Monolithic SiC and Si3N4 Materials367-374	9