Arthur H Heuer

List of Publications by Year
in descending order

98	3,781	109264 35	133188 59
papers	citations	h-index	g-index

99	99	99	2558
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Alcohol Interaction with Zirconia Powders. Journal of the American Ceramic Society, 1990, 73, 1504-1509.	1.9	218
2	Slip and Twinning in Sapphire (alpha-Al2O3). Journal of the American Ceramic Society, 1994, 77, 385-397.	1.9	214
3	Volatility Diagrams for Silica, Silicon Nitride, and Silicon Carbide and Their Application to High-Temperature Decomposition and Oxidation. Journal of the American Ceramic Society, 1990, 73, 2789-2803.	1.9	198
4	Carbon Additions to Molybdenum Disilicide: Improved High-Temperature Mechanical Properties. Journal of the American Ceramic Society, 1991, 74, 2704-2706.	1.9	162
5	Processing and Sintering of Ultrafine MgO-ZrO2 and (MgO, Y2O3)-ZrO2 Powders. Journal of the American Ceramic Society, 1990, 73, 1499-1503.	1.9	136
6	Alumina Scale Formation: A New Perspective. Journal of the American Ceramic Society, 2011, 94, s146.	1.9	131
7	Raman Spectra of Vateritic Calcium Carbonate. Spectroscopy Letters, 1995, 28, 983-995.	0.5	118
8	Microstructures of Y2O3-Stabilized ZrO2 Electron Beam-Physical Vapor Deposition Coatings on Ni-Base Superalloys. Journal of the American Ceramic Society, 1994, 77, 984-992.	1.9	109
9	Synthesis of ZrO₂ and Y₂O₃â€Doped ZrO₂ Thin Films Using Selfâ€Assembled Monolayers. Journal of the American Ceramic Society, 1997, 80, 2967-2981.	1.9	109
10	Microstructure of matrix and mineral components of eggshells from White Leghorn chickens (Gallus gallus). Journal of Morphology, 1996, 228, 287-306.	0.6	103
11	Crack-Tip Transformation Zones in Toughened Zirconia. Journal of the American Ceramic Society, 1990, 73, 2659-2666.	1.9	100
12	Microstructure of 96% Alumina Ceramics: I, Characterization of the As-Sintered Materials. Journal of the American Ceramic Society, 1990, 73, 3670-3676.	1.9	86
13	Fracture Toughness, Fracture Strength, and Stress Corrosion Cracking of Silicon Dioxide Thin Films. Journal of Microelectromechanical Systems, 2008, 17, 943-947.	1.7	85
14	Indentation Studies on Y2O2-Stabilized ZrO2: I, Development of Indentation-Induced Cracks. Journal of the American Ceramic Society, 1994, 77, 1185-1193.	1.9	84
15	Lattice Diffusion Kinetics in Undoped and Impurity-Doped Sapphire (alpha-Al2O3): A Dislocation Loop Annealing Study. Journal of the American Ceramic Society, 1989, 72, 2159-2171.	1.9	78
16	Structural and Microstructural Characterization of the Growth Lines and Prismatic Microarchitecture in Red Abalone Shell and the Microstructures of Abalone â€œFlat Pearlsâ€. Chemistry of Materials, 2002, 14, 3106-3117.	3.2	75
17	Electrical properties of TiO2 thin films formed on self-assembled organic monolayers on silicon. Journal of Applied Physics, 1998, 83, 3311-3317.	1.1	71
18	Novel Composite Microstructure and Mechanical Behavior of Mollusk Shell. Journal of the American Ceramic Society, 1989, 72, 2177-2179.	1.9	69

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19	On the Thermoelastic Martensitic Transformation in Tetragonal Zirconia. Journal of the American Ceramic Society, 1990, 73, 1084-1093.	1.9	66
20	High-Temperature Creep of Yttria-Stabilized Zirconia Single Crystals. Journal of the American Ceramic Society, 1990, 73, 2452-2456.	1.9	64
21	Temperature Dependence of Interfacial Shear Strength in SiC-Fiber-Reinforced Reaction-Bonded Silicon Nitride. Journal of the American Ceramic Society, 1990, 73, 713-720.	1.9	61
22	Temperature Dependence of Hardness in Yttria-Stabilized Zirconia Single Crystals. Journal of the American Ceramic Society, 1991, 74, 491-500.	1.9	59
23	Microstructure of 96% Alumina Ceramics: III, Crystallization of High-Calcia Boundary Glasses. Journal of the American Ceramic Society, 1990, 73, 3684-3691.	1.9	58
24	Indentation Studies on Y2O3-Stabilized ZrO2: II, Toughness Determination from Stable Growth of Indentation-Induced Cracks. Journal of the American Ceramic Society, 1994, 77, 1194-1201.	1.9	54
25	Microstructural Evolution in Ca-PSZ and the Room-Temperature Instability of Tetragonal ZrO2. Journal of the American Ceramic Society, 1987, 70, 214-220.	1.9	51
26	The Band Structure of Polycrystalline Al₂O₃ and Its Influence on Transport Phenomena. Journal of the American Ceramic Society, 2016, 99, 733-747.	1.9	51
27	Microstructural Characterization and Fracture Toughness of Cordierite-ZrO2 Glass-Ceramics. Journal of the American Ceramic Society, 1988, 71, 673-677.	1.9	49
28	Low-Temperature Ionic Conductivity of 9.4-mol%-Yttria-Stabilized Zirconia Single Crystals. Journal of the American Ceramic Society, 1989, 72, 1500-1502.	1.9	48
29	Determination of Pipe Diffusion Coefficients in Undoped and Magnesiaâ€Doped Sapphire (Î±â€Al₂O₃): A Study Based on Annihilation of Dislocation Dipoles. Journal of the American Ceramic Society, 2003, 86, 560-65.	1.9	48
30	Microstructure of 96% Alumina Ceramics: II, Crystallization of High-Magnesia Boundary Glasses. Journal of the American Ceramic Society, 1990, 73, 3677-683.	1.9	43
31	Eutectoid Decomposition of MgO-Partially-Stabilized ZrO2. Journal of the American Ceramic Society, 1987, 70, 431-440.	1.9	40
32	Microstructural and Microchemical Characterization of Silicon Carbide and Silicon Carbonitride Ceramic Fibers Produced from Polymer Precursors. Journal of the American Ceramic Society, 1988, 71, 960-969.	1.9	39
33	The reaction between a TiNi shape memory thin film and silicon. Journal of Materials Research, 1997, 12, 1734-1740.	1.2	38
34	On the Isothermal Martensitic Transformation in 3Y-TZP. Journal of the American Ceramic Society, 1993, 76, 1025-1030.	1.9	37
35	In Situ Martensitic Transformation in a Ternary MgO-Y2O3-ZrO2 Alloy: I, Transformation in Tetragonal ZrO2 Grains. Journal of the American Ceramic Society, 1988, 71, 694-700.	1.9	35
36	Defect Clusters in Nonstoichiometric 3d Transition-Metal Monoxides. Journal of the American Ceramic Society, 1986, 69, 619-623.	1.9	34

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37	Morphology of Tetragonal ZrO2 in a Ternary (Mg,Y)-PSZ. Journal of the American Ceramic Society, 1987, 70, 208-13.	1.9	32
38	Crystallization in a Barium-Containing Magnesium Aluminosilicate Glass-Ceramic. Journal of the American Ceramic Society, 1992, 75, 1512-1521.	1.9	31
39	Microhardness and Fracture Toughness Anisotropy in Cubic Zirconium Oxide Single Crystals. Journal of the American Ceramic Society, 1988, 71, C-332-C-333.	1.9	29
40	Temperature-Dependent Indentation Behavior of Transformation-Toughened Zirconia-Based Ceramics. Journal of the American Ceramic Society, 1991, 74, 593-597.	1.9	29
41	Numerical Simulations of Carbon and Nitrogen Composition-Depth Profiles in Nitrocarburized Austenitic Stainless Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4268-4279.	1.1	29
42	Microindentation-Induced Transformation in 3.5-mol%-Yttria-Partially-Stabilized Zirconia Single Crystals. Journal of the American Ceramic Society, 1991, 74, 1071-1081.	1.9	28
43	Structural Evolution and Electrical Properties of Sc2O3-Stabilized ZrO2Aged at 850Â°C in Air and Wet-Forming Gas Ambients. Journal of the American Ceramic Society, 2008, 91, 1626-1633.	1.9	28
44	Residual-Stress-Induced Grain Pullout in a 96% Alumina. Journal of the American Ceramic Society, 1991, 74, 646-649.	1.9	27
45	Indentation-Induced Cracks and the Toughness Anisotropy of 9.4-mol%-Yttria-Stabilized Cubic Zirconia Single Crystals. Journal of the American Ceramic Society, 1991, 74, 859-862.	1.9	27
46	A MEMS-Based Evaluation of the Mechanical Properties of Metallic Thin Films. Journal of Microelectromechanical Systems, 2007, 16, 650-658.	1.7	24
47	Solid-State Diffusive Amorphization in TiO2/ZrO2 Bilayers. Journal of the American Ceramic Society, 1996, 79, 1975-1978.	1.9	23
48	Pyrolysis of self-assembled organic monolayers on oxide substrates. Journal of Materials Research, 1999, 14, 2116-2123.	1.2	23
49	A high-temperature displacement-sensitive indenter for studying mechanical properties of thermal barrier coatings. Journal of Materials Research, 2004, 19, 351-356.	1.2	22
50	Low-Temperature Carburization of the Ni-base Superalloy IN718: Improvements in Surface Hardness and Crevice Corrosion Resistance. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 2022-2032.	1.1	20
51	Carbon Interfacial Layers Formed by Oxidation of SiC in SiC/Ba-Stuffed Cordierite Glass-Ceramic Reaction Couples. Journal of the American Ceramic Society, 1991, 74, 1663-1667.	1.9	19
52	Deposition of Compact Hydrous Aluminum Sulfate Thin Films on Titania Particles Coated with Organic Self-Assembled Monolayers. Chemistry of Materials, 1998, 10, 2135-2144.	3.2	19
53	Nanocrystalline Tin Oxide Thin Films via Liquid Flow Deposition. Journal of the American Ceramic Society, 2003, 86, 2074-2081.	1.9	19
54	In Situ Martensitic Transformation in a Ternary MgO-Y2O3-ZrO2 Alloy: II, Transformation in Tetragonal ZrO2 Precipitates. Journal of the American Ceramic Society, 1988, 71, 701-706.	1.9	17

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55	Chemical Reactions in the Processing of MoSi2 Carbon Compacts. Journal of the American Ceramic Society, 1993, 76, 2005-2009.	1.9	17
56	A 3rd Generation Advanced High-Strength Steel (AHSS) Produced by Dual Stabilization Heat Treatment (DSHT). Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 4450-4453.	1.1	17
57	The Calcia-Zirconia Phase Diagram Revisited: Stability of the Ordered Phases phi1 and phi2. Journal of the American Ceramic Society, 1991, 74, 234-237.	1.9	16
58	International Workshop on the Science of Alumina. Journal of the American Ceramic Society, 1994, 77, 292-292.	1.9	16
59	Anisometric Shape Factors for Ceramic Microstructures. Journal of the American Ceramic Society, 1989, 72, 517-519.	1.9	15
60	Fracture Mechanics of High-Toughness Magnesia-Partially-Stabilized Zirconia. Journal of the American Ceramic Society, 1990, 73, 2023-2031.	1.9	13
61	Volatility Diagrams for the Cr-O and Cr-Cl Systems: Application to Removal of Cr2O3-Rich Passive Films on Stainless Steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2012, 43, 1187-1201.	1.0	13
62	Cellular Precipitation at a 17-7 PH Stainless Steel Interphase Interface During Low-Temperature Nitridation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3578-3585.	1.1	13
63	An Unusual Twin Structure in Transformed Precipitates in Y-PSZ Single Crystals. Journal of the American Ceramic Society, 1994, 77, 57-64.	1.9	12
64	Microstructural Shape Factors: Relation of Random Planar Sections to Three-Dimensional Microstructures. Journal of the American Ceramic Society, 1995, 78, 1532-1536.	1.9	12
65	Growth Stresses in Thermally Grown Oxides on Nickel-Based Single-Crystal Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 1132-1142.	1.1	12
66	Annealing of Test Specimens of High-Toughness Magnesia-Partially-Stabilized Zirconia. Journal of the American Ceramic Society, 1988, 71, C-2-C-6.	1.9	11
67	Microstructural Characterization of Cofired Tungsten-Metallized High-Alumina Electronic Substrates. Journal of the American Ceramic Society, 1992, 75, 2815-2824.	1.9	11
68	Devitrification of the Grain Boundary Glassy Phase in a High-Alumina Ceramic Substrate. Journal of the American Ceramic Society, 1994, 77, 2593-2598.	1.9	11
69	Thin-Foil Phase Transformations of Tetragonal ZrO2 in a ZrO2-8 wt% Y2O3 Alloy. Journal of the American Ceramic Society, 1988, 71, 826-831.	1.9	10
70	Surface Microstructure Changes on Laser lteatment of MgO-Partially-Stabilized Zirconia. Journal of the American Ceramic Society, 1990, 73, 1519-1523.	1.9	10
71	Concentration-Dependent Carbon Diffusivity in Austenite. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3790-3799.	1.1	10
72	Erratum to â€œAlumina Scale Formation: A New Perspectiveâ€• Journal of the American Ceramic Society, 2011, 94, 2698-2698.	1.9	9

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73	Low-Temperature Carburization of AL-6XN Enabled by Provisional Passivation. Metals, 2018, 8, 997.	1.0	9
74	Oxidation Behavior of Î³â€²-Ni3Al-Based Niâ€“20Alâ€“5Cr Alloys With and Without Reactive Elements Under Different Heating Conditions. Oxidation of Metals, 2019, 92, 137-150.	1.0	9
75	Comment on "Direct Observation of Crack-Tip Geometry of SiO2Glass by High-Resolution Electron Microscopy". Journal of the American Ceramic Society, 1984, 67, c253-c253.	1.9	7
76	Precipitate Morphology in Ternary MgO,CaO-Partially-Stabilized Zirconias. Journal of the American Ceramic Society, 1993, 76, 833-840.	1.9	7
77	Thermally Activated Martensitic Transformations in Mg-PSZ. Journal of the American Ceramic Society, 1996, 79, 895-905.	1.9	7
78	The Effect of Surface Finish on Low-Temperature Acetylene-Based Carburization of 316L Austenitic Stainless Steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 2338-2345.	1.0	7
79	The Formation of Martensitic Austenite During Nitridation of Martensitic and Duplex Stainless Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 8-13.	1.1	7
80	Residual Displacement Effects During Crack Propagation in High-Toughness Magnesia-Partially-Stabilized Zirconia. Journal of the American Ceramic Society, 1990, 73, 2016-2022.	1.9	6
81	Deformation Twinning in Single-Crystal Monoclinic Zirconia: A First Report. Journal of the American Ceramic Society, 1992, 75, 2302-2303.	1.9	6
82	Strong cellular lattices with nitro-carburized stainless steel hollow trusses. International Journal of Materials Research, 2016, 107, 57-77.	0.1	6
83	Initial Stages of Na2SO4-Induced Degradation of Î²-Niâ€“36Al at 700ÂÂ°C: I-Intrinsic Behavior. Oxidation of Metals, 2017, 88, 649-667.	1.0	5
84	Comment on "Crystallographic Analysis of the Cubic-to-Tetragonal Phase Transformation in the ZrO2-Y2O3 System". Journal of the American Ceramic Society, 1988, 71, C-170-C-171.	1.9	2
85	Recovery of Crack-Tip Transformation Zones in Zirconia After High-Temperature Annealing. Journal of the American Ceramic Society, 1992, 75, 474-476.	1.9	2
86	Rapid Alloy Surface Engineering through Closed-Vessel Reagent Pyrolysis. Metals, 2021, 11, 1764.	1.0	2
87	Manganese Oxide Formation in Lanthanum Strontium Manganite-Yttria-Stabilized Zirconia SOFC Cathodes. Metallurgical and Materials Transactions E, 2014, 1, 263-271.	0.5	1
88	Orientation Mapping by Precession Transmission Electron Microscopy. Microscopy and Microanalysis, 2015, 21, 1661-1662.	0.2	1
89	Splicing Factor 3b Subunit 1 (SF3B1) mediates Mitochondrial Iron Overload In Myelodysplastic Syndromes With Ring Sideroblasts By Alternative Splicing Of Mitoferrin-1 (SLC25A37). Blood, 2013, 122, 1555-1555.	0.6	1
90	A high-temperature displacement-sensitive indenter for studying mechanical properties of thermal barrier coatings. Journal of Materials Research, 2004, 19, 351-356.	1.2	1

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91	Symposium for Electronic Structure of Ceramics. Journal of the American Ceramic Society, 1990, 73, 3133-3133.	1.9	0
92	Editorial Comments on Paper by W. D. Kingery, et al.. Journal of the American Ceramic Society, 1992, 75, 489-491.	1.9	0
93	Reply to "Comment on 'The Calcia-Zirconia Phase Diagram Revisited: Stability of the Ordered Phases phi1 and phi2,". Journal of the American Ceramic Society, 1992, 75, 733-733.	1.9	0
94	A. R. Cooper Symposium on Glass Science and Technology. Journal of the American Ceramic Society, 1993, 76, 1076-1076.	1.9	0
95	Alfred R. Cooper's Contributions to Glass Science and Technology. Journal of the American Ceramic Society, 1993, 76, 1077-1080.	1.9	0
96	Precipitate Coarsening by Liquid Film Migration in (Mg,Ca)-PSZ's. Journal of the American Ceramic Society, 1994, 77, 2657-2662.	1.9	0
97	Artwork Reproduction in the Journal. Journal of the American Ceramic Society, 1995, 78, 1427-1430.	1.9	0
98	On the formation of arrays of micro-tunnels in pyrope and almandine garnets. American Mineralogist, 2021, 106, 1026-1029.	0.9	0