

Markus Bussmann

List of Publications by Year in descending order

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87
all docs

87
docs citations

87
times ranked

2251
citing authors

#	ARTICLE	IF	CITATIONS
1	Water atomisation of molten metals: a mathematical model for a water spray. Powder Metallurgy, 2022, 65, 70-88.	0.9	0
2	Effect of Vacuum Heat Treatment on the Microstructure of a Laser Powder-Bed Fusion-Fabricated NiTi Alloy. Metals, 2022, 12, 700.	1.0	0
3	High Temperature Fracture Resistance of Model Kraft Recovery Boiler Deposits. Materials, 2022, 15, 4759.	1.3	0
4	An Analytical Solution for Moving Bed Heat Exchangers via Integral Transform Methods. Heat Transfer Engineering, 2021, 42, 215-222.	1.2	3
5	LBfoam: An open-source software package for the simulation of foaming using the Lattice Boltzmann Method. Computer Physics Communications, 2021, 259, 107698.	3.0	11
6	NPLIC: A machine learning approach to piecewise linear interface construction. Computers and Fluids, 2021, 223, 104950.	1.3	10
7	Nonlinear enthalpy transformation for transient convective phase change in Smoothed Particle Hydrodynamics (SPH). Numerical Heat Transfer, Part B: Fundamentals, 2021, 79, 255-277.	0.6	5
8	Supercritical CO ₂ utilization for development of graded cellular structures in semicrystalline polymers. Journal of CO ₂ Utilization, 2021, 51, 101615.	3.3	12
9	Spatio-temporal dynamics and disintegration of a fan liquid sheet. Physics of Fluids, 2021, 33, 112109.	1.6	5
10	A moving immersed boundary method for simulating particle interactions at fluid-fluid interfaces. Journal of Computational Physics, 2020, 402, 109089.	1.9	11
11	An image feature consolidation technique (IFCT) to capture multi-range droplet size distributions in atomizing liquid sheets. Experiments in Fluids, 2020, 61, 1.	1.1	17
12	Pore-scale direct numerical simulation of Haines jumps in a porous media model. European Physical Journal: Special Topics, 2020, 229, 1785-1798.	1.2	11
13	Water atomisation of metal powders: effect of water spray configuration. Powder Metallurgy, 2020, 63, 288-299.	0.9	10
14	Experiments and modeling of the breakup mechanisms of an attenuating liquid sheet. International Journal of Multiphase Flow, 2020, 130, 103347.	1.6	21
15	Accurate theoretical modeling of cell growth by comparing with visualized data in high-pressure foam injection molding. European Polymer Journal, 2019, 119, 189-199.	2.6	18
16	Numerical analysis of the effect of the local variation of viscosity on bubble growth and deformation in polymer foaming. Journal of Rheology, 2019, 63, 895-903.	1.3	17
17	A volume-of-fluid ghost-cell immersed boundary method for multiphase flows with contact line dynamics. Computers and Fluids, 2018, 165, 43-53.	1.3	16
18	Oil-particle separation in a falling sphere configuration: Effect of viscosity ratio & interfacial tension. International Journal of Multiphase Flow, 2018, 98, 120-127.	1.6	5

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19	New smoothed particle hydrodynamics (SPH) formulation for modeling heat conduction with solidification and melting. Numerical Heat Transfer, Part B: Fundamentals, 2017, 71, 299-312.	0.6	35
20	Assessing axial heat conduction in moving bed heat exchangers. International Journal of Thermal Sciences, 2017, 120, 303-313.	2.6	6
21	Aluminium scrap melting under different liquid aluminium flow conditions: part-II: two phase flow. Canadian Metallurgical Quarterly, 2016, 55, 273-284.	0.4	2
22	Aluminium scrap melting under different liquid aluminium flow conditions: part-I: single phase flow. Canadian Metallurgical Quarterly, 2016, 55, 261-272.	0.4	2
23	Oil-Particle Separation in a Falling Sphere Configuration: Effect of Oil Film Thickness. Energy & Fuels, 2016, 30, 8776-8786.	2.5	5
24	Co-current and counter-current vertical pipe moving bed heat exchangers: Analytical solutions. International Journal of Heat and Mass Transfer, 2016, 95, 1115-1128.	2.5	12
25	Mass transfer correlations for dissolution of cylindrical additions in liquid metals with gas agitation. International Journal of Heat and Mass Transfer, 2016, 97, 767-778.	2.5	2
26	Counter-current parallel-plate moving bed heat exchanger: An analytical solution. International Journal of Heat and Mass Transfer, 2015, 87, 625-635.	2.5	14
27	Comparative Studies of Silicon Dissolution in Molten Aluminum Under Different Flow Conditions, Part I: Single-Phase Flow. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 1275-1289.	1.0	6
28	Breakup of high solid volume fraction oil-particle cluster in simple shear flow. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 483, 25-35.	2.3	8
29	Oscillation and breakup of a bubble under forced vibration. International Journal of Heat and Fluid Flow, 2015, 54, 211-219.	1.1	11
30	Co-current parallel-plate moving bed heat exchanger: An analytical solution. International Journal of Heat and Mass Transfer, 2015, 87, 616-624.	2.5	20
31	Comparative Studies of Silicon Dissolution in Molten Aluminum Under Different Flow Conditions Part II: Two-Phase Flow. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 1290-1301.	1.0	5
32	Capillary Curves for <i>In Situ</i> Washing of Oil-Coated Particles. Journal of Surfactants and Detergents, 2015, 18, 811-823.	1.0	18
33	The Effect of Viscosity Ratio on the Hydrodynamics of Separation From an Oil-Coated Particle. , 2014, , .		1
34	Supersonic Jet Impingement on a Cylinder and Characterization of the Resulting Deflected Jets. Journal of Fluids Engineering, Transactions of the ASME, 2014, 136, .	0.8	2
35	Irrigation dynamics associated with positive pressure, apical negative pressure and passive ultrasonic irrigations: A computational fluid dynamics analysis. Australian Endodontic Journal, 2014, 40, 54-60.	0.6	50
36	Thermal Performance and Sizing of Moving Bed Heat Exchangers. , 2014, , .		0

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37	Piecewise linear volume tracking in spherical coordinates. Applied Mathematical Modelling, 2013, 37, 3077-3092.	2.2	8
38	Studies on sootblower jet dynamics and ash deposit removal in industrial boilers. Fuel Processing Technology, 2013, 105, 69-76.	3.7	20
39	Modeling of Sootblower Jets and the Impact on Deposit Removal in Industrial Boilers. Energy & Fuels, 2013, 27, 5733-5737.	2.5	7
40	A Semianalytical Solution for a Compressible Turbulent Axisymmetric Jet. SIAM Journal on Applied Mathematics, 2012, 72, 85-98.	0.8	3
41	Accurate implementation of forcing terms for two-phase flows into SIMPLE algorithm. International Journal of Multiphase Flow, 2012, 45, 40-52.	1.6	17
42	Chaotic Shape and Translational Dynamics of 2D Incompressible Bubbles under Forced Vibration in Microgravity. Microgravity Science and Technology, 2012, 24, 39-51.	0.7	4
43	Measurements of sootblower jet strength in kraft recovery boilers - Part II: Results of the third and fourth field trials. Tappi Journal, 2012, 11, 31-35.	0.2	1
44	Computational study of a supersonic free jet rotating perpendicular to the streamwise direction. International Journal of Computational Fluid Dynamics, 2011, 25, 319-332.	0.5	2
45	Equilibrium configurations of drops attached to spheres immersed in a uniform laminar flow. Canadian Journal of Chemical Engineering, 2011, 89, 707-716.	0.9	7
46	Numerical investigation of the effect of screw geometry on the mixing of a viscous polymer melt. Journal of Applied Polymer Science, 2010, 117, 775-784.	1.3	9
47	Experiments and simulation of rapid solidification of air plasma sprayed alloy 625 on stainless steel. Surface and Coatings Technology, 2010, 204, 1521-1527.	2.2	4
48	A volume-of-fluid interfacial flow solver with advected normals. Computers and Fluids, 2010, 39, 1401-1410.	1.3	39
49	Application of Realizability and Shock Unsteadiness to $k-\epsilon$ Simulations of Under-Expanded Axisymmetric Supersonic Free Jets. Journal of Fluids Engineering, Transactions of the ASME, 2010, 132, .	0.8	15
50	Numerical Investigation of Nucleating-Agent-Enhanced Heterogeneous Nucleation. Industrial & Engineering Chemistry Research, 2010, 49, 12783-12792.	1.8	81
51	A semi-implicit finite volume implementation of the CSF method for treating surface tension in interfacial flows. International Journal for Numerical Methods in Fluids, 2009, 59, 1093-1110.	0.9	36
52	Height functions for applying contact angles to 3D VOF simulations. International Journal for Numerical Methods in Fluids, 2009, 61, 827-847.	0.9	70
53	Experiments and modeling of rapid solidification of plasma-sprayed yttria-stabilized zirconia. Acta Materialia, 2009, 57, 6013-6021.	3.8	26
54	A mesh-dependent model for applying dynamic contact angles to VOF simulations. Journal of Computational Physics, 2009, 228, 5370-5389.	1.9	190

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55	The Impact of a Partially Molten YSZ Particle. Journal of Thermal Spray Technology, 2009, 18, 957-964.	1.6	24
56	A comparison of hyperbolic and parabolic models of phase change of a pure metal. International Journal of Heat and Mass Transfer, 2009, 52, 1177-1184.	2.5	23
57	Breakup of brittle deposits by supersonic air jet: The effects of varying jet and deposit characteristics. International Journal of Impact Engineering, 2009, 36, 199-209.	2.4	14
58	A mean flow field solution to a moderately under/over-expanded turbulent supersonic jet. Comptes Rendus - Mecanique, 2009, 337, 185-191.	2.1	5
59	Bubble Dynamics Under Forced Oscillation in Microgravity Environment. , 2009, , .		3
60	The Effect of Undercooling on Solidification of YSZ Splats. Journal of Thermal Spray Technology, 2008, 17, 646-654.	1.6	6
61	Height functions for applying contact angles to 2D VOF simulations. International Journal for Numerical Methods in Fluids, 2008, 57, 453-472.	0.9	85
62	Second-order accurate normals from height functions. Journal of Computational Physics, 2008, 227, 9293-9302.	1.9	24
63	Failure of Cylindrical Brittle Deposits Impacted by a Supersonic Air Jet. Journal of Engineering Materials and Technology, Transactions of the ASME, 2008, 130, .	0.8	5
64	A piecewise linear approach to volume tracking a triple point. International Journal for Numerical Methods in Fluids, 2007, 53, 1005-1018.	0.9	23
65	Adaptive VOF with curvature-based refinement. International Journal for Numerical Methods in Fluids, 2007, 55, 693-712.	0.9	47
66	Advecting normal vectors: A new method for calculating interface normals and curvatures when modeling two-phase flows. Journal of Computational Physics, 2007, 226, 774-797.	1.9	38
67	Bio-Microarray Fabrication Techniquesâ€™A Review. Critical Reviews in Biotechnology, 2006, 26, 237-259.	5.1	334
68	Effect of surface roughness on splat shapes in the plasma spray coating process. Thin Solid Films, 2006, 506-507, 133-135.	0.8	35
69	Modeling High Density Ratio Incompressible Interfacial Flows. , 2002, , 707.		29
70	A numerical study of steady flow and temperature fields within a melt spinning puddle. International Journal of Heat and Mass Transfer, 2002, 45, 3997-4010.	2.5	38
71	SIMULATING DROPLET IMPACT ON A SUBSTRATE OF ARBITRARY SHAPE. Atomization and Sprays, 2001, 11, 397-414.	0.3	61
72	Photographs and Simulations of Molten Metal Droplets Landing on a Solid Surface. Journal of Heat Transfer, 2000, 122, 422-422.	1.2	14

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73	Modeling the splash of a droplet impacting a solid surface. <i>Physics of Fluids</i> , 2000, 12, 3121-3132.	1.6	321
74	On a three-dimensional volume tracking model of droplet impact. <i>Physics of Fluids</i> , 1999, 11, 1406-1417.	1.6	351
75	3D Modelling of Thermal Spray Droplet Splashing. , 1998, , .		1
76	Multicomponent droplet evaporation at intermediate Reynolds numbers. <i>International Journal of Heat and Mass Transfer</i> , 1993, 36, 2827-2835.	2.5	45
77	A Droplet Vaporization Model for Spray Calculations. <i>Particle and Particle Systems Characterization</i> , 1992, 9, 59-65.	1.2	29
78	Convective evaporation of an extremely volatile fuel droplet. <i>Journal of Thermophysics and Heat Transfer</i> , 1990, 4, 527-529.	0.9	1
79	A hybrid lattice Boltzmann-molecular dynamics-immersed boundary method model for the simulation of composite foams. <i>Computational Mechanics</i> , 0, , 1.	2.2	0