Michael Brady

List of Publications by Year
in descending order

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128	5,775	76031	93651
papers	citations	42	72
		h-index	g-index

134	134	134	3339
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Study of galvanic corrosion and mechanical joint properties of AZ31B and carbon-fiberâ€“reinforced polymer joined by friction self-piercing riveting. Journal of Magnesium and Alloys, 2022, 10, 400-410.	5.5	13
2	Measuring oxygen solubility in Ni grains and boundaries after oxidation using atom probe tomography. Scripta Materialia, 2022, 210, 114411.	2.6	6
3	Creep Behavior and Phase Equilibria in Model Precipitate Strengthened Alumina-Forming Austenitic Alloys. Jom, 2022, 74, 1453-1468.	0.9	3
4	Role of Cr Content in Microstructure, Creep, and Oxidation Resistance of Alumina-Forming Austenitic Alloys at 850â€“900 Â°C. Metals, 2022, 12, 717.	1.0	8
5	Uncertainty Quantification of Machine Learning Predicted Creep Property of Alumina-Forming Austenitic Alloys. Jom, 2021, 73, 164-173.	0.9	6
6	Development of Alumina-Forming Austenitic Alloys for Solid Oxide Fuel Cell Balance of Plant Components. ECS Meeting Abstracts, 2021, MA2021-01, 794-794.	0.0	4
7	Chromium evaporation and oxidation characteristics of alumina-forming austenitic stainless steels for balance of plant applications in solid oxide fuel cells. International Journal of Hydrogen Energy, 2021, 46, 21619-21633.	3.8	15
8	Corrosion of Ferrous Structural Alloys in Biomass Derived Fuels and Organic Acids. Energy & Fuels, 2021, 35, 12175-12186.	2.5	6
9	Mechanical and Corrosion Assessment of Friction Self-Piercing Rivet Joint of Carbon Fiber-Reinforced Polymer and Magnesium Alloy AZ31B. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2021, 143, .	1.3	16
10	Compatibility of Alumina-Forming Austenitic Steels in Static and Flowing Pb. Jom, 2021, 73, 4016-4022.	0.9	5
11	Approaches to investigate the role of chelation in the corrosivity of biomass-derived oils. Biomass and Bioenergy, 2020, 133, 105446.	2.9	12
12	Corrosion Susceptibility of Crâ€“Mo Steels and Ferritic Stainless Steels in Biomass-Derived Pyrolysis Oil Constituents. Energy & Fuels, 2020, 34, 6220-6228.	2.5	18
13	Temporal Evolution of Corrosion Film Nano-Porosity and Magnesium Alloy Hydrogen Penetration in NaCl Solution. Journal of the Electrochemical Society, 2020, 167, 131513.	1.3	5
14	Surface Oxide Nanopillars Formed by Atmospheric Plasma. Microscopy and Microanalysis, 2019, 25, 754-755.	0.2	0
15	Magnesium Alloy Effects on Plasma Electrolytic Oxidation Electro-Ceramic and Electro-Coat Formation and Corrosion Resistance. Journal of the Electrochemical Society, 2019, 166, C492-C508.	1.3	12
16	Modern data analytics approach to predict creep of high-temperature alloys. Acta Materialia, 2019, 168, 321-330.	3.8	69
17	Degradation of Components After Exposure in a Biomass Pyrolysis System. Corrosion, 2019, 75, 1136-1145.	0.5	3
18	Development of Creep-Resistant, Alumina-Forming Ferrous Alloys for High-Temperature Structural Use. , 2018, , .		6

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19	Developing titanium micro/nano porous layers on planar thin/tunable LGDLs for high-efficiency hydrogen production. International Journal of Hydrogen Energy, 2018, 43, 14618-14628.	3.8	52
20	Corrosion of stainless steels in the riser during co-processing of bio-oils in a fluid catalytic cracking pilot plant. Fuel Processing Technology, 2017, 159, 187-199.	3.7	22
21	Alloy Corrosion Considerations in Low-Cost, Clean Biomass Cookstoves for the Developing World. Energy for Sustainable Development, 2017, 37, 20-32.	2.0	12
22	Characterization of Localized Filament Corrosion Products at the Anodic Head on a Model Mg-Zn-Zr Alloy Surface. Corrosion, 2017, 73, 518-525.	0.5	6
23	Rapid Diffusion and Nanosegregation of Hydrogen in Magnesium Alloys from Exposure to Water. ACS Applied Materials & Interfaces, 2017, 9, 38125-38134.	4.0	14
24	Study on corrosion migrations within catalyst-coated membranes of proton exchangeÂmembrane electrolyzer cells. International Journal of Hydrogen Energy, 2017, 42, 27343-27349.	3.8	24
25	Thin film surface modifications of thin/tunable liquid/gas diffusion layers for high-efficiency proton exchange membrane electrolyzer cells. Applied Energy, 2017, 206, 983-990.	5.1	58
26	Tracer Film Growth Study of the Corrosion of Magnesium Alloys AZ31B and ZE10A in 0.01% NaCl Solution. Journal of the Electrochemical Society, 2017, 164, C367-C375.	1.3	19
27	Development of 1100ÂÂ°C Capable Alumina-Forming Austenitic Alloys. Oxidation of Metals, 2017, 87, 1-10.	1.0	21
28	Insights from a Recent Meeting: Current Status and Future Directions in Magnesium Corrosion Research. Corrosion, 2017, 73, 452-462.	0.5	32
29	Field and Laboratory Evaluations of Commercial and Next-Generation Alumina-Forming Austenitic Foil for Advanced Recuperators. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	0.5	6
30	Advanced characterization study of commercial conversion and electrocoating structures on magnesium alloys AZ31B and ZE10A. Surface and Coatings Technology, 2016, 294, 164-176.	2.2	25
31	The impact of carbon coating on the synthesis and properties of Î±â€²â€²-Fe16N2 powders. Physical Chemistry Chemical Physics, 2016, 18, 13010-13017.	1.3	10
32	Development of Cast Alumina-Forming Austenitic Stainless Steels. Jom, 2016, 68, 2803-2810.	0.9	21
33	The corrosion and passivity of sputtered Mgâ€“Ti alloys. Corrosion Science, 2016, 104, 36-46.	3.0	27
34	Field and Laboratory Evaluations of Commercial and Next Generation Alumina-Forming Austenitic Foil for Advanced Recuperators. , 2015, , .		0
35	Performance of chromia- and alumina-forming Fe- and Ni-base alloys exposed to metal dusting environments: The effect of water vapor and temperature. Corrosion Science, 2015, 92, 58-68.	3.0	32
36	Tracer study of oxygen and hydrogen uptake by Mg alloys in air with water vapor. Scripta Materialia, 2015, 106, 38-41.	2.6	8

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37	Film Breakdown and Nano-Porous Mg(OH)₂Formation from Corrosion of Magnesium Alloys in Salt Solutions. Journal of the Electrochemical Society, 2015, 162, C140-C149.	1.3	128
38	The Effects of Water Vapor on the Oxidation Behavior of Alumina Forming Austenitic Stainless Steels. Oxidation of Metals, 2015, 84, 541-565.	1.0	18
39	Electrochemical investigation of stainless steel corrosion in a proton exchange membrane electrolyzer cell. International Journal of Hydrogen Energy, 2015, 40, 12506-12511.	3.8	54
40	Degradation of SS316L bipolar plates in simulated fuel cell environment: Corrosion rate, barrier film formation kinetics and contact resistance. Journal of Power Sources, 2015, 273, 1237-1249.	4.0	69
41	Long-Term Oxidation of Candidate Cast Iron and Stainless Steel Exhaust System Alloys from 650 to 800ÂÂ°C in Air with Water Vapor. Oxidation of Metals, 2014, 82, 359-381.	1.0	37
42	Corrosion of aluminaâ€forming austenitic steel in molten nitrate salts by gravimetric analysis and impedance spectroscopy. Materials and Corrosion - Werkstoffe Und Korrosion, 2014, 65, 267-275.	0.8	64
43	Transmission Electron Microscopy Study of Aqueous Film Formation and Evolution on Magnesium Alloys. Journal of the Electrochemical Society, 2014, 161, C302-C311.	1.3	111
44	Effect of Mo dispersion size and water vapor on oxidation of two-phase directionally solidified NiAlâ€“9Mo in-situ composites. Scripta Materialia, 2014, 80, 33-36.	2.6	6
45	Corrosion Considerations for Thermochemical Biomass Liquefaction Process Systems in Biofuel Production. Jom, 2014, 66, 2583-2592.	0.9	16
46	Tracer Film Growth Study of Hydrogen and Oxygen from the Corrosion of Magnesium in Water. Journal of the Electrochemical Society, 2014, 161, C395-C404.	1.3	30
47	Evaluation of nitrided titanium separator plates for proton exchange membrane electrolyzer cells. Journal of Power Sources, 2014, 272, 954-960.	4.0	51
48	Co-optimization of wrought alumina-forming austenitic stainless steel composition ranges for high-temperature creep and oxidation/corrosion resistance. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 590, 101-115.	2.6	109
49	9 T high magnetic field annealing effects on FeN bulk sample. Journal of Applied Physics, 2014, 115, 17A758.	1.1	9
50	Development of L12-ordered Ni3(Al,Ti)-strengthened alumina-forming austenitic stainless steel alloys. Scripta Materialia, 2013, 69, 816-819.	2.6	99
51	High temperature oxidation of fuel cladding candidate materials in steamâ€“hydrogen environments. Journal of Nuclear Materials, 2013, 440, 420-427.	1.3	363
52	Manufacturing and performance assessment of stamped, laser welded, and nitrided FeCrV stainless steel bipolar plates for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2013, 38, 4734-4739.	3.8	34
53	Evaluation of Commercial and Next Generation Alumina-Forming Austenitic Foil for Advanced Recuperators. , 2013, , .		3
54	Small-angle neutron scattering study of the wet and dry high-temperature oxidation of alumina- and chromia-forming stainless steels. Corrosion Science, 2012, 58, 121-132.	3.0	11

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55	Comparison of Short-Term Oxidation Behavior of Model and Commercial Chromia-Forming Ferritic Stainless Steels in Dry and Wet Air. Oxidation of Metals, 2012, 78, 1-16.	1.0	10
56	Oxidation of fuel cladding candidate materials in steam environments at high temperature and pressure. Journal of Nuclear Materials, 2012, 427, 396-400.	1.3	145
57	Evaluation of Commercial Alumina-Forming Austenitic Foil for Advanced Recuperators. , 2011, , .		2
58	Wet oxidation of stainless steels: New insights into hydrogen ingress. Corrosion Science, 2011, 53, 1633-1638.	3.0	22
59	Modeling the effect of water vapor on the interfacial behavior of high-temperature air in contact with Fe20Cr surfaces. Scripta Materialia, 2011, 64, 1027-1030.	2.6	6
60	Increasing the Upper Temperature Oxidation Limit of Alumina Forming Austenitic Stainless Steels in Air with Water Vapor. Oxidation of Metals, 2011, 75, 337-357.	1.0	85
61	Overview of Strategies for High-Temperature Creep and Oxidation Resistance of Alumina-Forming Austenitic Stainless Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 922-931.	1.1	131
62	Intro to Special Issue. International Journal of Hydrogen Energy, 2011, 36, 4518-4518.	3.8	0
63	Evaluation of Alumina-Forming Austenitic Foil for Advanced Recuperators. Journal of Engineering for Gas Turbines and Power, 2011, 133, .	0.5	14
64	Corrosion as a nanostructure synthesis strategy. Jom, 2010, 62, 31-31.	0.9	0
65	Sulfidationâ€“Oxidation Behavior of FeCrAl and TiCrAl and the Third-Element Effect. Oxidation of Metals, 2010, 74, 1-9.	1.0	10
66	Pre-oxidized and nitrided stainless steel alloy foil for proton exchange membrane fuel cell bipolar plates. Part 2: Single-cell fuel cell evaluation of stamped plates. Journal of Power Sources, 2010, 195, 5619-5627.	4.0	21
67	Aging effects on the mechanical properties of alumina-forming austenitic stainless steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 2079-2086.	2.6	61
68	Pre-oxidized and nitrided stainless steel alloy foil for proton exchange membrane fuel cell bipolar plates: Part 1. Corrosion, interfacial contact resistance, and surface structure. Journal of Power Sources, 2010, 195, 5610-5618.	4.0	41
69	Evaluation of Alumina-Forming Austenitic Foil for Advanced Recuperators. , 2010, , .		0
70	Development of Alumina-Forming Austenitic Alloys for Advanced Recuperators. , 2009, , .		3
71	Evaluation of Mn substitution for Ni in alumina-forming austenitic stainless steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 524, 176-185.	2.6	56
72	Effect of Alloying Additions on Phase Equilibria and Creep Resistance of Alumina-Forming Austenitic Stainless Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 1868-1880.	1.1	97

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73	Composition, Microstructure, and Water Vapor Effects on Internal/External Oxidation of Alumina-Forming Austenitic Stainless Steels. Oxidation of Metals, 2009, 72, 311-333.	1.0	134
74	The development of alumina-forming austenitic stainless steels for high-temperature structural use. Jom, 2008, 60, 12-18.	0.9	136
75	Alloying effects on creep and oxidation resistance of austenitic stainless steel alloys employing intermetallic precipitates. Intermetallics, 2008, 16, 453-462.	1.8	130
76	Design strategies for oxidation-resistant intermetallic and advanced metallic alloys. , 2008, , 3-18.		0
77	Micromachining of bipolar plates used in proton exchange membrane fuel cells. International Journal of Manufacturing Technology and Management, 2008, 13, 124.	0.1	1
78	Characterization and Mitigation of Spark Plug Electrode Erosion in Natural Gas and Automotive Engine Applications. , 2007, , 675.		0
79	Creep-Resistant, Al2O3-Forming Austenitic Stainless Steels. Science, 2007, 316, 433-436.	6.0	337
80	Nitridation of a Super-Ferritic Stainless Steel for PEMFC Bipolar Plate. ECS Transactions, 2007, 11, 1461-1471.	0.3	6
81	Alumina-Forming Austenitic Alloys for Advanced Recuperators. , 2007, , .		5
82	Growth of Cr-Nitrides on commercial Niâ€“Cr and Feâ€“Cr base alloys to protect PEMFC bipolar plates. International Journal of Hydrogen Energy, 2007, 32, 3778-3788.	3.8	98
83	A low-Cr metallic interconnect for intermediate-temperature solid oxide fuel cells. Journal of Power Sources, 2007, 172, 775-781.	4.0	51
84	Protective nitride formation on stainless steel alloys for proton exchange membrane fuel cell bipolar plates. Journal of Power Sources, 2007, 174, 228-236.	4.0	45
85	Metal dusting of ferritic Feâ€“Ge in the absence of cementite. Scripta Materialia, 2007, 56, 281-284.	2.6	12
86	Effects of minor alloy additions and oxidation temperature on protective alumina scale formation in creep-resistant austenitic stainless steels. Scripta Materialia, 2007, 57, 1117-1120.	2.6	132
87	Microstructure and Residual Stress of Alumina Scale Formed on Ti2AlC at High Temperature in Air. Oxidation of Metals, 2007, 68, 97-111.	1.0	102
88	Alumina-Forming Austenitic Stainless Steels Strengthened by Laves Phase and MC Carbide Precipitates. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2737-2746.	1.1	139
89	Corrosion behavior of CrN, Cr2N and Ï€ phase surfaces on nitrided Niâ€“50Cr for proton exchange membrane fuel cell bipolar plates. Corrosion Science, 2006, 48, 3157-3171.	3.0	92
90	Comparison of Oxidation Behavior and Electrical Properties of Doped NiO- and Cr2O3-Forming Alloys for Solid-Oxide, Fuel-Cell Metallic Interconnects. Oxidation of Metals, 2006, 65, 237-261.	1.0	30

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91	The formation of protective nitride surfaces for PEM fuel cell metallic bipolar plates. Jom, 2006, 58, 50-57.	0.9	62
92	Interdiffusion in Î³ (face-centered cubic) Ni-Cr-X (X=Al, Si, Ge, or Pd) alloys at 900 Â°C. Journal of Phase Equilibria and Diffusion, 2006, 27, 665-670.	0.5	3
93	Interdiffusion in Î³ (Face-Centered Cubic) Ni-Cr-<I>X</I> (<I>X</I> = Al, Si, Ge, or Pd) Alloys at 900 Â°C. Journal of Phase Equilibria and Diffusion, 2006, 27, 665-670.	0.5	2
94	Characterization of erosion and failure processes of spark plugs after field service in natural gas engines. Wear, 2005, 259, 1063-1067.	1.5	19
95	Feasibility assessment of self-grading metallic bond coat alloys for EBCs/TBCs to protect Si-Based ceramics. Scripta Materialia, 2005, 52, 393-397.	2.6	6
96	Effects of Fe additions on the mechanical properties and oxidation behavior of CrTa Laves phase reinforced Cr. Scripta Materialia, 2005, 52, 815-819.	2.6	30
97	Effects of Fe on the oxidation/internal nitridation behavior and tensile properties of Cr and oxide dispersion ductilized Cr. Scripta Materialia, 2005, 52, 809-814.	2.6	11
98	Coating and near-surface modification design strategies for protective and functional surfaces. Materials and Corrosion - Werkstoffe Und Korrosion, 2005, 56, 748-755.	0.8	13
99	On the improvement of the ductility of molybdenum by spinel (MgAl₂O₄) particles. International Journal of Materials Research, 2005, 96, 632-637.	0.8	9
100	Preferential thermal nitridation to form pin-hole free Cr-nitrides to protect proton exchange membrane fuel cell metallic bipolar plates. Scripta Materialia, 2004, 50, 1017-1022.	2.6	168
101	Oxidation Behavior of Cr2N, CrNbN, and CrTaN Phase Mixtures Formed on Nitrided Cr and Laves-Reinforced Cr Alloys. Oxidation of Metals, 2004, 61, 379-401.	1.0	24
102	Thermally nitrided stainless steels for polymer electrolyte membrane fuel cell bipolar plates. Journal of Power Sources, 2004, 138, 79-85.	4.0	142
103	Thermally nitrided stainless steels for polymer electrolyte membrane fuel cell bipolar plates. Journal of Power Sources, 2004, 138, 86-93.	4.0	120
104	Alloy design of intermetallics for protective scale formation and for use as precursors for complex ceramic phase surfaces. Intermetallics, 2004, 12, 779-789.	1.8	53
105	Synthesis of Ternary Nitrides from Intermetallic Precursors:â€‰ Modes of Nitridation in Model Cr3Pt Alloys To Form Cr3PtN Antiperovskite and Application to Other Systems. Chemistry of Materials, 2004, 16, 1984-1990.	3.2	12
106	Nitrogen impurity gettering in oxide dispersion ductilized chromium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 358, 243-254.	2.6	16
107	Assessment of Thermal Nitridation to Protect Metal Bipolar Plates in Polymer Electrolyte Membrane Fuel Cells. Electrochemical and Solid-State Letters, 2002, 5, A245.	2.2	74
108	Title is missing!. Oxidation of Metals, 2002, 58, 297-318.	1.0	10

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109	Templated growth of a complex nitride island dispersion through an internal nitridation reaction. Journal of Materials Research, 2001, 16, 2784-2787.	1.2	11
110	Long Term Oxidation of Model and Engineering TiAl Alloys. Materials Research Society Symposia Proceedings, 2000, 646, 444.	0.1	4
111	Alloy design strategies for promoting protective oxide-scale formation. Jom, 2000, 52, 16-21.	0.9	174
112	Oxidation resistance and mechanical properties of Laves phase reinforced Cr in-situ composites. Intermetallics, 2000, 8, 1111-1118.	1.8	50
113	Physical metallurgy and mechanical properties of transition-metal Laves phase alloys. Intermetallics, 2000, 8, 1119-1129.	1.8	198
114	Correlation of alloy microstructure with oxidation behavior in chromia-forming intermetallic-reinforced Cr alloys. Materials at High Temperatures, 2000, 17, 235-243.	0.5	12
115	Thermodynamics of Selected Ti-Al and Ti-Al-Cr Alloys. Oxidation of Metals, 1999, 52, 537-556.	1.0	45
116	Oxidation Behavior of Two-Phase Î³ + Ïƒ Nb-Ti-Al Alloys. Oxidation of Metals, 1999, 51, 539-556.	1.0	19
117	A phosphoric acid surface treatment for improved oxidation resistance of gamma titanium aluminides. Intermetallics, 1998, 6, 335-337.	1.8	36
118	Elastic and Plastic Properties of Gamma + Laves Phase In-situ Composite Alloys Using Nanoindentation Techniques. Materials Research Society Symposia Proceedings, 1998, 552, 1.	0.1	0
119	The role of Cr in promoting protective alumina scale formation by Î³-based Ti_Al_Cr alloysâ€" II. Oxidation behavior in air. Acta Materialia, 1997, 45, 2371-2382.	3.8	100
120	The role of Cr in promoting protective alumina scale formation by Î³-based Ti_Al_Cr alloysâ€"I. Compatibility with alumina and oxidation behavior in oxygen. Acta Materialia, 1997, 45, 2357-2369.	3.8	97
121	The oxidation and protection of gamma titanium aluminides. Jom, 1996, 48, 46-50.	0.9	177
122	Modification of Microstructure for Improved Oxidation Resistance in Î³-Based Ti-Al-X Alloys. Materials and Manufacturing Processes, 1996, 11, 635-653.	2.7	7
123	Microstructure of alumina-forming oxidation resistant Al-Ti-Cr alloys. Scripta Metallurgica Et Materialia, 1995, 32, 1659-1664.	1.0	46
124	Service Limitations for Oxidation Resistant Intermetallic Compounds. Materials Research Society Symposia Proceedings, 1994, 364, 1273.	0.1	23
125	Microstructure/Oxidation/Microhardness Correlations in Î³-Based And ãƒ„-Based Ai-Ti-Cr Alloys. Materials Research Society Symposia Proceedings, 1994, 364, 1309.	0.1	10
126	On the transition to protective alumina formation at high temperature in Nb-Ti-Al alloys. Scripta Metallurgica Et Materialia, 1993, 28, 115-120.	1.0	10

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127	The effect of nitrogen on the oxidation behavior of 25Nbî—¸25Tiî—¸50Al. Scripta Metallurgica Et Materialia, 1992, 26, 767-770.	1.0	2
128	Machining of proton exchange membrane fuel cells using micromilling tools. , 0, , .		0