

Ph Maugis

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2051705/publications.pdf>

Version: 2024-02-01

101
papers

1,728
citations

331670

21
h-index

330143

37
g-index

102
all docs

102
docs citations

102
times ranked

1281
citing authors

#	ARTICLE	IF	CITATIONS
1	Kinetics of vanadium carbonitride precipitation in steel: A computer model. Acta Materialia, 2005, 53, 3359-3367.	7.9	160
2	Modelling the precipitation of NbC on dislocations in $\hat{\text{I}}\pm\text{-Fe}$. Acta Materialia, 2007, 55, 1255-1266.	7.9	104
3	A small-angle neutron scattering study of fine-scale NbC precipitation kinetics in the $\hat{\text{I}}\pm\text{-Fe}\hat{\text{I}}\pm\text{-Nb}\hat{\text{I}}\pm\text{-C}$ system. Journal of Applied Crystallography, 2006, 39, 473-482.	4.5	77
4	Kinetics of heterogeneous dislocation precipitation of NbC in alpha-iron. Acta Materialia, 2008, 56, 5535-5543.	7.9	75
5	First principle calculations of the $\hat{\text{I}}\pm\text{-Fe}_3\text{AlC}$ perovskite and iron-aluminium intermetallics. Intermetallics, 2008, 16, 345-352.	3.9	72
6	A Calphad assessment of Al-Ca-Fe system with the carbide modelled as an ordered form of the fcc phase. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2008, 32, 361-370.	1.6	60
7	Atom Probe Tomography I. Early Stages of Precipitation of NbC and NbN in Ferritic Steels. Advanced Engineering Materials, 2006, 8, 1202-1205.	3.5	54
8	Aluminum and vacancies in $\hat{\text{I}}\pm\text{-iron}$: Dissolution, diffusion, and clustering. Physical Review B, 2010, 81, .	3.2	53
9	Grain-boundary segregation of boron in high-strength steel studied by nano-SIMS and atom probe tomography. Acta Materialia, 2020, 182, 226-234.	7.9	48
10	First-principles study of the stability of NbC and NbN precipitates under coherency strains in $\hat{\text{I}}\pm\text{-iron}$. Computational Materials Science, 2010, 49, 60-63.	3.0	41
11	3D thermo-chemical-mechanical simulation of power ramps with ALCYONE fuel code. Journal of Nuclear Materials, 2014, 452, 578-594.	2.7	41
12	Austenite growth and stability in medium Mn, medium Al Fe-C-Mn-Al steels. Computational Materials Science, 2016, 125, 206-217.	3.0	39
13	Kinetics of heterogeneous grain boundary precipitation of NbC in $\hat{\text{I}}\pm\text{-iron}$: A Monte Carlo study. Acta Materialia, 2008, 56, 5653-5667.	7.9	37
14	Precipitation of niobium carbonitrides in ferrite: chemical composition measurements and thermodynamic modelling. Philosophical Magazine Letters, 2007, 87, 645-656.	1.2	35
15	Ab Initio calculations of phase stabilities in the Fe-Al-C system and CALPHAD-Type assessment of the iron-rich corner. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 3397-3401.	2.2	34
16	A Criterion for the Change from Fast to Slow Regime of Cementite Dissolution in Fe-C-Mn Steels. Journal of Materials Science and Technology, 2012, 28, 728-736.	10.7	32
17	A methodology for the measurement of the interfacial excess of solute at a grain boundary. Scripta Materialia, 2016, 120, 90-93.	5.2	30
18	Effect of interstitial carbon distribution and nickel substitution on the tetragonality of martensite: A first-principles study. Intermetallics, 2017, 89, 92-99.	3.9	30

#	ARTICLE	IF	CITATIONS
19	MEAMfit: A reference-free modified embedded atom method (RF-MEAM) energy and force-fitting code. Computer Physics Communications, 2015, 196, 439-445.	7.5	29
20	Stress-controlled carbon diffusion channeling in bct-iron: A mean-field theory. Journal of Alloys and Compounds, 2018, 769, 1121-1131.	5.5	23
21	Relation between composition, microstructure and oxidation in iron aluminides. Intermetallics, 2006, 14, 1214-1220.	3.9	22
22	Interface transfer coefficient in second-phase-growth models. Physical Review B, 1994, 49, 11580-11587.	3.2	20
23	Multiple interface velocity solutions for ternary biphas infinite diffusion couples. Acta Materialia, 1997, 45, 1941-1954.	7.9	20
24	Phases Equilibrium Study in Quaternary Iron-rich Fe-Al-Mn-C Alloys. ISIJ International, 2007, 47, 898-906.	1.4	19
25	A first-principle study of the structural, elastic, lattice dynamical and thermodynamic properties of ϵ -Fe. Computational Materials Science, 2017, 128, 270-286.	3.2	19
26	Temperature hysteresis of the order-disorder transition in carbon-supersaturated ϵ -Fe. Physical Review B, 2017, 96, .	3.2	19
27	Combined Effect of Heating Rate and Microalloying Elements on Recrystallization During Annealing of Dual-Phase Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 2865-2875.	2.2	19
28	Influence of Heating Rate on Ferrite Recrystallization and Austenite Formation in Cold-Rolled Microalloyed Dual-Phase Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 66-77.	2.2	19
29	Ferrite, martensite and supercritical iron: A coherent elastochemical theory of stress-induced carbon ordering in steel. Acta Materialia, 2018, 158, 454-465.	7.9	19
30	Chemical composition of nano-phases studied by anomalous small-angle X-ray scattering: Application to oxide nano-particles in ODS steels. Materials Characterization, 2014, 87, 138-142.	4.4	18
31	Development of 3rd generation Medium Mn duplex steels for automotive applications. Materials Science and Technology, 2019, 35, 204-219.	1.6	18
32	Effect of stress on vacancy formation and diffusion in fcc systems: Comparison between DFT calculations and elasticity theory. Acta Materialia, 2020, 200, 869-882.	7.9	18
33	Precipitation of niobium carbides in Fe-C-Nb steel. Surface and Interface Analysis, 2004, 36, 585-588.	1.8	17
34	Co-segregation of boron and carbon atoms at dislocations in steel. Journal of Alloys and Compounds, 2017, 724, 1143-1148.	5.5	17
35	Carbon diffusivity and kinetics of spinodal decomposition of martensite in a model Fe-Ni-C alloy. Materials Letters, 2018, 214, 213-216.	2.6	17
36	From a discrete to a continuum model for static antiphase boundaries. Physical Review B, 1996, 53, 5276-5286.	3.2	16

#	ARTICLE	IF	CITATIONS
37	Characterization and Modeling of Precipitation Kinetics in a Fe-Si-Ti Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 4999-5008.	2.2	16
38	Monte Carlo Simulation of NbC Precipitation Kinetics in $\hat{\alpha}$ -Fe. Defect and Diffusion Forum, 2001, 194-199, 1779-1786.	0.4	15
39	Heterogeneous precipitation on dislocations: effect of the elastic field on precipitate morphology. Philosophical Magazine, 2008, 88, 1555-1567.	1.6	14
40	Empirical potential simulations of interstitial dislocation loops in uranium dioxide. Journal of Nuclear Materials, 2016, 479, 576-584.	2.7	13
41	Ferrite recrystallization and austenite formation during annealing of cold-rolled advanced high-strength steels: In situ synchrotron X-ray diffraction and modeling. Materials Characterization, 2019, 154, 20-30.	4.4	13
42	A Temperature- σ Stress Phase Diagram of Carbon-Supersaturated bcc-Iron, Exhibiting σ -Beyond-Zener σ Ordering. Journal of Phase Equilibria and Diffusion, 2020, 41, 269-275.	1.4	13
43	Degeneracy of diffusion paths in ternary, two-phase diffusion couples. Journal of Applied Physics, 1996, 79, 7592-7595.	2.5	12
44	Influence of a 2-D defect on the partitioning during the formation of a cementite particle in steels. Computational Materials Science, 2015, 106, 64-68.	3.0	12
45	Atomic-scale study of low-temperature equilibria in iron-rich Al-C-Fe. Physical Review B, 2008, 78, .	3.2	11
46	Bainite transformation stasis controlled by plastic work in austenite. Revue De Metallurgie, 2003, 100, 103-108.	0.3	10
47	Modelling of the interaction between phase transformation and precipitation: Coupled kinetics in microalloyed multiphase steels. Computational Materials Science, 2012, 55, 127-135.	3.0	10
48	Austenite formation in a ferrite/martensite cold-rolled microstructure during annealing of advanced high-strength steels. Metallurgical Research and Technology, 2014, 111, 3-8.	0.7	10
49	Formation of Ni ₃ InGaAs phase in Ni/InGaAs contact at low temperature. Applied Physics Letters, 2016, 109, 131902.	3.3	10
50	Nonlinear elastic behavior of iron-carbon alloys at the nanoscale. Computational Materials Science, 2019, 159, 460-469.	3.0	10
51	Role of dislocation elastic field on impurity segregation in Fe-based alloys. Scientific Reports, 2021, 11, 1780.	3.3	10
52	Relationship between the electronic structure and the precipitation of FeTiP in interstitial-free ferritic steels. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 2393-2403.	0.6	9
53	Effects of cementite size and chemistry on the kinetics of austenite formation during heating of a high-formability steel. Computational Materials Science, 2020, 182, 109786.	3.0	9
54	Stability of Zener order in martensite: an atomistic evidence. Scripta Materialia, 2021, 194, 113632.	5.2	9

#	ARTICLE	IF	CITATIONS
55	Modeling of Niobium Carbide Precipitation in Steel. Defect and Diffusion Forum, 2001, 194-199, 1767-1772.	0.4	8
56	Nucleation and growth of carbo-nitride nanoparticles in $\hat{1}\pm$ -Fe-based alloys and associated interfacial process. Nanotechnology Reviews, 2015, 4, .	5.8	7
57	Revisiting the pressure effect on carbon migration in iron. Materials Letters, 2020, 270, 127725.	2.6	7
58	Giant Snoek peak in ferrite due to carbon-carbon strain interactions. Materialia, 2020, 12, 100805.	2.7	7
59	Thermo-kinetic modelling of the giant Snoek effect in carbon-supersaturated iron. Journal of Alloys and Compounds, 2021, 877, 160236.	5.5	7
60	Kinetics of Precipitation: Comparison between Monte Carlo Simulations, Cluster Dynamics and the Classical Laws. Defect and Diffusion Forum, 2005, 237-240, 671-676.	0.4	6
61	Thermodynamic stabilities in the Fe-Fe ₁₆ C ₂ system: Influence of carbon-carbon interactions studied by DFT. Computational Materials Science, 2018, 150, 524-534.	3.0	6
62	Effect of thermal ageing on atomic redistribution at the ferrite/ferrite and ferrite/cementite interfaces. Journal of Materials Science, 2020, 55, 11561-11571.	3.7	6
63	Impact of Ni alloying on Fe-C martensite ageing: an atomistic investigation. Scripta Materialia, 2021, 205, 114182.	5.2	6
64	Effect of boron segregation on bainite nucleation during isothermal transformation. Scripta Materialia, 2022, 207, 114286.	5.2	6
65	Study of the effect of cold deformation on the austenite formation. Revue De Metallurgie, 2006, 103, 465-471.	0.3	5
66	Spinodal Decomposition in Multilayered Fe-Cr System: Kinetic Stasis and Wave Instability. Jom, 2015, 67, 2202-2207.	1.9	5
67	Hydrogen diffusivity and solubility in stressed fcc crystals. Journal of Alloys and Compounds, 2021, 879, 160425.	5.5	5
68	Effect of substitutional Ni atoms on the Snoek relaxation in ferrite and martensite Fe-C alloys: An atomistic investigation. Computational Materials Science, 2022, 203, 111083.	3.0	5
69	Bainite tip radius prediction by analogy with indentation. Scripta Materialia, 2006, 54, 1527-1529.	5.2	4
70	Precipitation of Niobium Carbonitrides: Chemical Composition Measurements and Modeling. Materials Science Forum, 0, 539-543, 4196-4201.	0.3	4
71	Structural, energetic and dynamical properties of ordered and disordered bcc Fe ₂₅ at.%Ni alloys: A first-principles study. Computational Materials Science, 2017, 126, 82-89.	3.0	4
72	Coupled modeling of irradiated fuel thermochemistry and gas diffusion during severe accidents. Journal of Nuclear Materials, 2022, 560, 153429.	2.7	4

#	ARTICLE	IF	CITATIONS
73	Grain size effect on interfacial segregation in nanomaterials. Journal of Physics and Chemistry of Solids, 2022, 164, 110620.	4.0	4
74	Modeling the Snoek peak in bct-martensite. Journal of Alloys and Compounds, 2022, 907, 164502.	5.5	4
75	A theory of Snoek relaxation in iron-carbon bct-martensite. Journal of Materials Science, 2022, 57, 10343-10358.	3.7	4
76	A Model for Niobium Carbonitride Precipitation in Ferrite. Materials Science Forum, 2003, 426-432, 1313-1318.	0.3	3
77	Precipitation of copper in ferrite: Prediction of the strengthening kinetics. Revue De Metallurgie, 2004, 101, 71-78.	0.3	3
78	Thermodynamic assessment of the Cs-Te binary system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2015, 48, 1-12.	1.6	3
79	Magnetic behavior of transition metal solutes in α -iron: A classification. Journal of Magnetism and Magnetic Materials, 2020, 513, 167223.	2.3	3
80	Carbon diffusion in bcc- and bct-Fe: Influence of short-range C-C pair interactions studied from first-principles calculations. Materials Chemistry and Physics, 2022, 286, 126159.	4.0	3
81	Thin-Film Reactive Interdiffusion in The Ti-AL System. Materials Research Society Symposia Proceedings, 1991, 237, 679.	0.1	2
82	Al-Ti reactive interdiffusion studied by STIMS and RBS. Vacuum, 1994, 45, 413-417.	3.5	2
83	Atomistic Monte Carlo Simulations of Homogeneous and Heterogeneous Precipitation on Grain Boundaries of NbC in Steels. Defect and Diffusion Forum, 2005, 237-240, 721-726.	0.4	2
84	Effect of Dislocations on Precipitation of Nb-C in α -Fe. Materials Science Forum, 0, 539-543, 4161-4166.	0.3	2
85	The Role of Dispersions in Modeling the Kinetics of Phase Transformations. Solid State Phenomena, 0, 172-174, 279-284.	0.3	2
86	Atomic mean-field model of E21 ordering in α -iron-aluminium-carbon alloys. Journal of Alloys and Compounds, 2017, 696, 1120-1128.	5.5	2
87	Delaying Effect of Cementite on Recrystallization Kinetics of a Ti-Nb Microalloyed High-Formability Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 4059-4073.	2.2	2
88	Atomistic investigation on the impact of substitutional Al and Si atoms on the carbon kinetics in ferrite. Journal of Alloys and Compounds, 2022, 921, 166031.	5.5	2
89	Statistical self-similarity in Rhines' concept of unique multiphase diffusion paths on the ternary gibbs isotherm. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 3357-3365.	2.2	1
90	Title is missing!. Transport in Porous Media, 2002, 47, 1-27.	2.6	1

#	ARTICLE	IF	CITATIONS
91	Characterization by APT and TEM of Xe nano-bubbles in CeO ₂ . Nuclear Instruments & Methods in Physics Research B, 2020, 469, 24-27.	1.4	1
92	Impact of stresses and alloying elements on ferrous martensite nanodomains. Materials Letters, 2021, , 131248.	2.6	1
93	Modeling of fission product release during severe accidents with the fuel performance code ALCYONE. Nuclear Engineering and Design, 2022, 393, 111778.	1.7	1
94	On the Interface Transfer Coefficient in Second Phase Growth Models. Materials Science Forum, 1994, 155-156, 389-392.	0.3	0
95	Application of thermodynamics and diffusion in solids to the development of high strength steels for the Automotive Industry. Materialwissenschaft Und Werkstofftechnik, 2005, 36, 467-470.	0.9	0
96	A Computer Model of Carbonitride Precipitation in Steel. , 2005, , 55-70.		0
97	The Joint Research Program "CPR Precipitation" Towards More Powerful Computer Assisted Metallurgy Codes. Advanced Engineering Materials, 2006, 8, 1220-1222.	3.5	0
98	Study of Diffusion and Reaction Diffusion in the Fe-C-Nb System. Defect and Diffusion Forum, 2007, 264, 163-169.	0.4	0
99	A nanometre-sized porous phase in iron-carbon-boron system. Materials Letters, 2010, 64, 2559-2561.	2.6	0
100	Atom probe tomography study of austenite formation during heating of a high-formability steel. Journal of Materials Science, 2020, 55, 9286-9298.	3.7	0
101	Oxidation microstructure of iron aluminides. Materials at High Temperatures, 2005, 22, 481-484.	1.0	0