Tarasankar DebRoy

List of PR Articles by Year
in descending order

196 PR articles	23,227 PR citations	10584 62 PR h-index	5520 146 g-index
214 documents	26251 doc citations	11035 67 h-index	11604 citing authors

#	Article	IF	PR Citations
1	Analytical modelling of scanning strategy effect on temperature field and melt track dimensions in laser powder bed fusion. Additive Manufacturing, 2024, 82, 104046.	3.4	8
2	Control of grain structure, phases, and defects in additive manufacturing of high-performance metallic components. Progress in Materials Science, 2023, 138, 101153.	35.9	190
3	Crack free metal printing using physics informed machine learning. Acta Materialia, 2022, 226, 117612.	8.7	55
4	Solidification cracking of a nickel alloy during high-power keyhole mode laser welding. Journal of Materials Processing Technology, 2022, 305, 117576.	6.8	25
5	High-throughput screening of surface roughness during additive manufacturing. Journal of Manufacturing Processes, 2022, 81, 65-77.	6.3	34
6	Superior printed parts using history and augmented machine learning. Npj Computational Materials, 2022, 8, .	10.7	39
7	Mechanistic models for additive manufacturing of metallic components. Progress in Materials Science, 2021, 116, 100703.	35.9	410
8	Deposit geometry and oxygen concentration spatial variations due to composition change in printed functionally graded components. International Journal of Heat and Mass Transfer, 2021, 164, 120526.	5.6	6
9	An improved heat transfer and fluid flow model of wire-arc additive manufacturing. International Journal of Heat and Mass Transfer, 2021, 167, 120835.	5.6	60
10	Spatial and temporal variation of hardness of a printed steel part. Acta Materialia, 2021, 209, 116775.	8.7	31
11	The case for digital twins in metal additive manufacturing. JPhys Materials, 2021, 4, 040401.	3.7	58
12	Physics-informed machine learning and mechanistic modeling of additive manufacturing to reduce defects. Applied Materials Today, 2021, 24, 101123.	3.9	74
13	Analytical estimation of fusion zone dimensions and cooling rates in part scale laser powder bed fusion. Additive Manufacturing, 2021, 46, 102222.	3.4	21
14	Towards developing multiscale-multiphysics models and their surrogates for digital twins of metal additive manufacturing. Additive Manufacturing, 2021, 46, 102089.	3.4	62
15	Residual stresses in wire-arc additive manufacturing â€“ Hierarchy of influential variables. Additive Manufacturing, 2020, 35, 101355.	3.4	73
16	Machine learning based hierarchy of causative variables for tool failure in friction stir welding. Acta Materialia, 2020, 192, 67-77.	8.7	55
17	Metallurgy, mechanistic models and machine learning in metal printing. Nature Reviews Materials, 2020, 6, 48-68.	78.1	406
18	Control of asymmetric track geometry in printed parts of stainless steels, nickel, titanium and aluminum alloys. Computational Materials Science, 2020, 182, 109791.	3.2	9

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19	Additive manufacturing of functionally graded transition joints between ferritic and austenitic alloys. Journal of Alloys and Compounds, 2019, 770, 995-1003.	6.0	112
20	Residual stresses and distortion in the patterned printing of titanium and nickel alloys. Additive Manufacturing, 2019, 29, 100808.	3.4	61
21	Conditions for void formation in friction stir welding from machine learning. Npj Computational Materials, 2019, 5, .	10.7	77
22	Harnessing the scientific synergy of welding and additive manufacturing. Science and Technology of Welding and Joining, 2019, 24, 361-366.	3.1	29
23	Printability of 316 stainless steel. Science and Technology of Welding and Joining, 2019, 24, 412-419.	3.1	41
24	Three-dimensional grain growth during multi-layer printing of a nickel-based alloy Inconel 718. Additive Manufacturing, 2019, 25, 448-459.	3.4	78
25	A digital twin for rapid qualification of 3D printed metallic components. Applied Materials Today, 2019, 14, 59-65.	3.9	288
26	Experiments and simulations on solidification microstructure for Inconel 718 in powder bed fusion electron beam additive manufacturing. Additive Manufacturing, 2019, 25, 511-521.	3.4	72
27	Laser weld geometry and microstructure of cast Uranium-6 wt% niobium alloy. Journal of Nuclear Materials, 2019, 514, 224-237.	2.9	7
28	Heat and fluid flow in additive manufacturingâ€"Part I: Modeling of powder bed fusion. Computational Materials Science, 2018, 150, 304-313.	3.2	178
29	Heat and fluid flow in additive manufacturing â€" Part II: Powder bed fusion of stainless steel, and titanium, nickel and aluminum base alloys. Computational Materials Science, 2018, 150, 369-380.	3.2	230
30	Additive manufacturing of metallic components â€" Process, structure and properties. Progress in Materials Science, 2018, 92, 112-224.	35.9	7,329
31	Special features of double pulsed gas metal arc welding. Journal of Materials Processing Technology, 2018, 251, 369-375.	6.8	63
32	Residual stresses and distortion in additively manufactured compositionally graded and dissimilar joints. Computational Materials Science, 2018, 143, 325-337.	3.2	114
33	Mitigation of lack of fusion defects in powder bed fusion additive manufacturing. Journal of Manufacturing Processes, 2018, 36, 442-449.	6.3	227
34	The Hardness of Additively Manufactured Alloys. Materials, 2018, 11, 2070.	2.9	142
35	Fusion zone geometries, cooling rates and solidification parameters during wire arc additive manufacturing. International Journal of Heat and Mass Transfer, 2018, 127, 1084-1094.	5.6	225
36	Three-dimensional modeling of grain structure evolution during welding of an aluminum alloy. Acta Materialia, 2017, 126, 413-425.	8.7	170

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37	Dimensionless numbers in additive manufacturing. Journal of Applied Physics, 2017, 121, .	2.1	159
38	Crystal growth during keyhole mode laser welding. Acta Materialia, 2017, 133, 10-20.	8.7	112
39	Building blocks for a digital twin of additive manufacturing. Acta Materialia, 2017, 135, 390-399.	8.7	359
40	A pathway to microstructural refinement through double pulsed gas metal arc welding. Scripta Materialia, 2017, 134, 61-65.	5.4	60
41	Building digital twins of 3D printing machines. Scripta Materialia, 2017, 135, 119-124.	5.4	219
42	An improved prediction of residual stresses and distortion in additive manufacturing. Computational Materials Science, 2017, 126, 360-372.	3.2	712
43	Mitigation of thermal distortion during additive manufacturing. Scripta Materialia, 2017, 127, 79-83.	5.4	195
44	Printability of alloys for additive manufacturing. Scientific Reports, 2016, 6, .	3.5	454
45	Origin of grain orientation during solidification of an aluminum alloy. Acta Materialia, 2016, 115, 123-131.	8.7	250
46	Towards a Map of Solidification Cracking Risk in Laser Welding of Austenitic Stainless Steels. Physics Procedia, 2015, 78, 230-239.	1.1	12
47	Evolution of solidification texture during additive manufacturing. Scientific Reports, 2015, 5, .	3.5	456
48	Employing microsecond pulses to form laserâ€fired contacts in photovoltaic devices. Progress in Photovoltaics: Research and Applications, 2015, 23, 1025-1036.	6.8	4
49	Asymmetry in steel welds with dissimilar amounts of sulfur. Scripta Materialia, 2015, 108, 88-91.	5.4	22
50	Spatial variation of melt pool geometry, peak temperature and solidification parameters during laser assisted additive manufacturing process. Materials Science and Technology, 2015, 31, 924-930.	1.8	257
51	Cooling rates and peak temperatures during friction stir welding of a high-carbon steel. Scripta Materialia, 2015, 94, 36-39.	5.4	53
52	Real time monitoring of laser beam welding keyhole depth by laser interferometry. Science and Technology of Welding and Joining, 2014, 19, 560-564.	3.1	54
53	Weld bead center line shift during laser welding of austenitic stainless steels with different sulfur content. Scripta Materialia, 2014, 71, 37-40.	5.4	19
54	Friction stir welding of mild steel: Tool durability and steel microstructure. Materials Science and Technology, 2014, 30, 1050-1056.	1.8	44

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55	Toward an integrated computational system for describing the additive manufacturing process for metallic materials. Additive Manufacturing, 2014, 1-4, 52-63.	3.4	77
56	Material adhesion and stresses on friction stir welding tool pins. Science and Technology of Welding and Joining, 2014, 19, 534-540.	3.1	46
57	Phenomenological Modeling of Fusion Welding Processes. MRS Bulletin, 2013, 19, 29-35.	4.1	34
58	A Smart Bi-Directional Model of Heat Transfer and Free Surface Flow in Gas-Metal-Arc Fillet Welding for Practising Engineers. Welding in the World, Le Soudage Dans Le Monde, 2013, 49, 32-48.	2.3	4
59	Solidification Map of a Nickel-Base Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 45, 2142-2151.	2.1	88
60	Neural network models of peak temperature, torque, traverse force, bending stress and maximum shear stress during friction stir welding. Science and Technology of Welding and Joining, 2012, 17, 460-466.	3.1	54
61	Tool durability maps for friction stir welding of an aluminium alloy. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 3552-3570.	2.0	34
62	Diamond growth with locally supplied methane and acetylene. Journal of Materials Research, 2011, 7, 379-383.	2.5	4
63	Review: Friction stir welding tools. Science and Technology of Welding and Joining, 2011, 16, 325-342.	3.1	715
64	Influence of oxygen on weld geometry in fibre laser and fibre laserâ€“GMA hybrid welding. Science and Technology of Welding and Joining, 2011, 16, 166-173.	3.1	25
65	Toward optimum friction stir welding tool shoulder diameter. Scripta Materialia, 2011, 64, 9-12.	5.4	245
66	Synthesis of nanocomposite thin films with self-assembled structures by pulsed ion beam ablation of MoS2 target. Materials Letters, 2011, 65, 4-6.	2.5	11
67	Tool Geometry for Friction Stir Weldingâ€”Optimum Shoulder Diameter. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 2716-2722.	2.1	111
68	Back-of-the-envelope calculations in friction stir welding â€“ Velocities, peak temperature, torque, and hardness. Acta Materialia, 2011, 59, 2020-2028.	8.7	78
69	Scaling of spiking and humping in keyhole welding. Journal Physics D: Applied Physics, 2011, 44, 245501.	3.0	18
70	Role of surface-active elements during keyhole-mode laser welding. Journal Physics D: Applied Physics, 2011, 44, 485203.	3.0	26
71	Load bearing capacity of tool pin during friction stir welding. International Journal of Advanced Manufacturing Technology, 2011, 61, 911-920.	2.7	106
72	Origin of stray grain formation in single-crystal superalloy weld pools from heat transfer and fluid flow modeling. Acta Materialia, 2010, 58, 1441-1454.	8.7	153

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73	Friction stir welding of dissimilar alloys â€“ a perspective. Science and Technology of Welding and Joining, 2010, 15, 266-270.	3.1	262
74	Cooling rate in 800 to 500Â°C range from dimensional analysis. Science and Technology of Welding and Joining, 2010, 15, 423-427.	3.1	17
75	A Genetic Algorithm-Assisted Inverse Convective Heat Transfer Model for Tailoring Weld Geometry. Materials and Manufacturing Processes, 2009, 24, 384-397.	4.7	30
76	Problems and issues in laser-arc hybrid welding. International Materials Reviews, 2009, 54, 223-244.	17.7	212
77	Torque, power requirement and stir zone geometry in friction stir welding through modeling and experiments. Scripta Materialia, 2009, 60, 13-16.	5.4	173
78	Unusual wavy weld pool boundary from dimensional analysis. Scripta Materialia, 2009, 60, 68-71.	5.4	50
79	Strains and strain rates during friction stir welding. Scripta Materialia, 2009, 61, 863-866.	5.4	190
80	The effects of Prandtl number on wavy weld boundary. International Journal of Heat and Mass Transfer, 2009, 52, 3790-3798.	5.6	29
81	Heat transfer and fluid flow during electron beam welding of 21Crâ€“6Niâ€“9Mn steel and Tiâ€“6Alâ€“4V alloy. Journal Physics D: Applied Physics, 2009, 42, 025503.	3.0	122
82	Critical assessment: Friction stir welding of steels. Science and Technology of Welding and Joining, 2009, 14, 193-196.	3.1	129
83	Stray Grain Formation in Welds of Single-Crystal Ni-Base Superalloy CMSX-4. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 41, 181-193.	2.1	63
84	Recent advances in friction-stir welding â€“ Process, weldment structure and properties. Progress in Materials Science, 2008, 53, 980-1023.	35.9	1,879
85	An experimental and theoretical study of gas tungsten arc welding of stainless steel plates with different sulfur concentrations. Acta Materialia, 2008, 56, 2133-2146.	8.7	78
86	Toward reliable calculations of heat and plastic flow during friction stir welding of Ti-6Al-4V alloy. International Journal of Materials Research, 2008, 99, 434-444.	0.4	69
87	Numerical simulation of heat transfer and fluid flow in GTA/Laser hybrid welding. Science and Technology of Welding and Joining, 2008, 13, 683-693.	3.1	101
88	Orientation Imaging Microscopy of Stray Grain Formation in Single Crystal Weld Structures. Microscopy and Microanalysis, 2008, 14, 40-41.	0.4	0
89	Heat transfer and fluid flow during keyhole mode laser welding of tantalum, Tiâ€“6Alâ€“4V, 304L stainless steel and vanadium. Journal Physics D: Applied Physics, 2007, 40, 5753-5766.	3.0	382
90	Three-dimensional heat and material flow during friction stir welding of mild steel. Acta Materialia, 2007, 55, 883-895.	8.7	579

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91	Tailoring gas tungsten arc weld geometry using a genetic algorithm and a neural network trained with convective heat flow calculations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 454-455, 477-486.	6.3	28
92	Heat Transfer and Fluid Flow during Gas-Metal-Arc Fillet Welding for Various Joint Configurations and Welding Positions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 506-519.	2.1	69
93	A Convective Heat-Transfer Model for Partial and Full Penetration Keyhole Mode Laser Welding of a Structural Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 39, 98-112.	2.1	110
94	Numerical modelling of 3D plastic flow and heat transfer during friction stir welding of stainless steel. Science and Technology of Welding and Joining, 2006, 11, 526-537.	3.1	237
95	Non-isothermal grain growth in metals and alloys. Materials Science and Technology, 2006, 22, 253-278.	1.8	54
96	Numerical simulation of three-dimensional heat transfer and plastic flow during friction stir welding. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 1247-1259.	2.1	327
97	Improving reliability of heat and fluid flow calculation during conduction mode laser spot welding by multivariable optimisation. Science and Technology of Welding and Joining, 2006, 11, 143-153.	3.1	53
98	Neural network model of heat and fluid flow in gas metal arc fillet welding based on genetic algorithm and conjugate gradient optimisation. Science and Technology of Welding and Joining, 2006, 11, 106-119.	3.1	15
99	Liquid metal expulsion during laser spot welding of 304 stainless steel. Journal Physics D: Applied Physics, 2006, 39, 525-534.	3.0	51
100	Dimensionless correlation to estimate peak temperature during friction stir welding. Science and Technology of Welding and Joining, 2006, 11, 606-608.	3.1	50
101	Tailoring weld geometry during keyhole mode laser welding using a genetic algorithm and a heat transfer model. Journal Physics D: Applied Physics, 2006, 39, 1257-1266.	3.0	36
102	Modeling of ferrite formation in a duplex stainless steel weld considering non-uniform starting microstructure. Acta Materialia, 2005, 53, 4441-4453.	8.7	48
103	Optimization of the johnson-mehl-avarami equation parameters for Î±-ferrite to Î³-austenite transformation in steel welds using a genetic algorithm. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 15-22.	2.1	32
104	Tailoring complex weld geometry through reliable heat-transfer and fluid-flow calculations and a genetic algorithm. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 2725-2735.	2.1	14
105	Integrated modelling of thermal cycles, austenite formation, grain growth and decomposition in the heat affected zone of carbon steel. Science and Technology of Welding and Joining, 2005, 10, 574-582.	3.1	33
106	Improving reliability of modelling heat and fluid flow in complex gas metal arc fillet weldsâ€"part I: an engineering physics model. Journal Physics D: Applied Physics, 2005, 38, 119-126.	3.0	14
107	A computational procedure for finding multiple solutions of convective heat transfer equations. Journal Physics D: Applied Physics, 2005, 38, 2977-2985.	3.0	32
108	Improving reliability of modelling heat and fluid flow in complex gas metal arc fillet weldsâ€"part II: application to welding of steel. Journal Physics D: Applied Physics, 2005, 38, 127-134.	3.0	12

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109	Grain topology in Tiâ€“6Alâ€“4V weldsâ€”Monte Carlo simulation and experiments. Journal Physics D: Applied Physics, 2004, 37, 2191-2196.	3.0	23
110	Composition change of stainless steel during microjoining with short laser pulse. Journal of Applied Physics, 2004, 96, 4547-4555.	2.1	51
111	Guaranteed fillet weld geometry from heat transfer model and multivariable optimization. International Journal of Heat and Mass Transfer, 2004, 47, 5793-5806.	5.6	36
112	Probing unknown welding parameters from convective heat transfer calculation and multivariable optimization. Journal Physics D: Applied Physics, 2004, 37, 140-150.	3.0	58
113	Nonisothermal growth and dissolution of inclusions in liquid steels. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2003, 34, 267-269.	2.4	24
114	Kinetic modeling of phase transformations occurring in the HAZ of C-Mn steel welds based on direct observations. Acta Materialia, 2003, 51, 3333-3349.	8.7	100
115	Heat transfer and fluid flow during laser spot welding of 304 stainless steel. Journal Physics D: Applied Physics, 2003, 36, 1388-1398.	3.0	277
116	Alloying element vaporization during laser spot welding of stainless steel. Journal Physics D: Applied Physics, 2003, 36, 3079-3088.	3.0	89
117	Computational Modeling:A Path to Expand the Knowledge Base in Fusion Welding. Indian Welding Journal, 2003, 36, 59.	0.2	2
118	Kinetics of ferrite to austenite transformation during welding of 1005 steel. Scripta Materialia, 2002, 46, 753-757.	5.4	38
119	Modeling and real time mapping of phases during GTA welding of 1005 steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 333, 320-335.	6.3	83
120	Pore formation during continuous wave Nd:YAG laser welding of aluminium for automotive applications. Welding International, 2001, 15, 275-281.	1.1	34
121	Weld metal composition change during conduction mode laser welding of aluminum alloy 5182. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2001, 32, 163-172.	2.4	186
122	Geometry of laser spot welds from dimensionless numbers. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2001, 32, 941-947.	2.4	61
123	Three-dimensional monte carlo simulation of grain growth in zone-refined iron. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2001, 32, 1195-1201.	2.4	22
124	Time-temperature-transformation diagrams for the growth and dissolution of inclusions in liquid steels. Scripta Materialia, 2001, 44, 847-852.	5.4	26
125	Effects of time, temperature, and steel composition on growth and dissolution of inclusions in liquid steels. Ironmaking and Steelmaking, 2001, 28, 450-454.	1.5	17
126	Effects of time, temperature, and steel composition on growth and dissolution of inclusions in liquid steels. Ironmaking and Steelmaking, 2001, 28, 450-454.	1.5	10

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127	Three dimensional Monte Carlo simulation of grain growth during GTA welding of titanium. Acta Materialia, 2000, 48, 4813-4825.	8.7	119
128	Numerical modeling of enhanced nitrogen dissolution during gas tungsten Arc welding. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2000, 31, 1371-1385.	2.4	31
129	Modeling of inclusion growth and dissolution in the weld pool. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2000, 31, 161-169.	2.4	42
130	Three-dimensional monte carlo simulation of grain growth in the heat-affected zone of a 2.25Cr-1Mo steel weld. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2000, 31, 529-536.	2.4	47
131	Continuous wave-Nd: yttriumâ€"aluminumâ€"garnet laser welding of AM60B magnesium alloy. Journal of Laser Applications, 2000, 12, 91-100.	1.6	66
132	FormaciÃ³n de porosidad durante la soldadura lÃ¡ser de Nd: YAG de onda continua en aleaciones de aluminio para aplicaciones automotrices. Revista De Metalurgia, 2000, 36, 108-117.	0.7	10
133	Modeling macro-and microstructures of Gas-Metal-Arc Welded HSLA-100 steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1999, 30, 483-493.	2.4	91
134	Current issues and problems in laser welding of automotive aluminium alloys. International Materials Reviews, 1999, 44, 238-266.	17.7	311
135	Quantitative modelling of motion, temperature gyrations, and growth of inclusions in weld pool. Science and Technology of Welding and Joining, 1998, 3, 33-41.	3.1	23
136	Enhanced dissolution of nitrogen during gas tungsten arc welding of steels. Science and Technology of Welding and Joining, 1998, 3, 190-203.	3.1	25
137	Enhanced dissolution of nitrogen during gas tungsten arc welding of steels. Science and Technology of Welding and Joining, 1998, 3, 190-203.	3.1	6
138	Quantitative modelling of motion, temperature gyrations, and growth of inclusions in weld pool. Science and Technology of Welding and Joining, 1998, 3, 33-41.	3.1	4
139	Weld metal microstructure prediction from fundamentals of transport phenomena and phase transformation theory. Science and Technology of Welding and Joining, 1997, 2, 53-58.	3.1	11
140	Absorption and transport of hydrogen during gas metal arc welding of low alloy steel. Science and Technology of Welding and Joining, 1997, 2, 174-184.	3.1	34
141	Kinetics of directed oxidation of Al-Mg alloys into A12O3 preforms. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 232, 39-46.	6.3	7
142	Weld metal microstructure prediction from fundamentals of transport phenomena and phase transformation theory. Science and Technology of Welding and Joining, 1997, 2, 53-58.	3.1	2
143	Absorption and transport of hydrogen during gas metal arc welding of low alloy steel. Science and Technology of Welding and Joining, 1997, 2, 174-184.	3.1	6
144	NUMERICAL PREDICTION OF FLUID FLOW AND HEAT TRANSFER IN WELDING WITH A MOVING HEAT SOURCE. Numerical Heat Transfer; Part A: Applications, 1996, 29, 115-129.	2.5	132

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145	Interdiffusion in the MgO-Al2O3 spinel with or without some dopants. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 2105-2114.	2.1	42
146	Probing the initial stage of synthesis of Al2O3/Al composites by directed oxidation of Al-Mg alloys. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1996, 27, 43-50.	2.4	13
147	Kinetics of directed oxidation of Al-Mg alloys in the initial and final stages of synthesis of Al2O3/Al composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1996, 210, 64-75.	6.3	26
148	Growth stage kinetics in the synthesis of Al2O3/Al composites by directed oxidation of Al-Mg and Al-Mg-Si alloys. Journal of the European Ceramic Society, 1996, 16, 1351-1363.	6.2	15
149	Metal distribution in alumina/aluminium composites synthesized by directed metal oxidation. Journal of Materials Science, 1996, 31, 5101-5108.	3.5	3
150	Coarsening of oxide inclusions in low alloy steel welds. Science and Technology of Welding and Joining, 1996, 1, 17-27.	3.1	27
151	Coarsening of oxide inclusions in low alloy steel welds. Science and Technology of Welding and Joining, 1996, 1, 17-27.	3.1	1
152	A general model for partitioning of gases between a metal and its plasma environment. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1995, 26, 149-157.	2.4	33
153	Development of macro- and microstructures of carbonâ€“manganese low alloy steel welds: inclusion formation. Materials Science and Technology, 1995, 11, 186-199.	1.8	117
154	Physical processes in fusion welding. Reviews of Modern Physics, 1995, 67, 85-112.	41.0	496
155	Electrical Conductivity of Alumina/Aluminum Composites Synthesized by Directed Metal Oxidation. Journal of the American Ceramic Society, 1994, 77, 3045-3047.	3.7	10
156	Oxide Matrix Composite by Directional Oxidation of a Commercial Aluminum-Magnesium Alloy. Journal of the American Ceramic Society, 1994, 77, 1296-1300.	3.7	24
157	Effect of Pressure on Plasma-Assisted Chemical Vapor. Deposition of Silicon Oxide(s). Journal of the American Ceramic Society, 1994, 77, 1366-1368.	3.7	0
158	Optical emissions during plasma assisted chemical vapor deposition of diamond-like carbon films. Diamond and Related Materials, 1994, 4, 69-75.	4.8	11
159	Transport phenomena in the scale-up of hot filament-assisted chemical vapor deposition of diamond. Surface and Coatings Technology, 1993, 62, 349-355.	5.7	5
160	Experimental studies on nitrogen solubility in Nd 2 Fe 14 B alloy in the temperature range 773â€“1143 K. Journal of Magnetism and Magnetic Materials, 1993, 127, 307-314.	2.8	5
161	Calculation of weld metal composition change in high-power conduction mode carbon dioxide laser-welded stainless steels. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1993, 24, 145-155.	1.6	72
162	Optical emission investigation of the plasma enhanced chemical vapor deposition of silicon oxide films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1992, 10, 3395-3400.	1.8	10

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163	Current Issues and Problems in Welding Science. Science, 1992, 257, 497-502.	36.4	253
164	Modeling of substrate surface temperature distribution during hot-filament assisted diamond deposition. Diamond and Related Materials, 1992, 1, 1177-1184.	4.8	3
165	Nitrogen activity determination in plasmas. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1992, 23, 207-214.	1.6	27
166	Thermochemistry and diffusion of nitrogen in solid molybdenum. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1991, 22, 219-224.	1.6	2
167	Effect of temperature and composition on surface tension in Fe-Ni-Cr alloys containing sulfur. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1991, 22, 557-560.	1.6	109
168	Laser-Induced Calcite-Aragonite Transition. Journal of the American Ceramic Society, 1990, 73, 733-735.	3.7	9
169	Fuming of stannous oxide from silicate melts. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1990, 21, 449-454.	1.6	6
170	Modeling of interfacial phenomena in welding. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1990, 21, 600-603.	1.6	32
171	TEM characterization of structural changes in graphite plates due to pulsed CO2 laser irradiation. Journal of Materials Science Letters, 1990, 9, 1071-1074.	1.0	3
172	Oxidation of diamond films synthesized by hot filament assisted chemical vapor deposition. Journal of Materials Research, 1990, 5, 2483-2489.	2.5	52
173	Heat transfer during Nd: Yag pulsed laser welding and its effect on solidification structure of austenitic stainless steels. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1989, 20, 957-967.	0.8	105
174	Emission spectroscopy of plasma during laser welding of AISI 201 stainless steel. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1989, 20, 277-286.	1.6	58
175	Diamond formation in air by the Fedoseev-Derjaguin laser process. Carbon, 1989, 27, 289-294.	10.7	39
176	Separation of synthetic diamond from carbon black by oxidation. Carbon, 1988, 26, 591-593.	10.7	4
177	Desulphurization of coal-derived char using mixtures of steam and methane. Fuel, 1988, 67, 1542-1547.	7.5	1
178	Free surface flow and heat transfer in conduction mode laser welding. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1988, 19, 851-858.	1.6	127
179	Effects of oxygen and sulfur on alloying element vaporization rates during laser welding. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1988, 19, 967-972.	1.6	43
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