Sven Eckert

List of Publications by Year
in descending order

196 papers	4,238 citations	117625 34 h-index	161849 54 g-index
204 all docs	204 docs citations	204 times ranked	1617 citing authors

#	Article	IF	Citations
1	Thermophysical Properties of the Liquid Gaâ€“Inâ€“Sn Eutectic Alloy. Journal of Chemical & Engineering Data, 2014, 59, 757-763.	1.9	223
2	The relevance of melt convection to grain refinement in Alâ€“Si alloys solidified under the impact of electric currents. Acta Materialia, 2014, 79, 327-338.	7.9	126
3	The columnar-to-equiaxed transition in Pbâ€“Sn alloys affected by electromagnetically driven convection. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 402, 55-65.	5.6	122
4	Velocity measurements in liquid sodium by means of ultrasound Doppler velocimetry. Experiments in Fluids, 2002, 32, 542-546.	2.4	114
5	Efficient Melt Stirring Using Pulse Sequences of a Rotating Magnetic Field: Part II. Application to Solidification of Al-Si Alloys. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2008, 39, 304-316.	2.1	109
6	Experimental Modeling of the Continuous Casting Process of Steel Using Low Melting Point Metal Alloysâ€”the LIMMCAST Program. ISIJ International, 2010, 50, 1134-1141.	1.4	97
7	3-D microstructural model of freckle formation validated using in situ experiments. Acta Materialia, 2014, 79, 168-180.	7.9	95
8	Velocity measurements at high temperatures by ultrasound Doppler velocimetry using an acoustic wave guide. Experiments in Fluids, 2003, 35, 381-388.	2.4	91
9	Experimental study of single bubble motion in a liquid metal column exposed to a DC magnetic field. International Journal of Multiphase Flow, 2005, 31, 824-842.	3.4	88
10	Local flow structures in liquid metals measured by ultrasonic Doppler velocimetry. Flow Measurement and Instrumentation, 2004, 15, 145-153.	2.0	80
11	Experimental Investigation of the Flow in a Continuous-Casting Mold under the Influence of a Transverse, Direct Current Magnetic Field. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2011, 42, 68-80.	2.1	78
12	Density, Viscosity, and Electrical Conductivity of Hypoeutectic Al-Cu Liquid Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 3040-3045.	2.2	77
13	Chimney Formation in Solidifying Ga-25wt pct In Alloys Under the Influence of Thermosolutal Melt Convection. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 3797-3808.	2.2	75
14	The effect of natural and forced melt convection on dendritic solidification in Gaâ€“In alloys. Journal of Crystal Growth, 2015, 417, 1-8.	1.5	72
15	X-Ray Radioscopic Visualization of the Solutal Convection during Solidification of a Ga-30 Wt Pct In Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 613-623.	2.2	69
16	Grain size control in Alâ€“Si alloys by grain refinement and electromagnetic stirring. Journal of Alloys and Compounds, 2009, 487, 163-172.	5.5	68
17	Efficient Melt Stirring Using Pulse Sequences of a Rotating Magnetic Field: Part I. Flow Field in a Liquid Metal Column. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2007, 38, 977-988.	2.1	66
18	Surface tension and density of liquid Biâ€“Pb, Biâ€“Sn and Biâ€“Pbâ€“Sn eutectic alloys. Surface Science, 2011, 605, 1034-1042.	1.9	65

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19	Electromagnetic melt flow control during solidification of metallic alloys. European Physical Journal: Special Topics, 2013, 220, 123-137.	2.6	60
20	Combined Electromagnetic Tomography for Determining Two-phase Flow Characteristics in the Submerged Entry Nozzle and in the Mold of a Continuous Casting Model. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2011, 42, 1201-1210.	2.1	59
21	Effect of an Electromagnetic Brake on the Turbulent Melt Flow in a Continuous-Casting Mold. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2012, 43, 954-972.	2.1	53
22	Visualization of Liquid Metal Two-phase Flows in a Physical Model of the Continuous Casting Process of Steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 700-710.	2.1	53
23	Electronic properties and viscosity of liquid Pbâ€“Sn alloys. Journal of Alloys and Compounds, 2005, 394, 63-68.	5.5	51
24	Combined measurement of velocity and temperature in liquid metal convection. Journal of Fluid Mechanics, 2019, 876, 1108-1128.	3.4	47
25	Visualization of freckle formation induced by forced melt convection in solidifying GaIn alloys. Materials Letters, 2010, 64, 1340-1343.	2.6	45
26	Application of a rotating magnetic field during directional solidification of Pbâ€“Sn alloys: Consequences on the CET. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 211-216.	5.6	44
27	The flow structure of a bubble-driven liquid-metal jet in a horizontal magnetic field. Journal of Fluid Mechanics, 2007, 575, 57-82.	3.4	43
28	Fragmentation-driven grain refinement in directional solidification of AlCu10wt-% alloy at low pulling speeds. Acta Materialia, 2017, 126, 236-250.	7.9	42
29	Visualization of bubble coalescence in bubble chains rising in a liquid metal. International Journal of Multiphase Flow, 2018, 105, 159-169.	3.4	42
30	Velocity Measurement Techniques for Liquid Metal Flows. Fluid Mechanics and Its Applications, 2007, , 275-294.	0.2	40
31	The behaviour of gas bubbles in a turbulent liquid metal magnetohydrodynamic flow. International Journal of Multiphase Flow, 2000, 26, 45-66.	3.4	39
32	Application of X-ray radioscopic methods for characterization of two-phase phenomena and solidification processes in metallic melts. European Physical Journal: Special Topics, 2013, 220, 63-77.	2.6	37
33	Measurements of an unsteady liquid metal flow during spin-up driven by a rotating magnetic field. Experiments in Fluids, 2010, 48, 233-244.	2.4	36
34	Simulation of Channel Segregation During Directional Solidification of Inâ€”75ÂwtÂpctÂGa. Qualitative Comparison with In Situ Observations. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4886-4897.	2.2	36
35	MHD turbulence measurements in a sodium channel flow exposed to a transverse magnetic field. International Journal of Heat and Fluid Flow, 2001, 22, 358-364.	2.4	33
36	Numerical modeling of bubble-driven liquid metal flows with external static magnetic field. International Journal of Multiphase Flow, 2013, 48, 32-45.	3.4	33

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37	Structure Sensitive Properties of Liquid Alâ€“Si Alloys. International Journal of Thermophysics, 2009, 30, 1400-1410.	2.1	32
38	Ultrasound Doppler system for two-dimensional flow mapping in liquid metals. Flow Measurement and Instrumentation, 2010, 21, 402-409.	2.0	31
39	The behaviour of gas bubbles in a turbulent liquid metal magnetohydrodynamic flow. International Journal of Multiphase Flow, 2000, 26, 67-82.	3.4	30
40	Some physical data of the near eutectic liquid leadâ€“bismuth. Journal of Nuclear Materials, 2008, 373, 335-342.	2.7	30
41	Regular flow reversals in Rayleigh-BÃ©nard convection in a horizontal magnetic field. Physical Review E, 2016, 93, 043109.	2.1	30
42	Flow regimes of Rayleighâ€“BÃ©nard convection in a vertical magnetic field. Journal of Fluid Mechanics, 2020, 894, .	3.4	30
43	Effect of rotating magnetic field on the microstructures and physical properties of Alâ€“Cuâ€“Co ternary eutectic alloy. Journal of Alloys and Compounds, 2015, 647, 471-480.	5.5	29
44	Transition between quasi-two-dimensional and three-dimensional Rayleigh-BÃ©nard convection in a horizontal magnetic field. Physical Review Fluids, 2018, 3, .	2.5	28
45	Experimental observation of swirl accumulation in a magnetically driven flow. Journal of Fluid Mechanics, 2008, 616, 135-152.	3.4	27
46	Two-dimensional ultrasound Doppler velocimeter for flow mapping of unsteady liquid metal flows. Ultrasonics, 2013, 53, 691-700.	3.9	27
47	Solidification of pure aluminium affected by a pulsed electrical field and electromagnetic stirring. Journal of Materials Science, 2016, 51, 2153-2159.	3.7	27
48	Phased Array Ultrasound System for Planar Flow Mapping in Liquid Metals. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 1327-1335.	3.0	27
49	Liquid metal model experiments on casting and solidification processes. Journal of Materials Science, 2004, 39, 7285-7294.	3.7	26
50	Coarsening evolution of dendritic sidearms: From synchrotron experiments to quantitative modeling. Acta Materialia, 2018, 146, 176-186.	7.9	26
51	X-ray Radioscopic Visualization of Bubbly Flows Injected Through a Top Submerged Lance into a Liquid Metal. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 124-139.	2.1	26
52	Thermophysical properties of liquid tinâ€“bismuth alloys. International Journal of Materials Research, 2010, 101, 839-844.	0.3	25
53	A Parallel Cellular Automata Lattice Boltzmann Method for Convection-Driven Solidification. Jom, 2019, 71, 48-58.	1.9	25
54	Study on the Formation of Openâ€Eye and Slag Entrainment in Gas Stirred Ladle. Steel Research International, 2007, 78, 849-856.	1.8	24

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55	Impact of the Electromagnetic Brake Position on the Flow Structure in a Slab Continuous Casting Mold: An Experimental Parameter Study. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 61-78.	2.1	24
56	Liquid metal experiments with swirling flow submerged entry nozzle. Ironmaking and Steelmaking, 2012, 39, 1-9.	2.1	23
57	Experimental investigation of bubble breakup in bubble chains rising in a liquid metal. International Journal of Multiphase Flow, 2019, 116, 39-50.	3.4	23
58	Dual-plane ultrasound flow measurements in liquid metals. Measurement Science and Technology, 2013, 24, 055302.	2.6	22
59	Experimental Investigations of Rotary Electromagnetic Mould Stirring in Continuous Casting Using a Cold Liquid Metal Model. ISIJ International, 2017, 57, 468-477.	1.4	22
60	Eulerâ€“Euler modeling and X-ray measurement of oscillating bubble chain in liquid metals. International Journal of Multiphase Flow, 2019, 110, 218-237.	3.4	21
61	CFD Modeling and Experimental Validation of Top-Submerged-Lance Gas Injection in Liquid Metal. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 1509-1525.	2.1	21
62	Generation of Reverse Meniscus Flow by Applying An Electromagnetic Brake. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 3193-3207.	2.1	21
63	DRESDYN – a new facility for MHD experiments with liquid sodium. Magnetohydrodynamics, 2012, 48, 103-114.	0.3	21
64	Gas bubble detection in liquid metals by means of the ultrasound transit-time-technique. European Physical Journal: Special Topics, 2013, 220, 53-62.	2.6	20
65	Influence of magnetic fields on the behavior of bubbles in liquid metals. European Physical Journal: Special Topics, 2013, 220, 167-183.	2.6	20
66	Validation of X-ray radiography for characterization of gas bubbles in liquid metals. IOP Conference Series: Materials Science and Engineering, 2017, 228, 012009.	0.6	20
67	Single bubble rise in GaInSn in a horizontal magnetic field. International Journal of Multiphase Flow, 2018, 104, 32-41.	3.4	20
68	Intermittent Behavior Caused by Surface Oxidation in a Liquid Metal Flow Driven by a Rotating Magnetic Field. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2011, 42, 1188-1200.	2.1	19
69	Novel ultrasound array measurement system for flow mapping of complex liquid metal flows. European Physical Journal: Special Topics, 2013, 220, 43-52.	2.6	19
70	Neutron imaging of froth structure and particle motion. Minerals Engineering, 2018, 119, 126-129.	4.3	19
71	Measurements of the bulk velocity during solidification of metallic alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 267-270.	2.2	18
72	Spin-up of a magnetically driven tornado-like vortex. Journal of Fluid Mechanics, 2013, 736, 641-662.	3.4	18

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73	Detection of gas entrainment into liquid metals. Nuclear Engineering and Design, 2015, 294, 16-23.	1.7	18
74	Electrophysical and structure-sensitive properties of liquid Gaâ€“In alloys. International Journal of Materials Research, 2015, 106, 66-71.	0.3	18
75	Development of a high-speed ultrasonic tomography system for measurements of rising bubbles in a horizontal cross-section. Measurement: Journal of the International Measurement Confederation, 2021, 182, 109654.	5.0	18
76	Collapse of Coherent Large Scale Flow in Strongly Turbulent Liquid Metal Convection. Physical Review Letters, 2022, 128, 164501.	7.8	18
77	Visualization of the global flow structure in a modified Rayleigh-BÃ©nard setup using contactless inductive flow tomography. Flow Measurement and Instrumentation, 2018, 62, 269-280.	2.0	17
78	Experimental Study of the Mold Flow Induced by a Swirling Flow Nozzle and Electromagnetic Stirring for Continuous Casting of Round Blooms. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 716-731.	2.1	17
79	Measurement technique developments for LBE flows. Journal of Nuclear Materials, 2011, 415, 396-403.	2.7	16
80	Prediction of Mortality and the Need for Neonatal Extracorporeal Membrane Oxygenation Therapy by 3â€Dimensional Sonography and Magnetic Resonance Imaging in Fetuses With Congenital Diaphragmatic Hernias. Journal of Ultrasound in Medicine, 2013, 32, 981-988.	1.7	16
81	Physical modelling of temperature fluctuations in a high aspect ratio model of the Czochralski crystal growth. Journal of Crystal Growth, 2015, 432, 69-77.	1.5	16
82	Euler-Euler simulation and X-ray measurement of bubble chain in a shallow container filled with liquid metals. Chemical Engineering Science, 2018, 192, 288-305.	3.8	16
83	Thermal dependence of large-scale freckle defect formation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180206.	3.4	16
84	On the formation of Taylorâ€“GÃ¶rtler vortices in RMF-driven spin-up flows. Experiments in Fluids, 2012, 52, 1-10.	2.4	15
85	URANS Simulation of Continuous Casting Mold Flow: Assessment of Revised Turbulence Models. Steel Research International, 2015, 86, 400-410.	1.8	15
86	Contactless Inductive Bubble Detection in a Liquid Metal Flow. Sensors, 2016, 16, 63.	3.8	15
87	Transition from steady to oscillating convection rolls in Rayleigh-BÃ©nard convection under the influence of a horizontal magnetic field. Physical Review Fluids, 2021, 6, .	2.5	15
88	A new mechano-optical technique to measure local velocities in opaque fluids. Flow Measurement and Instrumentation, 2000, 11, 71-78.	2.0	14
89	Experimental Modelling using Low Melting Point Metallic Melts: Relevance for Metallurgical Engineering. Steel Research International, 2007, 78, 419-425.	1.8	14
90	Flow measurements in liquid metals by means of the ultrasonic Doppler method and local potential probes. European Physical Journal: Special Topics, 2013, 220, 25-41.	2.6	14

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91	Investigations of electrically driven liquid metal flows using an ultrasound Doppler flow mapping system. Flow Measurement and Instrumentation, 2016, 48, 64-73.	2.0	14
92	Simultaneous optical measurement of temperature and velocity fields in solidifying liquids. Experiments in Fluids, 2020, 61, 1.	2.4	14
93	Jump rope vortex flow in liquid metal Rayleighâ€“BÃ©nard convection in a cuboid container of aspect ratio. Journal of Fluid Mechanics, 2022, 932, .	3.4	14
94	Assessment of Lung Volume by 3-Dimensional Sonography and Magnetic Resonance Imaging in Fetuses With Congenital Diaphragmatic Hernias. Journal of Ultrasound in Medicine, 2011, 30, 1539-1545.	1.7	13
95	Some Recent Developments in the Field of Measuring Techniques and Instrumentation for Liquid Metal Flows. Journal of Nuclear Science and Technology, 2011, 48, 490-498.	1.3	13
96	Experimental and Numerical Modeling of Fluid Flow Processes in Continuous Casting: Results from the LIMMCAST-Project. IOP Conference Series: Materials Science and Engineering, 2017, 228, 012019.	0.6	13
97	Pool CFD modelling: lessons from the SESAME project. Nuclear Engineering and Design, 2019, 355, 110343.	1.7	13
98	Magnetic Effects on Microstructure and Solute Plume Dynamics of Directionally Solidifying Ga-In Alloy. Jom, 2020, 72, 3645-3651.	1.9	13
99	Free-fall velocities and heat transport enhancement in liquid metal magneto-convection. Journal of Fluid Mechanics, 2021, 915, .	3.4	13
100	Transition from convection rolls to large-scale cellular structures in turbulent Rayleigh-BÃ©nard convection in a liquid metal layer. Physical Review Fluids, 2019, 4, .	2.5	13
101	Modification of Bubble-driven Liquid Metal Flows under the Influence of a DC Magnetic Field. ISIJ International, 2007, 47, 795-801.	1.4	12
102	Do rotating magnetic fields unconditionally lead to grain refinement? A case study for directionally solidified Al-10wt%Cu alloys. Materialia, 2018, 3, 326-337.	2.7	12
103	In situX-ray monitoring of convection effects on segregation freckle formation. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012035.	0.6	11
104	Visualization of the Flow in a Mold of Continuous Casting by Contactless Inductive Flow Tomography and Mutual Inductance Tomography. Steel Research International, 2014, 85, 1266-1273.	1.8	11
105	Dependency of structure, mechanical and electrical properties on rotating magnetic field in the Biâ€“Snâ€“Ag ternary eutectic alloy. International Journal of Materials Research, 2016, 107, 362-371.	0.3	11
106	Inductive System for Reliable Magnesium Level Detection in a Titanium Reduction Reactor. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 2089-2096.	2.1	11
107	Experimental investigations of bubble chains in a liquid metal under the influence of a horizontal magnetic field. International Journal of Multiphase Flow, 2019, 121, 103111.	3.4	11
108	Spectral random masking: a novel dynamic masking technique for PIV in multiphase flows. Experiments in Fluids, 2019, 60, 1.	2.4	11

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109	X-ray particle tracking velocimetry in liquid foam flow. Soft Matter, 2020, 16, 2093-2103.	2.7	11
110	Dynamics and length scales in vertical convection of liquid metals. Journal of Fluid Mechanics, 2022, 932, .	3.4	11
111	Spin-up and spin-down dynamics of a liquid metal driven by a single rotating magnetic field pulse. European Journal of Mechanics, B/Fluids, 2008, 27, 177-201.	2.5	10
112	Mixing Enhancement in Gas-Stirred Melts by Rotating Magnetic Fields. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2012, 43, 1454-1464.	2.1	10
113	The magnetic flywheel flow meter: Theoretical and experimental contributions. Applied Physics Letters, 2014, 104, 223504.	3.3	10
114	Inertial wave dynamics in a rotating liquid metal. Journal of Fluid Mechanics, 2014, 753, 472-498.	3.4	10
115	Instabilities and spin-up behaviour of a rotating magnetic field driven flow in a rectangular cavity. Physics of Fluids, 2017, 29, 114104.	4.0	10
116	Observation of segregation freckle formation under the influence of melt convection. IOP Conference Series: Materials Science and Engineering, 2012, 27, 012085.	0.6	9
117	Experimental and numerical modelling of the fluid flow in the continuous casting of steel. European Physical Journal: Special Topics, 2013, 220, 151-166.	2.6	9
118	Effect of Single-Ruler Electromagnetic Braking (EMBr) Location on Transient Flow in Continuous Casting. Journal for Manufacturing Science and Production, 2015, 15, 93-104.	0.1	9
119	Investigations of fluid flow effects on dendritic solidification: Consequences on fragmentation, macrosegregation and the influence of electromagnetic stirring. IOP Conference Series: Materials Science and Engineering, 2017, 228, 012005.	0.6	9
120	Combined experimental and numerical analysis of a bubbly liquid metal flow. IOP Conference Series: Materials Science and Engineering, 2017, 228, 012006.	0.6	9
121	Numerical and experimental investigation of the contactless inductive flow tomography in the presence of strong static magnetic fields. Magnetohydrodynamics, 2015, 51, 461-472.	0.3	9
122	Observation of dendritic growth and fragmentation in Gaâ€“In alloys by X-ray radioscopy. International Journal of Cast Metals Research, 2009, 22, 30-33.	1.0	8
123	Use of Cold Liquid Metal Models for Investigations of the Fluid Flow in the Continuous Casting Process. Steel Research International, 2014, 85, 1283-1290.	1.8	8
124	Flow structures arising from melt stirring by means of modulated rotating magnetic fields. Magnetohydrodynamics, 2012, 48, 213-220.	0.3	8
125	The Impact of a Vertically Travelling Magnetic Field on the Flow in a Cylindrical Liquid Metal Bubble Plume. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2009, 40, 700-711.	2.1	7
126	Influence of Different Rotation Angles in Assessment of Lung Volumes by 3-Dimensional Sonography in Comparison to Magnetic Resonance Imaging in Healthy Fetuses. Journal of Ultrasound in Medicine, 2011, 30, 819-825.	1.7	7

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127	Flow oscillations driven by a rotating magnetic field in liquid metal columns with an upper free surface. Journal of Crystal Growth, 2012, 339, 52-60.	1.5	7
128	The effects of natural, forced and thermoelectric magnetohydrodynamic convection during the solidification of thin sample alloys. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012018.	0.6	7
129	Experimental and numerical modeling of the steel flow in a continuous casting mould under the influence of a transverse DC magnetic field. Magnetohydrodynamics, 2010, 46, 437-448.	0.3	7
130	Flow Visualization by Means of Contactless Inductive Flow Tomography in the Presence of a Magnetic Brake. Journal for Manufacturing Science and Production, 2015, 15, 41-48.	0.1	6
131	Tracking of Particles in Froth Using Neutron Imaging. Chemie-Ingenieur-Technik, 2019, 91, 1001-1007.	0.8	6
132	Ultrasound Doppler flow measurements in a liquid column under the influence of a strong axial current. Magnetohydrodynamics, 2015, 51, 249-256.	0.3	6
133	Laboratory Investigation of Tomography-Controlled Continuous Steel Casting. Sensors, 2022, 22, 2195.	3.8	6
134	Melting-solidification process in Pb-Bi melts. Journal of Physics: Conference Series, 2007, 79, 012019.	0.4	5
135	The impact of turbulent flow on the solidification of metal alloys driven by a rotating magnetic field. International Journal of Cast Metals Research, 2009, 22, 236-239.	1.0	5
136	Use of time-modulated AC magnetic fields for melt flow control during unidirectional solidification. International Journal of Cast Metals Research, 2009, 22, 78-81.	1.0	5
137	Numeric simulations of a liquid metal model of a bloom caster under the effect of rotary electromagnetic stirring. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012027.	0.6	5
138	The effect of pulsed electrical currents on the formation of macrosegregation in solidifying Alâ€“Si hypoeutectic phases. International Journal of Cast Metals Research, 2017, 30, 13-19.	1.0	5
139	The impact of melt flow on the grain orientation in solidifying metal alloys. IOP Conference Series: Materials Science and Engineering, 2012, 27, 012051.	0.6	4
140	Thermophysical properties of the liquid Pb84.1Au15.9 eutectic alloy. Journal of Nuclear Materials, 2013, 434, 291-295.	2.7	4
141	Observation of dendritic growth under the influence of forced convection. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012080.	0.6	4
142	Inductive detection of the free surface of liquid metals. Measurement Science and Technology, 2017, 28, 115301.	2.6	4
143	Local Lorentz force and ultrasound Doppler velocimetry in a vertical convection liquid metal flow. Experiments in Fluids, 2018, 59, 1.	2.4	4
144	Predicting concurrent structural mechanical mechanisms during microstructure evolution. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210149.	3.4	4

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145	Large-Scale Test Facility for Modeling Bubble Behavior and Liquid Metal Two-Phase Flows in a Steel Ladle. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2022, 53, 1703-1720.	2.1	4
146	Contactless Inductive Flow Tomography for Real-Time Control of Electromagnetic Actuators in Metal Casting. Sensors, 2022, 22, 4155.	3.8	4
147	Measurement of electrical conductivity of Pbâ€“Bi alloys in the meltingâ€“solidification region. Journal of Nuclear Materials, 2008, 376, 363-365.	2.7	3
148	Flow control during solidification of SnPb-alloys using time-modulated AC magnetic fields. IOP Conference Series: Materials Science and Engineering, 2012, 27, 012053.	0.6	3
149	Contactless inductive flow tomography: basic principles and first applications in the experimental modelling of continuous casting. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012023.	0.6	3
150	Real-time control of the mould flow in a model of continuous casting in frame of the TOMOCON project. IOP Conference Series: Materials Science and Engineering, 0, 424, 012003.	0.6	3
151	Observation of side arm splitting studied by high resolution X-ray radiography. International Journal of Materials Research, 2020, 111, 11-16.	0.3	3
152	In situ observation of directional solidification in Ga-In alloy under a transverse DC magnetic field. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012025.	0.6	3
153	MHT-X: offline multiple hypothesis tracking with algorithm X. Experiments in Fluids, 2022, 63, 1.	2.4	3
154	Modeling and measurements of heat transfer phenomena in two-phase PbSn alloy solidification in an external magnetic field. Journal of Thermal Science, 2003, 12, 357-362.	1.9	2
155	Messung von Geschwindigkeitsfeldern in FlÃ¼ssigmetallen mit der Ultraschall-Doppler Methode. TM Technisches Messen, 2012, 79, 410-416.	0.7	2
156	Modular Ultrasound Array Doppler Velocimeter with FPGA-based Signal Processing for Real-time Flow Mapping in Liquid Metal. Physics Procedia, 2015, 70, 537-540.	1.2	2
157	Experimental investigation on the buoyancy-induced flow in a model of the Czochralski crystal growth process. IOP Conference Series: Materials Science and Engineering, 0, 424, 012011.	0.6	2
158	The integration of structural mechanics into microstructure solidification modelling. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012054.	0.6	2
159	Experimental Validation of an Inductive System for Magnesium Level Detection in a Titanium Reduction Reactor. Sensors, 2020, 20, 6798.	3.8	2
160	Some Recent Developments in the Field of Measuring Techniques and Instrumentation for Liquid Metal Flows. Journal of Nuclear Science and Technology, 2011, 48, 490-498.	1.3	2
161	Ultrasound Localization Microscopy in Liquid Metal Flows. Applied Sciences (Switzerland), 2022, 12, 4517.	2.5	2
162	Particle tracking velocimetry in liquid gallium flow around a cylindrical obstacle. Experiments in Fluids, 2022, 63, .	2.4	2

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163	Effect of the Fluid Convection Driven by a Rotating Magnetic Field on the Solidification of a PbSn Alloy. , 2005, , 194-203.		1
164	Velocity Measurements in Metallic Melts. , 2005, , 49.		1
165	Adjustment and verification of macroscopic melt flow during solidification by means of various AC magnetic fields. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012047.	0.6	1
166	Radial solidification of Al-Si alloys in the presence of a rotating magnetic field. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012048.	0.6	1
167	Experimental study on directional solidification of Al-Si alloys under the influence of electric currents. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012021.	0.6	1
168	The DRESDYN project: planned experiments and present status. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 123-126.	0.2	1
169	Modelling and simulation of a copper slag cleaning process improved by electromagnetic stirring. IOP Conference Series: Materials Science and Engineering, 2017, 228, 012007.	0.6	1
170	Experimental modelling of continuous casting of steel in slab moulds using low melting liquid metals. IOP Conference Series: Materials Science and Engineering, 0, 424, 012032.	0.6	1
171	Measurement techniques for liquid metal based nuclear coolants. , 2019, , 147-155.		1
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