GÃ¶ran Grimvall

List of Publications by Year
in descending order

51 papers	2,015 citations	304743 22 h-index	276875 41 g-index
51 all docs	51 docs citations	51 times ranked	1639 citing authors

#	Article	IF	Citations
1	Lattice instabilities in metallic elements. Reviews of Modern Physics, 2012, 84, 945-986.	45.6	448
2	Vacancies in Metals: From First-Principles Calculations to Experimental Data. Physical Review Letters, 2000, 85, 3862-3865.	7.8	226
3	Interface between quantum-mechanical-based approaches, experiments, and CALPHAD methodology. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2007, 31, 4-27.	1.6	108
4	How superheated crystals melt. Nature Materials, 2005, 4, 388-390.	27.5	103
5	Cohesive properties and vibrational entropy of 3dtransition-metal compounds:MX(NaCl) compounds (X=C, N, O, S), complex carbides, and nitrides. Physical Review B, 1989, 40, 10582-10593.	3.2	100
6	Cohesive properties and vibrational entropy of 3d-transition metal carbides. Journal of Physics and Chemistry of Solids, 1992, 53, 105-125.	4.0	97
7	Temperature dependent effective masses of conduction electrons. Journal of Physics and Chemistry of Solids, 1968, 29, 1221-1225.	4.0	95
8	Vacancy concentration in Al from combined first-principles and model potential calculations. Physical Review B, 2003, 67, .	3.2	73
9	Thermal conductivity of cast iron: Models and analysis of experiments. Journal of Applied Physics, 1991, 70, 1198-1206.	2.5	61
10	Electrical resistivity of steels and face-centered-cubic iron. Journal of Applied Physics, 2002, 92, 4402-4407.	2.5	56
11	Bonding properties and vibrational entropy of transition metal MeB2(AlB2) diborides. Journal of the Less Common Metals, 1991, 169, 257-281.	0.8	53
12	Polymorphism of Metals. III.Theory of the Temperature-Pressure Phase Diagram of Iron. Physica Scripta, 1976, 13, 59-64.	2.5	50
13	Analysis of thermodynamic properties of molybdenum and tungsten at high temperatures. Physical Review B, 1991, 44, 4332-4340.	3.2	50
14	Spin disorder in paramagnetic fcc iron. Physical Review B, 1989, 39, 12300-12301.	3.2	46
15	Reconciling ab initio and semiempirical approaches to lattice stabilities. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1998, 102, 1083-1087.	0.9	37
16	Thermodynamic properties of tungsten. Physical Review B, 1987, 36, 7816-7826.	3.2	33
17	Dynamical and thermodynamical instabilities in the disorderedRexW1â^'xsystem. Physical Review B, 1999, 60, 9999-10007.	3.2	33
18	Anharmonic effects in the heat capacity of Al. Physical Review B, 2004, 69, .	3.2	33

#	Article	IF	Citations
19	Homogeneous melting of superheated crystals: Molecular dynamics simulations. Physical Review B, 2005, 72, .	3.2	33
20	Thermodynamic properties of technetium. Journal of the Less Common Metals, 1989, 147, 195-211.	0.8	30
21	Anharmonic contribution to the vacancy formation in Cu. Physical Review B, 2001, 63, .	3.2	26
22	Conduction in inhomogeneous materials: Hot and high-field spots. Physical Review B, 1989, 39, 9231-9235.	3.2	24
23	Heat capacity of actinide dioxides. Journal of Nuclear Materials, 1994, 210, 115-122.	2.7	23
24	Heat capacity of liquid Al: Molecular dynamics simulations. Physical Review B, 2005, 72, .	3.2	22
25	New aspects on the electron-phonon system at finite temperatures with an application on lead and mercury. European Physical Journal B, 1969, 9, 283-299.	1.5	21
26	Electrical transport and deviations from Matthiessen's rule in alloys. Physical Review B, 1980, 21, 2072-2077.	3.2	19
27	Lattice dynamics and thermodynamic properties of theÎ²-Sn phase in Si. Physical Review B, 2000, 62, 14784-14789.	3.2	18
28	Electronâ€“Electron Renormalization of the Electronic Heat Capacity in Simple Metals. Physica Scripta, 1975, 12, 337-338.	2.5	12
29	Conductivity of inhomogeneous materials represented by discrete resistor networks. Journal of Applied Physics, 1986, 59, 186-190.	2.5	11
30	Bonding and Debye temperatures in alkali-earth-metal halides. Journal of Physics and Chemistry of Solids, 1994, 55, 707-710.	4.0	11
31	Vibrational entropy of dislocations in Al. Philosophical Magazine, 2004, 84, 521-532.	1.6	10
32	Numerical calculations on the electron-phonon system in sodium. European Physical Journal B, 1967, 6, 15-22.	1.5	9
33	Temperature effects in cyclotron resonance and specific heat electron masses. Solid State Communications, 1969, 7, 213-215.	1.9	8
34	New aspects on the thermodynamic functions of iron. Solid State Communications, 1974, 14, 551-553.	1.9	8
35	On rigid bands and mass enhancements in noble metal alloys. European Physical Journal B, 1972, 14, 101-104.	1.5	7
36	Conduction in a twoâ€phase plane with diamondâ€shaped tiling. Journal of Mathematical Physics, 1991, 32, 1958-1960.	1.1	7

#	Article	IF	Citations
37	Characteristic quantities and dimensional analysis. Scientific Modeling and Simulation SMNS, 2008, 15, 21-39.	0.8	5
38	Extrapolative procedures in modelling and simulations: the role of instabilities. Scientific Modeling and Simulation SMNS, 2008, 15, 5-20.	0.8	3
39	Lattice Vibrations, Heat Capacity, and Related Properties. , 2000, , .		2
40	Questionable physics tricks for children. Physics Teacher, 1987, 25, 378-379.	0.3	1
41	Recreational physics problems for a broad audience. Physics Teacher, 1995, 33, 52-53.	0.3	1
42	Variation of Elastic Shear Constants in Transition Metal Alloys. , 2005, , 295-305.		1
43	Accuracy of models. Scientific Modeling and Simulation SMNS, 2008, 15, 41-57.	0.8	1
44	Physics should be verifiable. Physics Teacher, 1984, 22, 554-554.	0.3	0
45	Ab initio and empirical approaches to the thermodynamics of transition metals, with an application to tungsten. Physica B: Condensed Matter, 1989, 159, 39-42.	2.7	0
46	PHASE DIAGRAMS AND BAND STRUCTURE OF TRANSITION METAL COMPOUNDS. International Journal of Modern Physics B, 1993, 07, 280-285.	2.0	0
47	The Gibbs Energy Of Transition Metal Compounds. NATO ASI Series Series B: Physics, 1994, , 567-570.	0.2	0
48	The Orthorhombic Phase of CaSiO3 Perovskite. Materials Research Society Symposia Proceedings, 2002, 718, 1.	0.1	0
49	Accuracy of models. Lecture Notes in Computational Science and Engineering, 2008, , 41-57.	0.3	0
50	Extrapolative procedures in modelling and simulations: the role of instabilities. Lecture Notes in Computational Science and Engineering, 2008, , 5-20.	0.3	0
51	Prediction of Lattice Vibrations in Metastable and Unstable Transition Metal Systems. NATO ASI Series Series B: Physics, 1996, , 425-430.	0.2	0