

Ah Heuer

List of Publications by Year in descending order

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106
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76326

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2894
citing authors

#	ARTICLE	IF	CITATIONS
1	Comment on "Self-diffusion in high-purity $\hat{\pm}$ -Al ₂ O ₃ : Comparison of Ti-doped, Mg-doped and undoped single crystals" P. Fielitz, S. Ganschow, K. Klemens, and G. Borchardt, J. Eur. Ceram. Soc., 41, (2021), 663-668; Journal of the European Ceramic Society, 2022, 42, 1829-1831.	5.7	0
2	Ultrahigh-strength AISI-316 austenitic stainless steel foils through concentrated interstitial carbon. Acta Materialia, 2019, 167, 231-240.	7.9	19
3	"Colossal" interstitial supersaturation in delta ferrite in stainless steels: (II) low-temperature nitridation of the 17-7 PH alloy. Acta Materialia, 2017, 124, 237-246.	7.9	9
4	"Colossal" Interstitial Supersaturation in Delta Ferrite in 17-7 PH Stainless Steels After Low-temperature Nitridation. Microscopy and Microanalysis, 2016, 22, 2020-2023.	0.4	0
5	Increasing the coefficient of sliding friction of NiCr at low loads by interstitial surface hardening. Wear, 2016, 346-347, 1-5.	3.1	3
6	"Colossal" interstitial supersaturation in delta ferrite in stainless steels" I. Low-temperature carburization. Acta Materialia, 2015, 86, 193-207.	7.9	18
7	NiAl precipitation in delta ferrite grains of 17-7 precipitation-hardening stainless steel during low-temperature interstitial hardening. Scripta Materialia, 2015, 108, 136-140.	5.2	6
8	A disconnection mechanism of enhanced grain boundary diffusion in Al ₂ O ₃ . Scripta Materialia, 2015, 102, 15-18.	5.2	37
9	Diffusion profiles after nitrocarburizing austenitic stainless steel. Surface and Coatings Technology, 2015, 279, 180-185.	4.8	21
10	Orientation dependence of nitrogen supersaturation in austenitic stainless steel during low-temperature gas-phase nitriding. Acta Materialia, 2014, 79, 339-350.	7.9	60
11	Colossal Carbon Supersaturation of Delta Ferrite in 17-7 PH Stainless Steel. Microscopy and Microanalysis, 2014, 20, 2102-2103.	0.4	1
12	Interstitial faulted dislocation dipole formation in sapphire ($\hat{\pm}$ -Al ₂ O ₃). Philosophical Magazine, 2013, 93, 152-161.	1.6	2
13	On the growth of Al ₂ O ₃ scales. Acta Materialia, 2013, 61, 6670-6683.	7.9	140
14	Fatigue crack growth in interstitially hardened AISI 316L stainless steel. International Journal of Fatigue, 2013, 47, 100-105.	5.7	14
15	The Role of Electron Microscopy and Focused Ion Beam in Studying Friction Modifiers in Engine Oils. Microscopy and Microanalysis, 2012, 18, 646-647.	0.4	0
16	Sustained-load crack growth of hydrogen-charged surface-hardened 316L stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 556, 43-50.	5.6	7
17	Enhanced corrosion resistance of interstitially hardened stainless steel: Implications of a critical passive layer thickness for breakdown. Acta Materialia, 2012, 60, 716-725.	7.9	65
18	Structural Evolution of TiO ₂ Precipitates in Ti-Doped Sapphire ($\hat{\pm}$ -Al ₂ O ₃). Journal of the American Ceramic Society, 2011, 94, 1272-1280.	3.8	5

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19	Ferromagnetism in interstitially hardened austenitic stainless steel induced by low-temperature gas-phase nitriding. Scripta Materialia, 2011, 65, 1089-1092.	5.2	16
20	Electrostrictive stresses and breakdown of thin passive films on stainless steel. Electrochimica Acta, 2011, 58, 157-160.	5.2	27
21	The use of laser scanning confocal microscopy (LSCM) in materials science. Journal of Microscopy, 2010, 240, 173-180.	1.8	59
22	Enhanced Carbon Diffusion in Austenitic Stainless Steel Carburized at Low Temperature. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 1768-1780.	2.2	47
23	Enhanced Corrosion Resistance of Stainless Steel Carburized at Low Temperature. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 1805-1810.	2.2	57
24	Do moving basal dislocations in sapphire (Al_2O_3) have non-stoichiometric cores?. Philosophical Magazine, 2009, 89, 489-499.	1.6	9
25	Oxygen and aluminum diffusion in Al_2O_3 : How much do we really understand?. Journal of the European Ceramic Society, 2008, 28, 1495-1507.	5.7	237
26	Surface oxide effects on failure of polysilicon MEMS after cyclic and monotonic loading. Scripta Materialia, 2008, 59, 912-915.	5.2	41
27	Fracture Toughness, Fracture Strength, and Stress Corrosion Cracking of Silicon Dioxide Thin Films. Journal of Microelectromechanical Systems, 2008, 17, 943-947.	2.5	85
28	Carbide precipitation in austenitic stainless steel carburized at low temperature. Acta Materialia, 2007, 55, 1895-1906.	7.9	97
29	Enhanced fatigue resistance in 316L austenitic stainless steel due to low-temperature paraequilibrium carburization. Acta Materialia, 2007, 55, 5572-5580.	7.9	75
30	Interstitial defects in 316L austenitic stainless steel containing $\sim 10^{-3}$ carbon concentrations: An internal friction study. Scripta Materialia, 2007, 56, 1067-1070.	5.2	36
31	Mechanical fatigue of polysilicon: Effects of mean stress and stress amplitude. Acta Materialia, 2006, 54, 667-678.	7.9	58
32	Growth stresses and viscosity of thermal oxides on silicon and polysilicon. Journal of Materials Research, 2006, 21, 209-214.	2.6	11
33	Confocal photo-stimulated microspectroscopy (CPSM) residual stress measurements in Al_2O_3 using confocal microscopy. Scripta Materialia, 2005, 53, 347-349.	5.2	15
34	Determination of the growth strain of LPCVD polysilicon. Journal of Microelectromechanical Systems, 2005, 14, 160-166.	2.5	7
35	Static and electrically actuated shaped MEMS mirrors. Journal of Microelectromechanical Systems, 2005, 14, 29-36.	2.5	23
36	Anodic oxidation during MEMS processing of silicon and polysilicon: native oxides can be thicker than you think. Journal of Microelectromechanical Systems, 2005, 14, 914-923.	2.5	48

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37	Dislocations and Mechanical Properties of Ceramics. Dislocations in Solids, 2004, 12, 339-402.	1.6	24
38	Quantitative phase transformation behavior in TiNi shape memory alloy thin films. Journal of Materials Research, 2004, 19, 2822-2833.	2.6	12
39	Dynamic fatigue of silicon. Current Opinion in Solid State and Materials Science, 2004, 8, 71-76.	11.5	85
40	MEMS Structures for On-chip Testing of Mechanical and Surface Properties of Thin Films. , 2003, , 325-356.		7
41	Surface Oxide Effects on Static Fatigue of Polysilicon MEMS. Materials Research Society Symposia Proceedings, 2002, 741, 341.	0.1	5
42	A robust co-sputtering fabrication procedure for TiNi shape memory alloys for MEMS. Journal of Microelectromechanical Systems, 2001, 10, 69-79.	2.5	65
43	Microindentation behavior of the shell of the conch Strombus gigas. Microscopy and Microanalysis, 2001, 7, 392-393.	0.4	0
44	On-Chip Testing of Mechanical Properties of MEMS Devices. MRS Bulletin, 2001, 26, 300-301.	3.5	13
45	On the Fracture Toughness of Polysilicon MEMS Structures. Materials Research Society Symposia Proceedings, 2000, 657, 211.	0.1	4
46	Fracture toughness of polysilicon MEMS devices. Sensors and Actuators A: Physical, 2000, 82, 274-280.	4.1	145
47	A new technique for producing large-area as-deposited zero-stress LPCVD polysilicon films: the MultiPoly process. Journal of Microelectromechanical Systems, 2000, 9, 485-494.	2.5	96
48	The effects of heterogeneity and anisotropy on the size effect in cracked polycrystalline films. International Journal of Fracture, 1999, 95, 19-39.	2.2	24
49	Oxygen self-diffusion in corundum (α -Al ₂ O ₃): A conundrum. Philosophical Magazine Letters, 1999, 79, 619-627.	1.2	72
50	Wafer-Level Strength and Fracture Toughness Testing of Surface-Micromachined MEMS Devices. Materials Research Society Symposia Proceedings, 1999, 605, 25.	0.1	15
51	MATRIX - DIRECTED IN VITRO OSTEOGENESIS. , 1999, , .		0
52	Deposition mechanism of oxide thin films on self-assembled organic monolayers11Paper presented at Sympos. Synergistic Synthesis of Inorganic Materials, March 1996, SchloÅ Ringberg, Germany. Acta Materialia, 1998, 46, 801-815.	7.9	84
53	Solution softening in spinel—Submitted to Scripta Materialia. Scripta Materialia, 1998, 39, 537-544.	5.2	7
54	Stress-induced martensitic transformation and ferroelastic deformation adjacent microhardness indents in tetragonal zirconia single crystals. Acta Materialia, 1998, 46, 2151-2171.	7.9	67

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55	Thin-film shape-memory alloy actuated micropumps. <i>Journal of Microelectromechanical Systems</i> , 1998, 7, 245-251.	2.5	318
56	The Fracture Toughness of Polysilicon Microdevices. <i>Materials Research Society Symposia Proceedings</i> , 1998, 518, 137.	0.1	21
57	Monte Carlo simulation of effective elastic constants of polycrystalline thin films. <i>Acta Materialia</i> , 1997, 45, 2247-2255.	7.9	88
58	On basal slip and basal twinning in sapphire ($\hat{\pm}$ -Al ₂ O ₃) ^I . Basal slip revisited. <i>Acta Materialia</i> , 1996, 44, 2145-2152.	7.9	79
59	On Basal slip and basal twinning in sapphire ($\hat{\pm}$ -Al ₂ O ₃) ^{II} . A new model of basal twinning. <i>Acta Materialia</i> , 1996, 44, 2153-2164.	7.9	42
60	On basal slip and basal twinning in sapphire ($\hat{\pm}$ -Al ₂ O ₃) ^{III} . HRTEM of the twin/matrix interface. <i>Acta Materialia</i> , 1996, 44, 2165-2174.	7.9	30
61	Localized yielding during high temperature deformation of Y ₂ O ₃ -fully-stabilized cubic ZrO ₂ single crystals. <i>Acta Materialia</i> , 1996, 44, 2651-2662.	7.9	15
62	Polycrystalline Silicon Films for Microelectromechanical Devices. <i>Materials Research Society Symposia Proceedings</i> , 1995, 403, 321.	0.1	5
63	Synthesis and characterization of TiO ₂ thin films on organic self-assembled monolayers: Part I. Film formation from aqueous solutions. <i>Journal of Materials Research</i> , 1995, 10, 692-698.	2.6	145
64	Synthesis and characterization of TiO ₂ thin films on organic self-assembled monolayers: Part II. Film formation via an organometallic route. <i>Journal of Materials Research</i> , 1995, 10, 699-703.	2.6	55
65	High temperature plastic anisotropy in MoSi ₂ single crystals. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 657-668.	1.8	90
66	High temperature precipitation hardening in Y ₂ O ₃ partially-stabilized ZrO ₂ (Y-PSZ) single crystals ^{III} . Effect of solute composition and orientation on the hardening. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 2469-2484.	1.8	21
67	Stress relaxation and solid solution hardening of cubic ZrO ₂ single crystals. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 1917-1923.	1.8	18
68	TiNi (shape memory) films silicon for MEMS applications. <i>Journal of Microelectromechanical Systems</i> , 1995, 4, 206-212.	2.5	162
69	A zonal dislocation mechanism for rhombohedral twinning in sapphire ($\hat{\pm}$ -Al ₂ O ₃). <i>Acta Metallurgica Et Materialia</i> , 1994, 42, 1367-1372.	1.8	47
70	On a high-purity Ge EDS detector I. Determination of detector efficiency. <i>Ultramicroscopy</i> , 1993, 50, 207-218.	1.9	6
71	On a high-purity Ge EDS detector II. Ice layer formation and optimization of detector design. <i>Ultramicroscopy</i> , 1993, 50, 219-227.	1.9	2
72	On a high-purity Ge EDS detector III. The reliable acquisition of EDS spectra. <i>Ultramicroscopy</i> , 1993, 50, 229-235.	1.9	1

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73	On the quantitative EDS analysis of low carbon concentrations in analytical TEM. Ultramicroscopy, 1993, 49, 220-224.	1.9	11
74	High temperature precipitation hardening of Y ₂ O ₃ partially-stabilized ZrO ₂ (Y-PSZ) single crystal. II. A quantitative model for the hardening. Acta Metallurgica Et Materialia, 1993, 41, 3171-3180.	1.8	23
75	Precipitation of Mo ₅ Si ₃ in MoSi ₂ . Journal of Materials Research, 1993, 8, 1079-1085.	2.6	13
76	On the slip systems in MoSi ₂ . Acta Metallurgica Et Materialia, 1992, 40, 3159-3165.	1.8	65
77	Transformation Toughening. , 1991, , 494-497.		1
78	Energetics of the break-up of dislocation dipoles into prismatic loops. Acta Metallurgica, 1989, 37, 3315-3325.	2.1	21
79	High-temperature precipitation hardening of Y ₂ O ₃ partially-stabilized ZrO ₂ (Y-PSZ) single crystals. Acta Metallurgica, 1989, 37, 559-567.	2.1	47
80	Plastic deformation in nonstoichiometric UO _{2+x} single crystals. I. Deformation at low temperatures. Acta Metallurgica, 1988, 36, 1061-1071.	2.1	29
81	Plastic deformation in nonstoichiometric UO _{2 + x} single crystals. II. Deformation at high temperatures. Acta Metallurgica, 1988, 36, 1073-1083.	2.1	32
82	Resistance curve behavior of supertough MgO-partially-stabilized ZrO ₂ . Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1988, 105-106, 83-89.	5.6	27
83	Transformation plasticity and thermoelastic behavior in ZrO ₂ -containing ceramics. Revue De Physique Appliquée, 1988, 23, 565-569.	0.4	5
84	The displacive cubic to tetragonal transformation in ZrO ₂ alloys. Acta Metallurgica, 1987, 35, 661-666.	2.1	109
85	HREM of coherent precipitates in ZrO ₂ alloys. Ultramicroscopy, 1987, 22, 27-34.	1.9	4
86	TEM Examination of Microstructures in LiNbO ₃ Optical Waveguides. , 1986, , .		0
87	R-Curve Behavior and The Mechanical Properties of Transformation-Toughened ZrO ₂ -Containing Ceramics. Materials Research Society Symposia Proceedings, 1985, 60, 469.	0.1	8
88	HREM studies of coherent and incoherent interfaces in ZrO ₂ -containing ceramics: A preliminary account. Ultramicroscopy, 1985, 18, 335-348.	1.9	23
89	Overview no. 45. Acta Metallurgica, 1985, 33, 2101-2112.	2.1	142
90	Stacking fault energy in sapphire (Al ₂ O ₃). Acta Metallurgica, 1984, 32, 97-105.	2.1	69

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91	Precipitation from cubic ZrO ₂ solid solutions. Acta Metallurgica, 1983, 31, 387-395.	2.1	54
92	Tem of Dislocations in Sapphire (Î±-Al ₂ O ₃). Materials Research Society Symposia Proceedings, 1983, 31, 303.	0.1	0
93	Ordered Defect-Fluorite Compounds in ZrO ₂ Alloys. Materials Research Society Symposia Proceedings, 1983, 31, 357.	0.1	0
94	Dislocation substructures in doped sapphire (Î±-Al ₂ O ₃) deformed by basal slip. Acta Metallurgica, 1982, 30, 147-156.	2.1	29
95	Work hardening and recovery in sapphire (Î±-Al ₂ O ₃) undergoing prism plane deformation. Acta Metallurgica, 1982, 30, 2205-2218.	2.1	38
96	An improved model of break-up of dislocation dipoles into loops: Application to sapphire (Î±-Al ₂ O ₃). Acta Metallurgica, 1982, 30, 491-498.	2.1	33
97	Overview No. 6. Acta Metallurgica, 1979, 27, 1677-1691.	2.1	34
98	Transformation-toughening in partially-stabilized zirconia (PSZ). Acta Metallurgica, 1979, 27, 1649-1654.	2.1	183
99	Solution hardening by aliovalent cations in ionic crystals. Materials Science and Engineering, 1977, 28, 81-97.	0.1	84
100	Work-hardening in sapphire (Î±-Al ₂ O ₃). Acta Metallurgica, 1977, 25, 25-33.	2.1	61
101	On a martensitic phase transformation in zirconia (ZrO ₂)â€™II. Crystallographic aspects. Acta Metallurgica, 1974, 22, 409-417.	2.1	116
102	ELECTRON MICROSCOPIC STUDY OF PHASE TRANSFORMATIONS IN PURE AND PARTIALLY-STABILIZED ZrO ₂ . , 1973, , 299-305.		1
103	On a martensitic phase transformation in zirconia (ZrO ₂)â€™I. Metallographic evidence. Acta Metallurgica, 1972, 20, 1281-1289.	2.1	173
104	A titanium-nickel shape-memory alloy actuated micropump. , 0, , .		25
105	LPCVD polysilicon films with controlled curvature for optical MEMS: the MultiPoly/sup TM/ process. , 0, , .		0
106	Design and fabrication of curved micromirrors using the multipoly process. , 0, , .		0