Franz Dieter Fischer

List of Publications by Year
in descending order

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210	6,362	76326	88630
papers	citations	40 h-index	70 g-index

215	215	215	4035
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Modeling concepts for intermetallic titanium aluminides. Progress in Materials Science, 2016, 81, 55-124.	32.8	304
2	Size effects on the martensitic phase transformation of NiTi nanograins. Journal of the Mechanics and Physics of Solids, 2007, 55, 419-444.	4.8	267
3	On the role of surface energy and surface stress in phase-transforming nanoparticles. Progress in Materials Science, 2008, 53, 481-527.	32.8	222
4	Bioinspired Design Criteria for Damageâ€Resistant Materials with Periodically Varying Microstructure. Advanced Functional Materials, 2011, 21, 3634-3641.	14.9	162
5	On the relation between the principle of maximum dissipation and inelastic evolution given by dissipation potentials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 117-132.	2.1	156
6	Intermetallic Î²â€Solidifying Î³â€TiAl Based Alloys â˜’ From Fundamental Research to Application. Advanced Engineering Materials, 2017, 19, 1600735.	3.5	156
7	J-integral and crack driving force in elasticâ€“plastic materials. Journal of the Mechanics and Physics of Solids, 2008, 56, 2876-2895.	4.8	140
8	Application of the thermodynamic extremal principle to modeling of thermodynamic processes in material sciences. Philosophical Magazine, 2005, 85, 3699-3707.	1.6	137
9	Inhomogeneity effects on the crack driving force in elastic and elasticâ€“plastic materials. Journal of the Mechanics and Physics of Solids, 2003, 51, 209-240.	4.8	130
10	Surface energy of nanoparticles â€“ influence of particle size and structure. Beilstein Journal of Nanotechnology, 2018, 9, 2265-2276.	2.8	130
11	Phase Transformations of Nanocrystalline Martensitic Materials. MRS Bulletin, 2009, 34, 814-821.	3.5	128
12	Diffusion and creep in multi-component alloys with non-ideal sources and sinks for vacancies. Acta Materialia, 2006, 54, 3043-3053.	7.9	117
13	Deformation mechanisms in TiAl intermetallicsâ€”experiments and modeling. International Journal of Plasticity, 2003, 19, 281-321.	8.8	115
14	Modified evolution equations for the precipitation kinetics of complex phases in multi-component systems. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2004, 28, 379-382.	1.6	113
15	Thermodynamic extremal principles for irreversible processes in materials science. Acta Materialia, 2014, 67, 1-20.	7.9	111
16	Modeling of excess vacancy annihilation at different types of sinks. Acta Materialia, 2011, 59, 3463-3472.	7.9	101
17	Diffusion in multi-component systems with no or dense sources and sinks for vacancies. Acta Materialia, 2002, 50, 1369-1381.	7.9	99
18	Continuum mechanical aspects of phase transformations in solids. Archive of Applied Mechanics, 1994, 64, 54-85.	2.2	96

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19	A criterion for the martensitic transformation of a microregion in an elasticâ€“plastic material. Acta Materialia, 1998, 46, 2095-2102.	7.9	89
20	Modelling of kinetics in multi-component multi-phase systems with spherical precipitatesII: Numerical solution and application. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 385, 157-165.	5.6	89
21	Surface tension determines tissue shape and growth kinetics. Science Advances, 2019, 5, eaav9394.	10.3	80
22	Residual stress formation during the roller straightening of railway rails. International Journal of Mechanical Sciences, 2001, 43, 2281-2295.	6.7	79
23	Modelling for hydrogen diffusion in metals with traps revisited. Acta Materialia, 2012, 60, 1211-1220.	7.9	79
24	Crack Tip Shielding or Anti-shielding due to Smooth and Discontinuous Material Inhomogeneities. International Journal of Fracture, 2005, 135, 73-93.	2.2	77
25	Kinetics of interfaces during diffusional transformations1F. D. Fischer dedicates this paper to Prof. D. Gross, Darmstadt, on the occasion of his 60th anniversary.1. Acta Materialia, 2001, 49, 1249-1259.	7.9	76
26	Improvements of strength and fracture resistance by spatial material property variations. Acta Materialia, 2014, 68, 279-294.	7.9	69
27	Application of the thermodynamic extremal principle to the diffusional phase transformations. Acta Materialia, 2004, 52, 959-967.	7.9	67
28	A new view on J-integrals in elasticâ€“plastic materials. International Journal of Fracture, 2014, 187, 77-107.	2.2	64
29	A thermodynamic approach to grain growth and coarsening. Philosophical Magazine, 2003, 83, 1075-1093.	1.6	63
30	Shape factors in modeling of precipitation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 441, 68-72.	5.6	61
31	Determination of trapping parameters and the chemical diffusion coefficient from hydrogen permeation experiments. Corrosion Science, 2014, 82, 93-100.	6.6	60
32	Modelling the role of surface stress on the kinetics of tissue growth in confined geometries. Acta Biomaterialia, 2013, 9, 5531-5543.	8.3	59
33	Crack driving force in twisted plywood structures. Acta Biomaterialia, 2017, 55, 349-359.	8.3	58
34	Interstitial diffusion in systems with multiple sorts of traps. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 025008.	2.0	55
35	Experimental and theoretical evidence of displacive martensite in an intermetallic Mo-containing Î³-TiAl based alloy. Acta Materialia, 2016, 115, 242-249.	7.9	55
36	Deformation and damage of a crossing nose due to wheel passages. Wear, 2008, 265, 1431-1438.	3.1	54

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37	On the fracture behavior of inhomogeneous materialsâ€“â€“A case study for elastically inhomogeneous bimaterials. International Journal of Solids and Structures, 2005, 42, 605-620.	2.7	48
38	Influence of solute segregation and drag on properties of migrating interfaces. Acta Materialia, 2002, 50, 967-977.	7.9	44
39	Surface Energy of Au Nanoparticles Depending on Their Size and Shape. Nanomaterials, 2020, 10, 484.	4.1	44
40	Mechanical twins, their development and growth. European Journal of Mechanics, A/Solids, 2003, 22, 709-726.	3.7	42
41	Experimental Na/K exchange between alkali feldspar and an NaClâ€“KCl salt melt: chemically induced fracturing and element partitioning. Contributions To Mineralogy and Petrology, 2012, 164, 341-358.	3.1	41
42	Buckling of Free Infinite Strips Under Residual Stresses and Global Tension. Journal of Applied Mechanics, Transactions ASME, 2001, 68, 399-404.	2.2	40
43	A thermodynamical model for the nucleation of mechanical twins in TiAl. Acta Materialia, 2003, 51, 1249-1260.	7.9	39
44	Modelling the influence of trapping on hydrogen permeation in metals. Corrosion Science, 2013, 76, 382-389.	6.6	39
45	Phases and phase transformations in nanocrystalline ZrO2. Journal of Nanoparticle Research, 2006, 8, 1003-1016.	1.9	38
46	Reprint of â€œCracks in inhomogeneous materials: Comprehensive assessment using the configurational forces conceptâ€• Engineering Fracture Mechanics, 2010, 77, 3611-3624.	4.3	38
47	Deformation mechanisms in micron-sized PST TiAl compression samples: Experiment and model. Acta Materialia, 2011, 59, 3410-3421.	7.9	38
48	Precipitation twinning. Acta Materialia, 2007, 55, 4915-4923.	7.9	36
49	Influence of material flux on the jump relations at a singular interface in a multicomponent solid. Acta Mechanica, 2004, 171, 213-223.	2.1	35
50	Mean-field model for the growth and coarsening of stoichiometric precipitates at grain boundaries. Modelling and Simulation in Materials Science and Engineering, 2010, 18, 015011.	2.0	35
51	Kinetics of interaction of impurity interstitials with dislocations revisited. Progress in Materials Science, 2019, 101, 172-206.	32.8	34
52	Deformation, stress state and thermodynamic force for a growing void in an elasticâ€“plastic material. International Journal of Plasticity, 2009, 25, 1819-1832.	8.8	33
53	A kinetic model of the transformation of a micropatterned amorphous precursor into a porous single crystal. Acta Biomaterialia, 2010, 6, 1001-1005.	8.3	33
54	Physicochemical Basis for Water-Actuated Movement and Stress Generation in Nonliving Plant Tissues. Physical Review Letters, 2013, 111, 238001.	7.8	32

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55	Substitutional diffusion in multicomponent solids with non-ideal sources and sinks for vacancies. Acta Materialia, 2010, 58, 2698-2707.	7.9	31
56	Diffusion processes in a migrating interface: The thick-interface model. Acta Materialia, 2011, 59, 4775-4786.	7.9	31
57	A new approach to modelling of non-steady grain growth. Acta Materialia, 2007, 55, 4467-4474.	7.9	29
58	A study on the principle of maximum dissipation for coupled and non-coupled non-isothermal processes in materials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 1186-1196.	2.1	29
59	An energy approach to the formation of twins in TiAl. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 2827-2836.	2.2	28
60	Modeling of formation of binary-phase hollow nanospheres from metallic solid nanospheres. Acta Materialia, 2009, 57, 1912-1919.	7.9	28
61	On the temperature in the wheelâ€“rail rolling contact*. Fatigue and Fracture of Engineering Materials and Structures, 2003, 26, 999-1006.	3.4	27
62	Kinetics of Diffusional Phase Transformation in Multicomponent Elastic-Plastic Materials. Journal of Engineering Materials and Technology, Transactions of the ASME, 2003, 125, 266-276.	1.4	27
63	Strain compensation by twinning in Au thin films: Experiment and model. Acta Materialia, 2007, 55, 6659-6665.	7.9	27
64	Study of nanometer-scaled lamellar microstructure in a Tiâ€“45Alâ€“7.5Nb alloy â€“ Experiments and modeling. Intermetallics, 2010, 18, 509-517.	3.9	26
65	Generalization of the Lifshitzâ€“Slyozovâ€“Wagner coarsening theory to non-dilute multi-component systems. Acta Materialia, 2014, 79, 304-314.	7.9	26
66	The temperature and stress fields developing in rolls during hot rolling. Journal of Materials Processing Technology, 2004, 150, 263-269.	6.3	25
67	From distribution functions to evolution equations for grain growth and coarsening. Acta Materialia, 2008, 56, 5395-5400.	7.9	25
68	A model for evolution of shape changing precipitates in multicomponent systems. Acta Materialia, 2008, 56, 4896-4904.	7.9	24
69	Chemically induced fracturing in alkali feldspar. Physics and Chemistry of Minerals, 2014, 41, 1-16.	0.8	24
70	Diffusion of elements and vacancies in multi-component systems. Progress in Materials Science, 2014, 60, 338-367.	32.8	24
71	Damage tolerance of lamellar bone. Bone, 2020, 130, 115102.	2.9	24
72	Diffusional phase transformation and deformation in steels. Computational Materials Science, 2002, 25, 92-99.	3.0	23

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73	Precipitate growth in multi-component systems with stress relaxation by diffusion and creep. International Journal of Plasticity, 2016, 82, 112-126.	8.8	23
74	Cycled hydrogen permeation through Armco iron â€“ A joint experimental and modeling approach. Corrosion Science, 2020, 176, 109017.	6.6	23
75	Some comments on surface cracks in rails. Fatigue and Fracture of Engineering Materials and Structures, 2006, 29, 938-948.	3.4	22
76	Cracks in inhomogeneous materials: Comprehensive assessment using the configurational forces concept. Engineering Fracture Mechanics, 2010, 77, 2698-2711.	4.3	22
77	Modelling of the influence of the vacancy source and sink activity and the stress state on diffusion in crystalline solids. Acta Materialia, 2011, 59, 1212-1219.	7.9	22
78	Chemically and mechanically driven creep due to generation and annihilation of vacancies with non-ideal sources and sinks. International Journal of Plasticity, 2011, 27, 1384-1390.	8.8	22
79	Kinetics of grain boundary segregation in multicomponent systems â€“ The example of a Mo-C-B-O system. Scripta Materialia, 2018, 150, 110-114.	5.2	22
80	On the role of the transformation eigenstrain in the growth or shrinkage of spheroidal isotropic precipitations. Acta Materialia, 2005, 53, 367-374.	7.9	21
81	Semi-analytical approaches to assess the crack driving force in periodically heterogeneous elastic materials. International Journal of Fracture, 2012, 173, 57-70.	2.2	21
82	Role of vacancies in work hardening and fatigue of TiAl alloys. International Journal of Plasticity, 2013, 42, 83-100.	8.8	20
83	Evaluation of elastic strain energy of spheroidal inclusions with uniform volumetric and shear eigenstrains. Scripta Materialia, 1997, 36, 1053-1059.	5.2	19
84	Physical metallurgy of high Nb-containing TiAl alloys. International Journal of Materials Research, 2004, 95, 585-591.	0.8	19
85	The role of elastic contrast on the strain energy and the stress state of a spheroidal inclusion with a general eigenstrain state. Acta Materialia, 2006, 54, 151-156.	7.9	19
86	Void growth due to vacancy supersaturation â€“ A non-equilibrium thermodynamics study. Scripta Materialia, 2008, 58, 93-95.	5.2	19
87	Vacancy-driven stress relaxation in layers. Acta Materialia, 2009, 57, 4649-4657.	7.9	19
88	On configurational forces at boundaries in fracture mechanics. International Journal of Fracture, 2012, 174, 61-74.	2.2	19
89	Kinetics of interstitial segregation in Cottrell atmospheres and grain boundaries. Philosophical Magazine Letters, 2015, 95, 458-465.	1.2	19
90	Improved thermodynamic treatment of vacancy-mediated diffusion and creep. Acta Materialia, 2016, 108, 347-354.	7.9	19

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91	Relaxation of the elastic strain energy of misfitting inclusions due to diffusion of vacancies. Philosophical Magazine Letters, 2005, 85, 473-479.	1.2	18
92	Kinetics of solute driven melting and solidification. Acta Materialia, 2007, 55, 2599-2607.	7.9	18
93	Modeling of diffusional phase transformation in multi-component systems with stoichiometric phases. Acta Materialia, 2010, 58, 2905-2911.	7.9	18
94	Derivation of the phase field equations from the thermodynamic extremal principle. Acta Materialia, 2012, 60, 396-406.	7.9	18
95	Pre- and post-buckling behavior of bi-crystalline micropillars: Origin and consequences. Acta Materialia, 2017, 124, 195-203.	7.9	18
96	Residual stresses in rails due to roll straightening. Steel Research = Archiv FÃ¼r Das EisenhÃ¼ttenwesen, 1998, 69, 272-278.	0.3	17
97	A case study on the effect of thermal residual stresses on the crack-driving force in linear-elastic bimaterials. International Journal of Mechanical Sciences, 2009, 51, 531-540.	6.7	17
98	Transient solute drag in migrating grain boundaries. Acta Materialia, 2011, 59, 6556-6562.	7.9	17
99	Determination of depths of traps for interstitials from thermodynamic data: a new view on carbon trapping and diffusion. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 065012.	2.0	17
100	Modeling of kinetics of diffusive phase transformation in binary systems with multiple stoichiometric phases. Journal of Phase Equilibria and Diffusion, 2006, 27, 622-628.	1.4	16
101	Stress development during reaction of metallic nanospheres with gas. Acta Materialia, 2011, 59, 61-67.	7.9	16
102	Formation of bubbles by hydrogen attack and elasticâ€“plastic deformation of the matrix. International Journal of Plasticity, 2014, 63, 110-123.	8.8	16
103	Relaxation of a precipitate misfit stress state by creep in the matrix. International Journal of Plasticity, 2015, 64, 164-176.	8.8	16
104	The Surface Temperature of a Halfplane Heated by Friction and Cooled by Convection. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2001, 81, 75-81.	1.6	15
105	Unification of the non-linear geometric transformation theory of martensite and crystal plasticity - Application to dislocated lath martensite in steels. International Journal of Plasticity, 2019, 119, 140-155.	8.8	15
106	Interaction of Phase Transformation and Diffusion in Steels. Journal of Engineering Materials and Technology, Transactions of the ASME, 2003, 125, 22-26.	1.4	14
107	Modeling of massive transformation in substitutional alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 125-132.	2.2	14
108	High temperature instability of hollow nanoparticles. Journal of Nanoparticle Research, 2008, 10, 255-261.	1.9	14

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109	Kinetics of Precipitation in a Complex Hotâ€work Tool Steel. Steel Research International, 2010, 81, 64-73.	1.8	14
110	Modelling the kinetics of a triple junction. Acta Materialia, 2012, 60, 4704-4711.	7.9	14
111	Elastoplastic buckling as source of misinterpretation of micropillar tests. Acta Materialia, 2013, 61, 4996-5007.	7.9	14
112	A new computational treatment of reactive diffusion in binary systems. Computational Materials Science, 2013, 78, 39-46.	3.0	14
113	Diffusive and massive phase transformations in Tiâ€“Alâ€“Nb alloys â€“ Modelling and experiments. Intermetallics, 2013, 38, 126-138.	3.9	14
114	A new treatment of transient grain growth. Acta Materialia, 2016, 115, 442-447.	7.9	14
115	On solute depletion zones along grain boundaries during segregation. Acta Materialia, 2020, 182, 100-107.	7.9	14
116	A study on the principle of maximum dissipation for coupled and non-coupled non-isothermal processes in materials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 2422-2426.	2.1	13
117	Determination of depths of multiple traps for interstitials and their influence on diffusion kinetics. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 065015.	2.0	13
118	Stress, deformation and diffusion interactions in solids â€“ A simulation study. Journal of the Mechanics and Physics of Solids, 2015, 78, 427-442.	4.8	13
119	Incorporation of vacancy generation/annihilation into reactive diffusion concept â€“ Prediction of possible Kirkendall porosity. Computational Materials Science, 2017, 127, 136-140.	3.0	13
120	Diffusion-controlled crack propagation in alkali feldspar. Physics and Chemistry of Minerals, 2019, 46, 15-26.	0.8	13
121	A micromechanical model of phase boundary movement during solid-solid phase transformations. Archive of Applied Mechanics, 2001, 71, 193-205.	2.2	12
122	Onsager's coefficients and diffusion lawsâ€”a Monte Carlo study. Philosophical Magazine, 2005, 85, 1243-1260.	1.6	12
123	Formation of multiple stoichiometric phases in binary systems by combined bulk and grain boundary diffusion: Experiments and model. Acta Materialia, 2013, 61, 32-39.	7.9	12
124	On material immanent ratchetting of two-phase materials under cyclic purely thermal loading. Archive of Applied Mechanics, 1999, 69, 727-750.	2.2	11
125	Interaction energy between martensitic variants. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 2583-2590.	2.2	11
126	Theory, experiments and numerical modelling of phase transformations with emphasis on TRIP. Steel Research = Archiv FÃ¼r Das EisenhÃ¼ttenwesen, 2002, 73, 225-235.	0.3	11

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127	On energy changes due to the formation of a circular hole in an elastic plate. Archive of Applied Mechanics, 2006, 76, 681-697.	2.2	11
128	A Note on the Principle of Maximum Dissipation Rate. Journal of Applied Mechanics, Transactions ASME, 2007, 74, 923-926.	2.2	11
129	Application of material forces to fracture of inhomogeneous materials: illustrative examples. Archive of Applied Mechanics, 2007, 77, 95-112.	2.2	11
130	Mechanics of sheared bands â€“ Applications to faults, twins and variants. Mechanics of Materials, 2008, 40, 195-205.	3.2	11
131	Fluctuations, bistability and hysteresis connected to phase transformations of nanoparticles. Progress in Materials Science, 2011, 56, 1030-1076.	32.8	11
132	Influence of diffusional stress relaxation on growth of stoichiometric precipitates in binary systems. Acta Materialia, 2006, 54, 4575-4581.	7.9	10
133	Computational analysis of the precipitation kinetics in a complex tool steel. International Journal of Materials Research, 2008, 99, 410-415.	0.3	10
134	Crack-stimulated twinning. Scripta Materialia, 2009, 61, 959-962.	5.2	10
135	Structural fluctuations in nanoparticles. Journal of Nanoparticle Research, 2009, 11, 433-439.	1.9	10
136	Computational Modeling and Experimental Study of the Deformation Behavior of Î³-TiAl-Based Alloys. Advanced Engineering Materials, 2000, 2, 662-666.	3.5	9
137	Energy Dissipation and Stability of Propagating Surfaces. Physical Review Letters, 2005, 95, 195702.	7.8	9
138	Compressive deformation of lamellar microstructures â€“ a short review. International Journal of Materials Research, 2007, 98, 1041-1046.	0.3	9
139	A variational approach to grooving and wetting. Acta Materialia, 2013, 61, 1581-1591.	7.9	9
140	Surface stress of gold nanoparticles revisited. International Journal of Solids and Structures, 2021, 224, 111044.	2.7	9
141	Bistability, hysteresis and fluctuations in adiabatic ensembles of nanoparticles. Journal of Nanoparticle Research, 2009, 11, 1485-1499.	1.9	8
142	On problems with the determination of the fracture resistance for materials with spatial variations of the Youngâ€™s modulus. International Journal of Fracture, 2014, 190, 23-38.	2.2	8
143	Can local hot spots induce Î±2/Î³ lamellae during incomplete massive transformation of Î³-TiAl alloys?. Intermetallics, 2010, 18, 972-976.	3.9	7
144	Two-dimensional simulation of reactive diffusion in binary systems. Computational Materials Science, 2014, 95, 309-315.	3.0	7

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145	An innovative concept for interstitial diffusion in stressed crystals. International Journal of Solids and Structures, 2018, 134, 173-180.	2.7	7
146	Driving forces on dislocations â€“ An analytical and finite element study. International Journal of Solids and Structures, 2020, 190, 181-198.	2.7	7
147	Are Onsager's reciprocal relations necessary to apply Thermodynamic Extremal Principles?. Journal of the Mechanics and Physics of Solids, 2020, 135, 103780.	4.8	7
148	Continuum Mechanics of Deformation Twinning â€“ A Review. Multidiscipline Modeling in Materials and Structures, 2006, 2, 167-187.	1.3	6
149	Approximate Analytical Model for Hertzian Elliptical Wheel/Rail or Wheel/Crossing Contact Problems. Journal of Tribology, 2008, 130, .	1.9	6
150	Structural fluctuations in ensembles of nanoparticles. Journal of Nanoparticle Research, 2009, 11, 647-654.	1.9	6
151	Abnormal grain growth: a non-equilibrium thermodynamic model for multi-grain binary systems. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 015013.	2.0	6
152	A variational approach to the modelling of grooving in a three-dimensional setting. Acta Materialia, 2017, 129, 331-342.	7.9	6
153	Au55, a stable glassy cluster: results of ab initio calculations. Beilstein Journal of Nanotechnology, 2017, 8, 2221-2229.	2.8	6
154	Elastic stressâ€“strain analysis of an infinite cylindrical inclusion with eigenstrain. Archive of Applied Mechanics, 2018, 88, 453-460.	2.2	6
155	Thermodynamic trapping and diffusion model for multiple species in systems with multiple sorts of traps. Acta Materialia, 2022, 233, 117940.	7.9	6
156	Comparison of Monte Carlo simulations and macroscopic theories of diffusion in systems with non-ideal sources and sinks for vacancies. Philosophical Magazine, 2005, 85, 2363-2389.	1.6	5
157	On the Algorithmic Implementation of a Material Model Accounting for the Effects of Martensitic Transformation. Steel Research International, 2006, 77, 733-740.	1.8	5
158	Model for coarsening of intergranular precipitates in multicomponent systems. Scripta Materialia, 2010, 62, 754-757.	5.2	5
159	Modelling the role of compositional fluctuations in nucleation kinetics. Acta Materialia, 2015, 91, 365-376.	7.9	5
160	A new approach predicting the evolution of laminated nanostructuresâ€”martensite in NiTi as an example. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 035004.	2.0	5
161	Couples and pairs formationâ€”thermodynamic and kinetic modelling applied to Alâ€“Mgâ€“Si. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 065011.	2.0	5
162	Anisotropy of interstitial diffusion in bcc-crystals due to stress-induced unequal occupancies of different types of sites. International Journal of Solids and Structures, 2018, 152-153, 66-70.	2.7	5

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163	Role of elastic strain energy in spheroidal precipitates revisited. Mechanics of Materials, 2021, 155, 103781.	3.2	5
164	Analysis of non-steady-state distribution functions for grain growth and coarsening. Philosophical Magazine, 2009, 89, 1425-1438.	1.6	4
165	A possible origin of surface cracks in rails. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2011, 225, 605-611.	2.0	4
166	Modeling the role of sources and sinks for vacancies on the kinetics of diffusive phase transformation in binary systems with several stoichiometric phases. Philosophical Magazine Letters, 2012, 92, 67-76.	1.2	4
167	A new self-consistent model for thermodynamics of binary solutions. Scripta Materialia, 2015, 108, 27-30.	5.2	4
168	A thermokinetic model for Mgâ€“Si couple formation in Alâ€“Mgâ€“Si alloys. Modelling and Simulation in Materials Science and Engineering, 2016, 24, 035021.	2.0	4
169	The Emergence of Complexity from a Simple Model for Tissue Growth. Journal of Statistical Physics, 2020, 180, 459-473.	1.2	4
170	On the treatment of non-reciprocal rate-independent kinetics via thermodynamic extremal principles. Journal of the Mechanics and Physics of Solids, 2020, 145, 104149.	4.8	4
171	Evolution of chemically induced cracks in alkali feldspar: thermodynamic analysis. Physics and Chemistry of Minerals, 2022, 49, 14.	0.8	4
172	Simplified calculation of temperature field in heat treated cylinder using temperature measured at one point. Materials Science and Technology, 1992, 8, 468-474.	1.6	3
173	Near surface deformation of rails and wheels in a curve and during acceleration and braking. Vehicle System Dynamics, 2008, 46, 71-83.	3.7	3
174	The Configurational Force Concept in Elastic-Plastic Fracture Mechanicsâ˜Instructive Examples. Key Engineering Materials, 0, 417-418, 297-300.	0.4	3
175	Phase transformations of nanoparticles exposed to hydrostatic pressure. Journal of Nanoparticle Research, 2010, 12, 1859-1868.	1.9	3
176	Temperature fields in particles and in their environment due to sudden phase transformations. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2010, 90, 641-650.	1.6	3
177	Generalized Gaussian error functions and their applications. Acta Mechanica, 2015, 226, 2887-2897.	2.1	3
178	Physical metallurgy of high Nb-containing TiAl alloys. International Journal of Materials Research, 2022, 95, 585-591.	0.3	3
179	A Study of the Deformation Behavior of Lamellar Î³-TiAl by Numeric Modeling. Materials Research Society Symposia Proceedings, 2004, 842, 447.	0.1	2
180	Thermodynamics and Kinetics of Phase and Twin Boundaries. , 2004, , 169-201.		2

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181	Modelling of Precipitation Kinetics with Simultanous Stress Relaxation. Materials Research Society Symposia Proceedings, 2006, 979, 1.	0.1	2
182	Solute drag or diffusion processes in a migrating thick interface. Philosophical Magazine Letters, 2008, 88, 415-420.	1.2	2
183	The effect of surface contact conditions on grain boundary interdiffusion in a semi-infinite bicrystal. Philosophical Magazine, 2014, 94, 3398-3412.	1.6	2
184	An easy-to-use estimate of the energy-release rate for crack arrays. Archive of Applied Mechanics, 2014, 84, 1325-1337.	2.2	2
185	Free edges at bilayered compoundsâ€"a short analytical and numerical reconsideration. Archive of Applied Mechanics, 2016, 86, 2053-2061.	2.2	2
186	A self-consistent model for thermodynamics of multicomponent solid solutions. Scripta Materialia, 2016, 123, 154-157.	5.2	2
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