Edgar Dachs

List of Publications by Year
in descending order

86 papers	1,593 citations	304602 22 h-index	345118 36 g-index
86 all docs	86 docs citations	86 times ranked	1255 citing authors

#	Article	IF	Citations
1	A ternary feldspar-mixing model based on calorimetric data: development and application. Contributions To Mineralogy and Petrology, 2010, 160, 327-337.	1.2	126
2	Precision and accuracy of the heat-pulse calorimetric technique: lowtemperature heat capacities of milligram-sized synthetic mineral samples. European Journal of Mineralogy, 2005, 17, 251-259.	0.4	107
3	Pitfalls in geothermobarometry of eclogites: Fe 3+ and changes in the mineral chemistry of omphacite at ultrahigh pressures. Contributions To Mineralogy and Petrology, 2004, 147, 305-318.	1.2	77
4	Heat capacities and entropies of mixing of pyrope-grossular (Mg3Al2Si3O12-Ca3Al2Si3O12) garnet solid solutions: A low-temperature calorimetric and a thermodynamic investigation. American Mineralogist, 2006, 91, 894-906.	0.9	77
5	A low-temperature calorimetric study of synthetic (forsterite+fayalite) {(Mg2SiO4+Fe2SiO4)} solid solutions: An analysis of vibrational, magnetic, and electronic contributions to the molar heat capacity and entropy of mixing. Journal of Chemical Thermodynamics, 2007, 39, 906-933.	1.0	57
6	A sample-saving method for heat capacity measurements on powders using relaxation calorimetry. Cryogenics, 2011, 51, 460-464.	0.9	57
7	Eclogite meso- and microfabrics: implications for the burial and exhumation history of eclogites in the Tauern Window (Eastern Alps) from P-T-d paths. Tectonophysics, 1998, 285, 183-209.	0.9	55
8	PET: petrological elementary tools for mathematica. Computers and Geosciences, 1998, 24, 219-235.	2.0	52
9	Comprehensive chemical analyses of natural cordierites: implications for exchange mechanisms. Lithos, 2004, 78, 389-409.	0.6	52
10	Constraints on the duration of high-pressure metamorphism in the Tauern Window from diffusion modelling of discontinuous growth zones in eclogite garnet. Journal of Metamorphic Geology, 2002, 20, 769-780.	1.6	49
11	PET: Petrological Elementary Tools for MathematicaÂ®: an update. Computers and Geosciences, 2004, 30, 173-182.	2.0	37
12	Relics of high-pressure metamorphism from the Grossglockner region, Hohe Tauern, Austria: Paragenetic evolution and PT-paths of retrogressed eclogites. European Journal of Mineralogy, 2001, 13, 67-86.	0.4	35
13	The heat capacity of fayalite at high temperatures. American Mineralogist, 2012, 97, 657-660.	0.9	29
14	Thermodynamic mixing behavior of synthetic Ca-Tschermakâ€"diopside pyroxene solid solutions: I. Volume and heat capacity of mixing. Physics and Chemistry of Minerals, 2007, 34, 733-746.	0.3	28
15	Excess heat capacity and entropy of mixing in high structural state plagioclase. American Mineralogist, 2009, 94, 1153-1161.	0.9	28
16	Excess heat capacity and entropy of mixing along the chlorapatiteâ€"fluorapatite binary join. Physics and Chemistry of Minerals, 2010, 37, 665-676.	0.3	27
17	The mechanism of the reaction 1 tremolite+3 calcite+2 quartz =5 diopside+3 CO2+1 H2O: results of powder experiments. Contributions To Mineralogy and Petrology, 1988, 100, 542-551.	1.2	26
18	The uncertainty in determining the third law entropy by the heat-pulse calorimetric technique. Cryogenics, 2008, 48, 527-529.	0.9	25

#	Article	IF	Citations
19	Almandine: Lattice and non-lattice heat capacity behavior and standard thermodynamic properties. American Mineralogist, 2012, 97, 1771-1782.	0.9	25
20	A relationship to estimate the excess entropy of mixing: Application in silicate solid solutions and binary alloys. Journal of Alloys and Compounds, 2012, 527, 127-131.	2.8	25
21	The vibrational and configurational entropy of disordering in Cu3Au. Journal of Alloys and Compounds, 2015, 632, 585-590.	2.8	25
22	Excess heat capacity and entropy of mixing in ternary series of high-structural-state feldspars. European Journal of Mineralogy, 2010, 22, 403-410.	0.4	23
23	Thermodynamic Properties and Phase Equilibria of the Secondary Copper Minerals Libethenite, Olivenite, Pseudomalachite, KrÃ¶hnkite, Cyanochroite, and Devilline. Canadian Mineralogist, 2015, 53, 937-960.	0.3	23
24	A calorimetric investigation of spessartine: Vibrational and magnetic heat capacity. Geochimica Et Cosmochimica Acta, 2009, 73, 3393-3409.	1.6	22
25	Grossular: A crystal-chemical, calorimetric, and thermodynamic study. American Mineralogist, 2012, 97, 1299-1313.	0.9	22
26	The accuracy of standard enthalpies and entropies for phases of petrological interest derived from density-functional calculations. Contributions To Mineralogy and Petrology, 2018, 173, 90.	1.2	22
27	Experimentally Determined Standard Thermodynamic Properties of Synthetic MgSO₄Â·4H₂O (Starkeyite) and MgSO₄Â·3H₂O: A Revised Internally Consistent Thermodynamic Data Set for Magnesium Sulfate Hydrates. Astrobiology, 2012, 12, 1042-1054.	1.5	21
28	Thermodynamics, crystal chemistry and structural complexity of the Fe(SO4)(OH)(H2O) x phases: Fe(SO4)(OH), metahohmannite, butlerite, parabutlerite, amarantite, hohmannite, and fibroferrite. European Journal of Mineralogy, 2018, 30, 259-275.	0.4	20
29	Thermodynamic behavior and properties of katoite (hydrogrossular): A calorimetric study. American Mineralogist, 2012, 97, 1252-1255.	0.9	17
30	Heat capacity, entropy and phase equilibria of stishovite. Physics and Chemistry of Minerals, 2012, 39, 153-162.	0.3	15
31	Heat capacities of Tschermak substituted Fe-biotite. Contributions To Mineralogy and Petrology, 1999, 135, 53-61.	1.2	14
32	Thermodynamic properties of tooeleite, Fe63+(As3+O3)4(SO4)(OH)4Â·4H2O. Chemie Der Erde, 2016, 76, 419-428.	0.8	14
33	Heat capacity and entropy of melanophlogite: Molecule-containing porosils in nature. American Mineralogist, 2008, 93, 1179-1182.	0.9	13
34	Excess heat capacity and entropy of mixing in the high-structural state (K,Ca)-feldspar binary. Physics and Chemistry of Minerals, 2010, 37, 209-218.	0.3	13
35	The heat capacity of the serpentine subgroup mineral berthierine (Fe_{2.5}Al_{0.5})[Si_{1.5}Al_{0.5}O₅](OH)₄. Clays and Clay Minerals, 2005, 53, 380-388.	0.6	12
36	Quasi-ice-like CP behavior of molecular H2O in hemimorphite Zn4Si2O7(OH)2{middle dot}H2O: CP and entropy of confined H2O in microporous silicates. American Mineralogist, 2009, 94, 634-637.	0.9	12

#	Article	IF	Citations
37	On the nature of the excess heat capacity of mixing. Physics and Chemistry of Minerals, 2011, 38, 185-191.	0.3	12
38	Heat capacity and entropy of rutile and TiO2II: Thermodynamic calculation of rutileâ€“TiO2II transition boundary. Physics of the Earth and Planetary Interiors, 2014, 226, 39-47.	0.7	12
39	Recent developments and the future of lowâ€<i>T</i> calorimetric investigations in the Earth sciences: Consequences for thermodynamic calculations and databases. Journal of Metamorphic Geology, 2018, 36, 283-295.	1.6	12
40	Geochemistry of metabasites in the north of the Shahrekord, Sanandaj-Sirjan Zone, Iran. Neues Jahrbuch Fur Mineralogie, Abhandlungen, 2006, 182, 291-298.	0.1	11
41	Heat-capacity behaviour of hemimorphite, Zn4Si2O7(OH)2H2O, and its dehydrated analogue Zn4Si2O7(OH)2: a calorimetric and thermodynamic investigation of their phase transitions. European Journal of Mineralogy, 2009, 21, 971-983.	0.4	11
42	Thermochemistry of the alkali feldspars: Calorimetric study of the entropy relations in the low albite-low microcline series. American Mineralogist, 2014, 99, 76-83.	0.9	11
43	Low-temperature heat capacity of synthetic Fe- and Mg-cordierite: thermodynamic properties and phase relations in the system FeO-Al2O3-SiO2-(H2O). European Journal of Mineralogy, 2008, 20, 47-62.	0.4	10
44	Molecular H2O in armenite, BaCa2Al6Si9O30Â·2H2O, and epididymite, Na2Be2Si6O15Â·H2O: Heat capacity, entropy and local-bonding behavior of confined H2O in microporous silicates. Geochimica Et Cosmochimica Acta, 2010, 74, 5202-5215.	1.6	10
45	Thermodynamic mixing properties and behavior of almandineâ€“spessartine solid solutions. Geochimica Et Cosmochimica Acta, 2014, 125, 210-224.	1.6	10
46	Thermodynamic properties of anhydrous and hydrous wadsleyite, Î²âˆ’Mg₂SiO₄. High Pressure Research, 2013, 33, 584-594.	0.4	9
47	First-principles investigation of the lattice vibrations in the alkali feldspar solid solution. Physics and Chemistry of Minerals, 2015, 42, 243-249.	0.3	9
48	Thermodynamics, stability, crystal structure, and phase relations among euchroite, Cu2 (AsO4)(OH)Â·3H2O, and related minerals. European Journal of Mineralogy, 2017, 29, 5-16.	0.4	9
49	Calorimetric data for naturally occurring magnesiocarpholite and ferrocarpholite. American Mineralogist, 2006, 91, 441-445.	0.9	8
50	Entropies of mixing and subsolidus phase relations of forsterite-fayalite (Mg2SiO4-Fe2SiO4) solid solution. American Mineralogist, 2007, 92, 699-702.	0.9	8
51	Heat capacity and third-law entropy of kaersutite, pargasite, fluoropargasite, tremolite and fluorotremolite. European Journal of Mineralogy, 2010, 22, 319-331.	0.4	8
52	Thermodynamic properties of FeAsO 4 Â·0.75H 2 O - a more favorable disposable product of low As solubility. Hydrometallurgy, 2016, 164, 136-140.	1.8	8
53	Heat capacity and entropy behavior of andradite: a multi-sample and âˆ’methodological investigation. European Journal of Mineralogy, 2018, 30, 681-694.	0.4	8
54	Thermodynamic properties of mansfieldite (AlAsO₄Â·2H₂O), angelellite (Fe₄(AsO₄)₂O₃) and kamarizaite (Fe₃(AsO₄)₂(OH)₃Â·3H₂O). Mineralogical Magazine, 2018, 82, 1333-1354.	0.6	8

#	Article	IF	Citations
55	Heat capacity, entropy, and phase equilibria of dmitryivanovite. Physics and Chemistry of Minerals, 2012, 39, 259-267.	0.3	7
56	Calorimetric study of the entropy relation in the NaClâ€“KCl system. Journal of Chemical Thermodynamics, 2013, 62, 231-235.	1.0	7
57	Thermodynamic mixing properties and behavior of grossularâ€“spessartine, (Ca Mn1âˆ’)3Al2Si3O12, solid solutions. Geochimica Et Cosmochimica Acta, 2014, 141, 294-302.	1.6	7
58	Furfuryl Alcohol and Lactic Acid Blends: Homo- or Co-Polymerization?. Polymers, 2019, 11, 1533.	2.0	7
59	Thermodynamic behaviour of grossularâ€“andradite, Ca3(AlxFe3+1-x)2Si3O12, garnets: a calorimetric study. European Journal of Mineralogy, 2019, 31, 443-451.	0.4	7
60	Uncertainties in the activities of garnets and their propagation into geothermobarometry. European Journal of Mineralogy, 1994, 6, 291-296.	0.4	7
61	Low-temperature calorimetric and magnetic data for natural end-members of the axinite group. American Mineralogist, 2008, 93, 548-557.	0.9	6
62	The Structure and Thermochemistry of Three Fe-Mg Chlorites. Clays and Clay Minerals, 2015, 63, 351-367.	0.6	6
63	P21/c-C2/c phase transition and mixing properties of the (Li,Na)FeGe2O6 solid solution: A calorimetric and thermodynamic study. Journal of Chemical Thermodynamics, 2018, 120, 123-140.	1.0	6
64	The vibrational and configurational entropy of Î±-brass. Journal of Chemical Thermodynamics, 2014, 71, 126-132.	1.0	5
65	Standard-state thermodynamic properties of annite, KFe3[(OH)2AlSi3O10], based on new calorimetric measurements. European Journal of Mineralogy, 2015, 27, 603-616.	0.4	5
66	Thermodynamics and crystal chemistry of rhomboclase, (H₅O₂)Fe(SO₄)₂Â·2H₂O, and the phase (H₃O)Fe(SO₄)₂and implications for acid mine drainage. American Mineralogist, 2017, 102, 643-654.	0.9	5
67	A neutron diffraction study of crystal and low-temperature magnetic structures within the (Na,Li)FeGe2O6 pyroxene-type solid solution series. Physics and Chemistry of Minerals, 2017, 44, 669-684.	0.3	5
68	Thermodynamics of disordering in Au3Cu. Journal of Alloys and Compounds, 2018, 735, 1344-1349.	2.8	5
69	A new activity model for Mgâ€“Al biotites determined through an integrated approach. Contributions To Mineralogy and Petrology, 2019, 174, 76.	1.2	5
70	An analysis of the magnetic behavior of olivine and garnet substitutional solid solutions. American Mineralogist, 2019, 104, 1246-1255.	0.9	5
71	Thermodynamic properties of calcium alkali phosphates Ca(Na,K)PO4. Journal of Materials Science, 2020, 55, 8477-8490.	1.7	5
72	Prediction and observation of formation of Caâ€“Mg arsenates in acidic and alkaline fluids: Thermodynamic properties and mineral assemblages at JÃ¡chymov, Czech Republic and RotgÃ¼lden, Austria. Chemical Geology, 2021, 559, 119922.	1.4	5

#	Article	IF	Citations
73	Annite stability revised: hydrogen-sensor data for the reaction annite = sanidine + magnetite + H 2 : additional results and reply to Chou. Contributions To Mineralogy and Petrology, 1997, 128, 306-311.	1.2	4
74	Polymorphism and thermochemistry of MgAlPO4O, a product of lazulite breakdown at high temperature. European Journal of Mineralogy, 2007, 19, 159-172.	0.4	3
75	Heat capacity measurements of CaAlSiO4F from 5 to 850 K and its standard entropy. American Mineralogist, 2018, 103, 1165-1168.	0.9	3
76	Excess enthalpy of mixing of mineral solid solutions derived from density-functional calculations. Physics and Chemistry of Minerals, 2020, 47, 15.	0.3	3
77	Thermodynamics of the double sulfates Na2M2+(SO4)2Â·nH2O (M = Mg, Mn, Co, Ni, Cu, Zn, n = 2 or 4) of the blÃ¶diteâ€“krÃ¶hnkite family. RSC Advances, 2021, 11, 374-379.	1.7	3
78	Chapmanite [Fe₂Sb(Si₂O₅)O₃(OH)]: thermodynamic properties and formation in low-temperature environments. European Journal of Mineralogy, 2021, 33, 357-371.	0.4	3
79	The assimilation of felsic xenoliths in kimberlites: insights into temperature and volatiles during kimberlite emplacement. Contributions To Mineralogy and Petrology, 2021, 176, 1.	1.2	3
80	Crystal chemistry, MÃ¶ssbauer spectroscopy, and thermodynamic properties of botryogen. Neues Jahrbuch Fur Mineralogie, Abhandlungen, 2016, 193, 147-159.	0.1	2
81	Are the thermodynamic properties of natural and synthetic Mg2SiO4-Fe2SiO4 olivines the same?. American Mineralogist, 2021, 106, 317-321.	0.9	2
82	A new activity model for Feâ€“Mgâ€“Al biotites: IIâ€"Applications in the K2Oâ€“FeOâ€“MgOâ€“Al2O3â€“SiO2â€“H2O (KFMASH) system. Contributions To Mineralogy and Petrology, 2021, 176, 1.	1.2	2
83	Excess heat capacity and entropy of mixing along the hydroxyapatite-chlorapatite and hydroxyapatite-fluorapatite binaries. Physics and Chemistry of Minerals, 2021, 48, 44.	0.3	2
84	Stability and calorimetric studies of silicoâ€ferrites of calcium aluminum and magnesium. Journal of the American Ceramic Society, 2018, 101, 4193-4202.	1.9	1
85	Heat capacity, entropy, configurational entropy, and viscosity of magnesium silicate glasses and liquids. Physics and Chemistry of Minerals, 2021, 48, 1.	0.3	1
86	A new activity model for Feâ€“Mgâ€“Al biotites: Iâ€"Derivation and calibration of mixing parameters. Contributions To Mineralogy and Petrology, 2021, 176, 1.	1.2	0