John Morris

List of Publications by Year
in descending order

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55 papers	2,115 citations	279798 23 h-index	233421 45 g-index
57 all docs	57 docs citations	57 times ranked	1478 citing authors

#	Article	IF	Citations
1	Origin of dramatic oxygen solute strengthening effect in titanium. Science, 2015, 347, 635-639.	12.6	255
2	Theoretical investigation of the precipitation of Î´ in Al-Li. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1988, 19, 249-258.	1.4	186
3	Defect reconfiguration in a Tiâ€"Al alloy via electroplasticity. Nature Materials, 2021, 20, 468-472.	27.5	142
4	Dislocationâ€"grain boundary interactions in martensitic steel observed through in situ nanoindentation in a transmission electron microscope. Journal of Materials Research, 2004, 19, 3626-3632.	2.6	127
5	Stronger, Tougher Steels. Science, 2008, 320, 1022-1023.	12.6	112
6	The creep properties of lead-free solder joints. Jom, 2002, 54, 30-32.	1.9	97
7	Direct imaging of short-range order and its impact on deformation in Ti-6Al. Science Advances, 2019, 5, eaax2799.	10.3	86
8	Morphology of electromigration-induced damage and failure in Al alloy thin film conductors. Journal of Electronic Materials, 1990, 19, 1213-1220.	2.2	82
9	Growth of a Au-Ni-Sn intermetallic compound on the solder-substrate interface after aging. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 798-800.	2.2	82
10	The microstructure of eutectic Au-Sn solder bumps on Cu/electroless Ni/Au. Journal of Electronic Materials, 2001, 30, 1083-1087.	2.2	70
11	Effects of cooling rate on mechanical properties of near-eutectic tin-lead solder joints. Journal of Electronic Materials, 1991, 20, 599-608.	2.2	68
12	Inhibiting growth of the Au0.5Ni0.5Sn4 intermetallic layer in Pb-Sn solder joints reflowed on Au/Ni metallization. Journal of Electronic Materials, 2000, 29, 1170-1174.	2.2	65
13	Mechanistic basis of oxygen sensitivity in titanium. Science Advances, 2020, 6, .	10.3	59
14	Making steel strong and cheap. Nature Materials, 2017, 16, 787-789.	27.5	51
15	In-situ transmission electron microscopy study of the nanoindentation behavior of Al. Journal of Electronic Materials, 2002, 31, 958-964.	2.2	47
16	Catalyzed precipitation in Al-Cu-Si. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 2697-2711.	2.2	46
17	Cryogenic fracture toughness of 9Ni steel enhanced through grain refinement. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1976, 7, 1827-1832.	1.4	44
18	Elimination of oxygen sensitivity in Î±-titanium by substitutional alloying with Al. Nature Communications, 2021, 12, 6158.	12.8	41

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19	Auâ˘'Niâ˘'Sn intermetallic phase relationships in eutectic Pbâ˘'Sn solder formed on Ni/Au metallization. Journal of Electronic Materials, 2001, 30, 409-414.	2.2	39
20	Superplastic creep of eutectic tinlead solder joints. Journal of Electronic Materials, 1990, 19, 1273-1280.	2.2	35
21	The microstructure of ultrafine eutectic Au-Sn solder joints on Cu. Journal of Electronic Materials, 2000, 29, 1038-1046.	2.2	35
22	Creep in Shear of Experimental Solder Joints. Journal of Electronic Packaging, Transactions of the ASME, 1990, 112, 87-93.	1.8	31
23	Precipitation and aging in Al-Si-Ge-Cu. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 197-199.	2.2	31
24	Electronic Origins of Anomalous Twin Boundary Energies in Hexagonal Close Packed Transition Metals. Physical Review Letters, 2015, 115, 065501.	7.8	23
25	The Interaction Between an Imposed Current and the Creep of Idealized Sn-Ag-Cu Solder Interconnects. Journal of Electronic Materials, 2009, 38, 2585-2591.	2.2	22
26	The creep behavior of In-Ag eutectic solder joints. Journal of Electronic Materials, 1999, 28, 69-75.	2.2	19
27	Study of Deformation Behavior of Ultrafine-grained Materials Through in Situ Nanoindentation in a Transmission Electron Microscope. Journal of Materials Research, 2005, 20, 1735-1740.	2.6	17
28	Microstructural Analysis of Electromigration-Induced Voids and Hillocks. Materials Research Society Symposia Proceedings, 1991, 225, 53.	0.1	16
29	Mechanisms of Creep Deformation in Pure Sn Solder Joints. Journal of Electronic Materials, 2013, 42, 516-526.	2.2	14
30	Development and elemental powder metallurgy of a Y-containing two-phase TiAl alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 2077.	2.2	13
31	Nanomechanical Testing of Gum Metal. Experimental Mechanics, 2010, 50, 37-45.	2.0	13
32	The Influence of Sn Orientation on Intermetallic Compound Evolution in Idealized Sn-Ag-Cu 305 Interconnects: an Electron Backscatter Diffraction Study of Electromigration. Journal of Electronic Materials, 2014, 43, 43-51.	2.2	13
33	Computer simulation of martensitic transformations in constrained, two-dimensional crystals under external stress. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1993, 24, 1281-1294.	2.2	12
34	Microstructural Mechanism of Electromigration Failure In Narrow Interconnects. Materials Research Society Symposia Proceedings, 1993, 309, 127.	0.1	11
35	A MÃ¶ssbauer spectrometry study of the mechanical transformation of precipitated austenite in 6Ni steel. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1985, 16, 173-177.	1.4	10
36	Aging characteristics of electron beam and gas tungsten arc fusion zones of Al-Cu-Li alloy 2090. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1991, 22, 903-913.	1.4	8

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37	Î˜ CuAl₂ Precipitate Coarsening in Al-2% Cu Thin Films. Materials Research Society Symposia Proceedings, 1991, 230, 67.	0.1	7
38	The correlation between stress relaxation and steady-state creep of eutectic Sn-Pb. Journal of Electronic Materials, 2005, 34, 1287-1300.	2.2	7
39	Validation of predicted precipitate compositions in Al-Si-Ge. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 2305-2311.	2.2	6
40	Precipitation-strengthened austenitic Feâˆ'Mnâˆ'Ti alloys. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1979, 10, 1377-1387.	1.4	4
41	A MÃ¶ssbauer spectrometry study of the mechanical transformation of precipitated austenite in 6Ni steel. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1985, 16, 173-177.	1.4	4
42	Microstructural Control of Internal Electromigration Failure in Narrow Al-Cu-Si Lines. Materials Research Society Symposia Proceedings, 1995, 391, 353.	0.1	4
43	Metallurgical Control of the Ductile-Brittle Transition in High-Strength Structural Steels. Materials Research Society Symposia Proceedings, 1998, 539, 23.	0.1	4
44	Computer simulation of reversible martensitic transformations. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 1187-1201.	2.2	3
45	Influence of Solute Additions on Electromigration in Aluminum. Materials Research Society Symposia Proceedings, 1996, 428, 213.	0.1	2
46	Further Investigations of the Microstructural Mechanism of Electromigration Failure in Al-Cu Lines with Quasi-Bamboo Microstructures. Materials Research Society Symposia Proceedings, 1996, 428, 255.	0.1	2
47	The Influence of Grain Structure on the Reliability of Narrow Al-Based Interconnects. Materials Research Society Symposia Proceedings, 1995, 391, 385.	0.1	1
48	A Method for Extracting Quantitative Data During<i>in-situ</i>TEM Nanoindentation. Materials Research Society Symposia Proceedings, 2001, 695, 1.	0.1	1
49	An Investigation Into 6-Fold Symmetry in Martensitic Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5266-5270.	2.2	1
50	A MÃ–ssbauer Study of Microstructural and Chemical Changes in FE-9NI Steel During Two-Phase Tempering. Materials Research Society Symposia Proceedings, 1980, 3, 377.	0.1	0
51	The use of Phase Transformations in the Design of Alloy Steel. Materials Research Society Symposia Proceedings, 1983, 21, 713.	0.1	0
52	Application of Superplasticity in Solder Joints. Materials Research Society Symposia Proceedings, 1990, 203, 425.	0.1	0
53	Mechanism of Electromigration Failure in Al Thin Film Interconnects Containing Sc. Materials Research Society Symposia Proceedings, 1995, 391, 289.	0.1	0
54	Electromigration Failure Kinetics in Al Alloy Lines: A Microstructure-Based Constitutive Equation. Materials Research Society Symposia Proceedings, 1998, 516, 129.	0.1	0

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55	The relationship between toughness and microstructure in Fe-high Mn binary alloys. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1991, 18, 1073-1081.	1.4	0