Bo Sundman

List of Publications by Year
in descending order

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Version: 2024-02-01

61 papers	11,843 citations	126708 33 h-index	138251 58 g-index
62 all docs	62 docs citations	62 times ranked	5264 citing authors

#	Article	IF	Citations
1	Modeling the thermodynamics of the FeTi hydrogenation under para-equilibrium: An ab-initio and experimental study. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2022, 77, 102426.	0.7	3
2	Algorithms useful for calculating multi-component equilibria, phase diagrams and other kinds of diagrams. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2021, 75, 102330.	0.7	6
3	Implementation of the UNIQUAC model in the OpenCalphad software. Fluid Phase Equilibria, 2020, 507, 112398.	1.4	4
4	Calphad Modeling of LRO and SRO Using ab initio Data. Metals, 2020, 10, 998.	1.0	2
5	An improved method to evaluate the â€œJoint Oxyde-Gaineâ€•formation in (U,Pu)O₂ irradiated fuels using the GERMINAL V2 code coupled to Calphad thermodynamic computations. EPJ Nuclear Sciences & Technologies, 2020, 6, 47.	0.3	8
6	Development of a robust, accurate and efficient coupling between PLEIADES/ALCYONE <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si10.svg"><mml:mrow><mml:mn>2.1</mml:mn></mml:mrow></mml:math> fuel performance code and the OpenCalphad thermo-chemical solver. Nuclear Engineering and Design, 2020, 369, 110818.	0.8	9
7	A method for handling the extrapolation of solid crystalline phases to temperatures far above their melting point. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2020, 68, 101737.	0.7	19
8	Simulation of the chemical state of high burnup <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:mrow><mml:mrow><mml:mo stretchy="true">(</mml:mo><mml:mtext>U</mml:mtext><mml:mo>,</mml:mo><mml:mtext>Pu</mml:mtext><mml:mo) Tj ET Q q 0 0 0 fuel in fast reactors based on thermodynamic calculations. Journal of Nuclear Materials, 2020, 532, 15	1.3	
9	Computational Thermodynamics: Application to Nuclear Materials. , 2020, , 814-849.		0
10	A stepwise thermodynamic modeling of the phase diagram for the Cuâ€“Be system. Journal of Materials Science, 2018, 53, 3756-3766.	1.7	7
11	Thermodynamic investigations of the uranium-molybdenum-oxygen system by a coupling of density functional theory and CALPHAD methodologies. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2018, 63, 196-211.	0.7	5
12	A Review of Calphad Modeling of Ordered Phases. Journal of Phase Equilibria and Diffusion, 2018, 39, 678-693.	0.5	39
13	The OpenCalphad thermodynamic software interface. Computational Materials Science, 2016, 125, 188-196.	1.4	45
14	A thermodynamic description of the Alâ€“Coâ€“Ni system and site occupancy in CoÂ+ÂAlNi3 composite binder phase. Journal of Alloys and Compounds, 2016, 687, 855-866.	2.8	25
15	The implementation of an algorithm to calculate thermodynamic equilibria for multi-component systems with non-ideal phases in a free software. Computational Materials Science, 2015, 101, 127-137.	1.4	47
16	Incorporating the CALPHAD sublattice approach of ordering into the phase-field model with finite interface dissipation. Acta Materialia, 2015, 88, 156-169.	3.8	81
17	OpenCalphad - a free thermodynamic software. Integrating Materials and Manufacturing Innovation, 2015, 4, 1-15.	1.2	126
18	Thermodynamic modeling of the Coâ€“Hf system supported by key experiments and first-principles calculations. Thermochimica Acta, 2015, 608, 49-58.	1.2	10

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19	Perspectives on point defect thermodynamics. Physica Status Solidi (B): Basic Research, 2014, 251, 97-129.	0.7	58
20	Thermodynamic modelling of advanced oxide and carbide nuclear fuels: Description of the Uâ€“Puâ€“Oâ€“C systems. Journal of Nuclear Materials, 2011, 419, 145-167.	1.3	186
21	Thermodynamic investigations on materials corrosion in some industrial and environmental processes. Journal of Environmental Sciences, 2011, 23, S1-S7.	3.2	14
22	Modeling multiple defects in ionic phases like UO2Â±x using the compound energy formalism. Acta Materialia, 2011, 59, 6039-6047.	3.8	9
23	Calphad thermodynamic description of some binary systems involving U. Journal of Nuclear Materials, 2011, 411, 131-143.	1.3	60
24	An attempt to correct the quasichemical model. Acta Materialia, 2009, 57, 5237-5244.	3.8	9
25	An assessment of the entire Alâ€“Fe system including D03 ordering. Acta Materialia, 2009, 57, 2896-2908.	3.8	203
26	Thermodynamic assessments of the Niâ€“Pt and Alâ€“Niâ€“Pt systems. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2009, 33, 450-456.	0.7	77
27	Thermodynamic modelling of the plutoniumâ€“oxygen system. Journal of Nuclear Materials, 2008, 378, 257-272.	1.3	72
28	A Calphad assessment of Alâ€“Câ€“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.	0.7	60
29	Thermodynamic Assessment of the CaO-Al2O3-SiO2 System. Journal of the American Ceramic Society, 2006, 89, 298-308.	1.9	105
30	Using first-principles results to calculate finite-temperature thermodynamic properties of the Nbâ€“Ni Î¼ phase in the Braggâ€“Williams approximation. Philosophical Magazine, 2006, 86, 1631-1641.	0.7	18
31	Equilibrium between Fluorite and Pyrochlore Structures in the ZrO₂–Nd₂O₃ System. Materials Transactions, 2005, 46, 1167-1174.	0.4	16
32	Phase Equilibria and Thermodynamics in the Al2O3-SiO2 System-Modeling of Mullite and Liquid. Journal of the American Ceramic Society, 2005, 88, 2544-2551.	1.9	56
33	A revised thermodynamic description of the Co-W-C system. Journal of Phase Equilibria and Diffusion, 2005, 26, 152-160.	0.5	66
34	Thermodynamic assessment of the MgOâ€“Al2O3â€“SiO2 system. Journal of Materials Research, 2005, 20, 975-986.	1.2	49
35	Atomic, Electronic, and Magnetic Structure of Iron-Based Sigma-Phases. Materials Research Society Symposia Proceedings, 2004, 842, 185.	0.1	7
36	A thermodynamic assessment of the Co-V system. Journal of Phase Equilibria and Diffusion, 2003, 24, 495-503.	0.3	30

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37	A description of the effect of short range ordering in the compound energy formalism. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2003, 27, 403-408.	0.7	34
38	Using Re-W Ïƒ-phase first-principles results in the Bragg-Williams approximation to calculate finite-temperature thermodynamic properties. Physical Review B, 2002, 66, .	1.1	46
39	Computation of Partial Equilibrium Solidification with Complete Interstitial and Negligible Substitutional Solute Back Diffusion. Materials Transactions, 2002, 43, 551-559.	0.4	85
40	Thermo-Calc & DICTRA, computational tools for materials science. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2002, 26, 273-312.	0.7	3,254
41	Thermodynamic assessment of the uraniumâ€“oxygen system. Journal of Nuclear Materials, 2002, 304, 161-175.	1.3	193
42	Modeling of thermodynamic properties for Bcc, Fcc, liquid, and amorphous iron. Journal of Phase Equilibria and Diffusion, 2001, 22, 631-644.	0.3	147
43	A thermodynamic database for Ni-base superalloys. Scandinavian Journal of Metallurgy, 2001, 30, 184-192.	0.3	91
44	Modeling of thermodynamic properties for Bcc, Fcc, liquid, and amorphous iron. , 2001, 22, 631.		4
45	Thermodynamic assessment of the Ti-Al-N system. Journal of Phase Equilibria and Diffusion, 1998, 19, 146-160.	0.3	43
46	The Bragg-Williams-Gorsky (BWG) ordering treatment in the compound energy formalism (CEF). Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1998, 102, 1102-1110.	0.9	10
47	Thermodynamic modelling of short range order using the compound energy formalism. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1998, 102, 1111-1115.	0.9	5
48	Phase equilibria, defect chemistry and semiconducting properties of CdTe(s)â€”Thermodynamic modeling. Journal of Electronic Materials, 1998, 27, 961-971.	1.0	24
49	A thermodynamic assessment of the Au-Cu system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1998, 22, 335-354.	0.7	97
50	Thermodynamic assessment of the Al-Ni system. Journal of Alloys and Compounds, 1997, 247, 20-30.	2.8	462
51	A reassessment of the non-stoichiometry of fayalite. Physics and Chemistry of Minerals, 1996, 23, 387.	0.3	7
52	A thermodynamic evaluation of the nickel-silicon system. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 2897-2903.	1.1	41
53	The Ringberg workshop 1995 on unary data for elements and other end-members of solutions. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1995, 19, 433-436.	0.7	32
54	A binary database for IIIâ€“V compound semiconductor systems. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1994, 18, 177-222.	0.7	206

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55	The compound energy model for ionic solutions with applications to solid oxides. Journal of Phase Equilibria and Diffusion, 1992, 13, 459-475.	0.3	88
56	An assessment of the Fe-O system. Journal of Phase Equilibria and Diffusion, 1991, 12, 127-140.	0.3	196
57	A two-sublattice model for molten solutions with different tendency for ionization. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1985, 16, 261-266.	1.4	247
58	A two-sublattice model for molten solutions with different tendency for ionization. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1985, 16, 261-266.	1.4	346
59	The Thermo-Calc databank system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1985, 9, 153-190.	0.7	3,104
60	A regular solution model for phases with several components and sublattices, suitable for computer applications. Journal of Physics and Chemistry of Solids, 1981, 42, 297-301.	1.9	868
61	Thermodynamic Calculations and Kinetic Simulations of some Advanced Materials. Materials Science Forum, 0, 675-677, 961-974.	0.3	15