Peng-Sheng Wei

List of Publications by Year
in descending order

108 papers	1,327 citations	304368 22 h-index	433756 31 g-index
109 all docs	109 docs citations	109 times ranked	541 citing authors

#	Article	IF	Citations
1	Modeling Dynamic Electrical Resistance During Resistance Spot Welding. Journal of Heat Transfer, 2001, 123, 576-585.	1.2	58
2	Electrical contact resistance effect on resistance spot welding. International Journal of Heat and Mass Transfer, 2012, 55, 3316-3324.	2.5	54
3	Energy considerations in high-energy beam drilling. International Journal of Heat and Mass Transfer, 1990, 33, 2207-2217.	2.5	48
4	Transport Phenomena During Resistance Spot Welding. Journal of Heat Transfer, 1996, 118, 762-773.	1.2	45
5	Axisymmetric Nugget Growth During Resistance Spot Welding. Journal of Heat Transfer, 1990, 112, 309-316.	1.2	44
6	Mass, Momentum, and Energy Transport in a Molten Pool When Welding Dissimilar Metals. Journal of Heat Transfer, 1999, 121, 451-461.	1.2	44
7	Unsteady marangoni flow in a molten pool when welding dissimilar metals. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2000, 31, 1387-1403.	1.0	44
8	Nucleation of bubbles on a solidification frontâ€"experiment and analysis. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2003, 34, 321-332.	1.0	44
9	Shape of a pore trapped in solid during solidification. International Journal of Heat and Mass Transfer, 2000, 43, 263-280.	2.5	42
10	Growths of bubble/pore sizes in solid during solidificationâ€"an in situ measurement and analysis. Journal of Crystal Growth, 2004, 270, 662-673.	0.7	38
11	Mechanisms of Spiking and Humping in Keyhole Welding. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 383-394.	1.4	37
12	Thermal Science of Weld Bead Defects: A Review. Journal of Heat Transfer, 2011, 133, .	1.2	36
13	Investigation of High-Intensity Beam Characteristics on Welding Cavity Shape and Temperature Distribution. Journal of Heat Transfer, 1990, 112, 163-169.	1.2	30
14	Beam focusing characteristics effect on energy reflection and absorption in a drilling or welding cavity of paraboloid of revolution. International Journal of Heat and Mass Transfer, 1998, 41, 3299-3308.	2.5	30
15	Factors Affecting Nugget Growth With Mushy-Zone Phase Change During Resistance Spot Welding. Journal of Heat Transfer, 1991, 113, 643-649.	1.2	29
16	Three-Dimensional Analytical Temperature Field Around the Welding Cavity Produced by a Moving Distributed High-Intensity Beam. Journal of Heat Transfer, 1993, 115, 848-856.	1.2	29
17	The effects of Prandtl number on wavy weld boundary. International Journal of Heat and Mass Transfer, 2009, 52, 3790-3798.	2.5	28
18	Surface Ripple in Electron-Beam Welding Solidification. Journal of Heat Transfer, 1996, 118, 960-969.	1.2	27

#	ARTICLE	IF	CITATIONS
19	An analytical self-consistent determination of a bubble with a deformed cap trapped in solid during solidification. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2002, 33, 91-100.	1.0	27
20	Pore shape development from a bubble captured by a solidification front. International Journal of Heat and Mass Transfer, 2012, 55, 8129-8138.	2.5	27
21	Absorption coefficient of carbon dioxide across atmospheric troposphere layer. Heliyon, 2018, 4, e00785.	1.4	24
22	Beam focusing characteristics and alloying element effects on high-intensity electron beam welding. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1992, 23, 81-90.	0.5	22
23	Active solute effects on surface ripples in electron-beam welding solidification. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2003, 34, 421-432.	1.0	20
24	Energy-Beam redistribution and absorption in a drilling or welding cavity. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1992, 23, 505-511.	0.5	19
25	Three-dimensional analytical temperature field and its application to solidification characteristics in high- or low-power-densitybeam welding. International Journal of Heat and Mass Transfer, 1997, 40, 2283-2292.	2.5	19
26	Workpiece property effects on nugget microstructure determined by heat transfer and solidification rate during resistance spot welding. International Journal of Thermal Sciences, 2014, 86, 421-429.	2.6	17
27	Electrode geometry effects on microstructure determined by heat transfer and solidification rate during resistance spot welding. International Journal of Heat and Mass Transfer, 2014, 79, 408-416.	2.5	17
28	Absorption coefficient of water vapor across atmospheric troposphere layer. Heliyon, 2019, 5, e01145.	1.4	16
29	Fusion Zone Shapes in Electron-Beam Welding Dissimilar Metals. Journal of Heat Transfer, 2000, 122, 626-631.	1.2	16
30	Contact melting by a non-isothermal heating surface of arbitrary shape. International Journal of Heat and Mass Transfer, 1995, 38, 3275-3284.	2.5	15
31	Microbubble or pendant drop control described by a general phase diagram. International Journal of Heat and Mass Transfer, 2009, 52, 1304-1312.	2.5	15
32	Origin of wavy weld boundary. Journal of Applied Physics, 2009, 105, .	1.1	15
33	Scaling of spiking and humping in keyhole welding. Journal Physics D: Applied Physics, 2011, 44, 245501.	1.3	15
34	Scaling weld or melt pool shape induced by thermocapillary convection. International Journal of Heat and Mass Transfer, 2012, 55, 2328-2337.	2.5	15
35	Effects of electrical current on transport processes in resistance spot welding. Science and Technology of Welding and Joining, 2010, 15, 448-456.	1.5	14
36	Energy absorption in a conical cavity truncated by spherical cap subject to a focused high intensity beam. International Journal of Heat and Mass Transfer, 1997, 40, 1895-1905.	2.5	13

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37	Phase Change Effects on Transport Processes in Resistance Spot Welding. Journal of Mechanics, 2011, 27, 19-26.	0.7	11
38	Workpiece Property Effect on Resistance Spot Welding. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 925-934.	1.4	11
39	Electron Beam Deflection When Welding Dissimilar Metals. Journal of Heat Transfer, 1990, 112, 714-720.	1.2	10
40	Heat Transfer Coefficient in Rapid Solidification of a Liquid Layer on a Substrate. Journal of Heat Transfer, 2000, 122, 792-800.	1.2	10
41	Missed joint induced by thermoelectric magnetic field in electron-beam welding dissimilar metalsâ€"Experiment and scale analysis. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2002, 33, 765-773.	1.0	10
42	Plasma energy transport to an electrically biased surface. International Journal of Heat and Mass Transfer, 2004, 47, 4019-4029.	2.5	10
43	Magnetic property effect on transport processes in resistance spot welding. Journal Physics D: Applied Physics, 2011, 44, 325501.	1.3	10
44	Numerical study of electrode geometry effects on resistance spot welding. Science and Technology of Welding and Joining, 2013, 18, 661-670.	1.5	10
45	Effects of electrode contact condition on electrical dynamic resistance during resistance spot welding. Science and Technology of Welding and Joining, 2014, 19, 173-180.	1.5	10
46	Sustaining the inter-wire arc in twin-wire indirect arc welding. Journal of Manufacturing Processes, 2016, 21, 69-74.	2.8	10
47	Effects of solidification rate on pore shape in solid. International Journal of Thermal Sciences, 2017, 115, 79-88.	2.6	10
48	Distribution functions of positive ions and electrons in a plasma near a surface. IEEE Transactions on Plasma Science, 2000, 28, 1244-1253.	0.6	9
49	Prediction of pore size in high power density beam welding. International Journal of Heat and Mass Transfer, 2014, 79, 223-232.	2.5	9
50	Joint Quality Affected by Electrode Contact Condition During Resistance Spot Welding. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 2164-2173.	1.4	8
51	Effects of solute concentration in liquid on pore shape in solid. International Journal of Heat and Mass Transfer, 2016, 103, 920-930.	2.5	8
52	Effects of mass transfer coefficient on pore shape in solid. International Journal of Heat and Mass Transfer, 2016, 103, 931-939.	2.5	8
53	Effects of supersaturation on pore shape in solid. Journal of Crystal Growth, 2017, 460, 126-133.	0.7	8
54	Solute convection effects on a bubble entrapped as a pore during unidirectional upward solidification. International Journal of Heat and Mass Transfer, 2019, 135, 62-71.	2.5	8

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55	Melting Solid Plug Between Two Coaxial Pipes by a Moving Heat Source in the Inner Pipe. Journal of Heat Transfer, 1994, 116, 1028-1033.	1.2	7
56	Fluid-like transport variables in a kinetic collisionless plasma near a surface with ion and electron reflection. IEEE Transactions on Plasma Science, 2000, 28, 1233-1243.	0.6	7
57	Distinct property effects on rapid solidification of a thin liquid layer on a substrate subject to self-consistent melting. Journal of Crystal Growth, 2003, 247, 563-575.	0.7	6
58	Transient Thermocapillary Convection in a Molten or Weld Pool. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2012, 134, .	1.3	6
59	Existence of Universal Phase Diagrams for Describing General Pore Shape Resulting From an Entrapped Bubble During Solidification. Journal of Heat Transfer, 2016, 138, .	1.2	6
60	Three-Dimensional Electron-Beam Deflection and Missed Joint in Welding Dissimilar Metals. Journal of Heat Transfer, 1997, 119, 832-839.	1.2	5
61	Absorption in a paraboloid of revolution-shaped welding or drilling cavity irradiated by a polarized laser beam. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2001, 32, 603-614.	1.0	5
62	Effects of Plasma Parameters on the Temperature Field in a Workpiece Experiencing Solid-Liquid Phase Transition. Journal of Heat Transfer, 2005, 127, 987-994.	1.2	5
63	Unsteady heat conduction involving phase changes for an irregular bubble/particle entrapped in a solid during freezing â€" An extension of the heat-balance integral method. International Journal of Heat and Mass Transfer, 2009, 52, 996-1004.	2.5	5
64	Solute segregation due to a bubble entrapped as a pore in solid during unidirectional solidification. International Journal of Heat and Mass Transfer, 2020, 152, 119474.	2.5	5
65	Keyhole collapse during high intensity beam drilling. International Journal of Heat and Mass Transfer, 2014, 79, 300-308.	2.5	4
66	Existence of an isolated pore in solid during unidirectional solidification. Journal of Crystal Growth, 2020, 550, 125889.	0.7	4
67	Using the universal phase diagrams to describe pore shape development in solid for different solidification rates. International Journal of Heat and Mass Transfer, 2020, 158, 119977.	2.5	4
68	The effect of sheath on plasma momentum transport to an electrically biased surface. International Journal of Heat and Mass Transfer, 2005, 48, 2198-2208.	2.5	3
69	Three-dimensional temperature field in a line-heater embedded by a spiral electric resistor. Applied Thermal Engineering, 2006, 26, 916-926.	3.0	3
70	Universal phase and force diagrams for a microbubble or pendant drop in static fluid on a surface. Journal of Applied Physics, 2008, 103, 023515.	1.1	3
71	Dynamic electrical resistance effects in resistance spot welding. , 2010, , .		3
72	Scaling Weld or Melt Pool Shape Affected by Thermocapillary Convection With High Prandtl Numbers. Journal of Heat Transfer, 2012, 134, .	1.2	3

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73	Case Study of Ambient Pressure Effects on Pore Shape in Solid. Journal of Thermophysics and Heat Transfer, 2017, 31, 796-804.	0.9	3
74	Effects of physico-chemical interfacial equilibrium on pore shape in solid. International Journal of Heat and Mass Transfer, 2018, 117, 1-10.	2.5	3
75	Scaling of amplitude and pitch of surface ripples after welding solidification. Science and Technology of Welding and Joining, 2021, 26, 20-27.	1.5	3
76	Analytical expression for isolated pore shape in solid. International Journal of Heat and Mass Transfer, 2021, 167, 120812.	2.5	3
77	Parametric and algebraic study of an isolated pore shape in solid after unidirectional solidification. Journal of Crystal Growth, 2021, 573, 126289.	0.7	3
78	Pore Formation from Bubble Entrapment by a Solidification Front. American Journal of Heat and Mass Transfer, 0, , .	0.0	3
79	Transport processes for a bubble entrapment during horizontal solidification. International Journal of Thermal Sciences, 2022, 172, 107314.	2.6	3
80	Unified algebraic expression of lotus-type pore shape in solid. International Journal of Heat and Mass Transfer, 2022, 185, 122269.	2.5	3
81	Nugget shape control in resistance spot welding. , 2013, , .		2
82	The Effects of Entrainment on Pore Shape in Keyhole Mode Welding. Journal of Heat Transfer, 2015, 137, .	1.2	2
83	Bond number effects on pore shape in solid. International Journal of Thermal Sciences, 2017, 116, 73-81.	2.6	2
84	Analytical Solution of a Creeping Flow Impinging on a Spherical Cap-Shaped Bubble on a Flat Solid Surface. Journal of Applied Mechanics, Transactions ASME, 2006, 73, 516-523.	1.1	1
85	Curie temperature effects on resistance spot welding. , 2011, , .		1
86	Effects of Bubble Growth and Solidification Rate on Pore Formation in Solid. , 2012, , .		1
87	Pore Formation in Solid. Journal of Mechanics, 2012, 28, 1-6.	0.7	1
88	Effects of Entrainment on Incapability of High Intensity Beam Drilling. Journal of Heat Transfer, 2015, 137, .	1.2	1
89	Effects of initial contact angle on pore shape in solid. International Journal of Thermal Sciences, 2018, 130, 208-215.	2.6	1
90	Effects of Bubble Location on Pore Shape in Solid. Journal of Mechanics, 2019, 35, 121-129.	0.7	1

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91	TEMPERATURE AND VELOCITY DISTRIBUTIONS IN THE LIQUID FLOWING AROUND THE FRONT OF AN ELECTRON BEAM WELDING CAVITY. , 1982, , .		1
92	The effects of material properties on solute transport during entrapment of a bubble subject to horizontal solidification. International Communications in Heat and Mass Transfer, 2022, 133, 105942.	2.9	1
93	Self-consistent scaling of amplitude and pitch of ripples on a solidified surface. Journal of Manufacturing Processes, 2022, 79, 501-509.	2.8	1
94	Universal Force Diagrams of a Microbubble in Static Fluid on a Surface. , 2008, , .		0
95	Mechanism of pore formation in solid. , 2009, , .		0
96	A Model to Predict Pore Shape in Solid During Solidification. , 2009, , .		0
97	Spiking and Humping Defects in Laser Welding. , 2010, , .		0
98	Scale Analysis of Thermocapillary Weld Pool Shape With High Prandtl Number. , 2011, , .		0
99	Scaling Thermocapillary Surface Velocity in Weld Pool. , 2011, , .		0
100	Controlling fusion zone shape and peak temperature produced by laser or electron beam. , 2012, , .		0
101	Modeling of pore formation in solid. , 2012, , .		0
102	Controlled Efficiency During Drilling With a High Intensity Beam. , 2013, , .		0
103	Incapability of Drilling With a High-Power-Density Beam. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 2026-2034.	1.4	0
104	Controlling efficiency of laser drilling. , 2014, , .		0
105	The Effects of Drilling Parameters on Pore Size in Keyhole Mode Welding. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016, 138, .	1.3	0
106	A pair of pore formation affected by convection during unidirectional solidification. AIP Conference Proceedings, 2019, , .	0.3	0
107	Geometrical Effects of an Entrapped Bubble on Pore Shape in Solid. , 2015, , .		0
108	Energy generation on an array of nanoparticles on a surface. , 2020, , .		0