Arthur D Pelton

List of Publications by Year
in descending order

112 papers	6,358 citations	61857 43 h-index	69108 77 g-index
112 all docs	112 docs citations	112 times ranked	2817 citing authors

#	Article	IF	Citations
1	On the Application of the FactSage Thermochemical Software and Databases in Materials Science and Pyrometallurgy. Processes, 2020, 8, 1156.	1.3	10
2	A thermodynamic model for molten salt-water solutions â€“ Application to a thermodynamic optimization of the Ca(NO3)2-KNO3-H2O system. Journal of Chemical Thermodynamics, 2019, 128, 225-243.	1.0	5
3	Equilibrium and Scheil-Gulliver Solidification. , 2019, , 133-148.		1
4	Paraequilibrium Phase Diagrams and Minimum Gibbs Energy Diagrams. , 2019, , 149-158.		0
5	Phase Diagrams of Systems With an Aqueous Phase. , 2019, , 165-182.		0
6	Some Applications. , 2019, , 319-350.		0
7	Thermodynamic evaluation and optimization of the BaO-SiO2 and BaO-CaO-SiO2 systems. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2018, 61, 140-147.	0.7	9
8	Thermodynamic calculation of aqueous phase diagrams. Monatshefte FÃ¼r Chemie, 2018, 149, 395-409.	0.9	7
9	Scheilâ€“Gulliver Constituent Diagrams. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 3113-3129.	1.1	11
10	Regarding "Sulfide Capacity in Ladle Slag at Steelmaking Temperatures," C. Allertz, Du Sichen; MMTB 2015 December. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 3241-3243.	1.0	2
11	Use of a biobjective direct search algorithm in the process design of material science applications. Optimization and Engineering, 2016, 17, 27-45.	1.3	18
12	Thermodynamic modelling and in-situ neutron diffraction investigation of the (Nd+Mg+Zn) system. Journal of Chemical Thermodynamics, 2016, 94, 43-51.	1.0	8
13	Thermodynamic modelling and in-situ neutron diffraction investigation of the (Ce + Mg + Zn) system. Journal of Chemical Thermodynamics, 2016, 93, 242-254.	1.0	6
14	Critical assessment and optimization of phase diagrams and thermodynamic properties of REâ€“Zn systems-part I: Scâ€“Zn, Laâ€“Zn, Ceâ€“Zn, Prâ€“Zn, Ndâ€“Zn, Pmâ€“Zn and Smâ€“Zn. Journal of Alloys and Compounds, 2015, 641, 249-260.	2.8	24
15	Critical assessment and optimization of phase diagrams and thermodynamic properties of REâ€“Zn systems â€“ Part II â€“ Yâ€“Zn, Euâ€“Zn, Gdâ€“Zn, Tbâ€“Zn, Dyâ€“Zn, Hoâ€“Zn, Erâ€“Zn, Tmâ€“Zn, Ybâ€“Zn and Luâ€“Zn. Journal of Alloys and Compounds, 2015, 641, 261-271.	2.8	27
16	Thermodynamic modeling of the Laâ€“Mgâ€“Zn, Prâ€“Mgâ€“Zn and Smâ€“Mgâ€“Zn system. Journal of Alloys and Compounds, 2015, 652, 415-425.	2.8	12
17	The Origin and Archaeometallurgy of a Mixed Sulphide Ore for Copper Production on the Island of Kea, <scp>A</scp>egean <scp>S</scp>ea, <scp>G</scp>reece. Archaeometry, 2015, 57, 318-343.	0.6	10
18	Thermodynamic modeling of the Yâ€“Mgâ€“Zn, Gdâ€“Mgâ€“Zn, Tbâ€“Mgâ€“Zn, Dyâ€“Mgâ€“Zn, Hoâ€“Mgâ€“Zn, Erâ€“Mgâ€“Zn, Tmâ€“Mgâ€“Zn and Luâ€“Mg-Zn systems. Journal of Alloys and Compounds, 2015, 652, 426-443.	2.8	24

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19	Thermodynamic evaluation and optimization of the (NaNO3+KNO3+Na2SO4+K2SO4) system. Journal of Chemical Thermodynamics, 2015, 83, 12-26.	1.0	15
20	Para-equilibrium phase diagrams. Journal of Chemical Thermodynamics, 2014, 72, 16-22.	1.0	21
21	Thermodynamics and Phase Diagrams. , 2014, , 203-303.		5
22	Interpretation and calculation of first-melting projections of phase diagrams. Journal of Chemical Thermodynamics, 2013, 67, 63-73.	1.0	6
23	The shape of liquid miscibility gaps and short-range-order. Journal of Chemical Thermodynamics, 2013, 60, 19-24.	1.0	7
24	Modeling the viscosity of silicate melts containing manganese oxide. Journal of Mining and Metallurgy, Section B: Metallurgy, 2013, 49, 323-337.	0.3	8
25	Modeling the Viscosity of Silicate Melts Containing Lead Oxide. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2012, 43, 325-336.	1.0	16
26	Modeling the viscosity of silicate melts containing zinc oxide. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2011, 35, 542-550.	0.7	16
27	Calculating all local minima on liquidus surfaces using the FactSage software and databases and the Mesh Adaptive Direct Search algorithm. Journal of Chemical Thermodynamics, 2011, 43, 1323-1330.	1.0	42
28	Modeling short-range ordering in liquids: The Mgâ€“Alâ€“Sn system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2010, 34, 180-188.	0.7	51
29	Thermodynamic assessment of the Ceâ€“Si, Yâ€“Si, Mgâ€“Ceâ€“Si and Mgâ€“Yâ€“Si systems. International Journal of Materials Research, 2009, 100, 208-217.	0.1	30
30	Thermodynamic and volumetric databases and software for magnesium alloys. Jom, 2009, 61, 75-82.	0.9	24
31	Thermodynamic Model and Database for Sulfides Dissolved in Molten Oxide Slags. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2009, 40, 979-994.	1.0	79
32	Thermodynamic Assessment of the Al-Mn and Mg-Al-Mn Systems. Journal of Phase Equilibria and Diffusion, 2009, 30, 28-39.	0.5	67
33	A condensation model for the formation of chondrules in enstatite chondrites. Meteoritics and Planetary Science, 2009, 44, 531-543.	0.7	11
34	Thermodynamic Modeling of the Al2O3â€“Ti2O3â€“TiO2 System and Its Applications to the Feâ€“Alâ€–Tiâ€–O Inclusion Diagram. ISIJ International, 2009, 49, 1290-1297.	0.6	87
35	Thermodynamic assessment of the Caâ€“Zn, Srâ€–Zn, Yâ€–Zn and Ceâ€–Zn systems. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2008, 32, 423-431.	0.7	45
36	Critical evaluation and thermodynamic optimization of the Alâ€–Ce, Alâ€–Y, Alâ€–Sc and Mgâ€–Sc binary systems. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2008, 32, 413-422.	0.7	113

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37	Thermodynamic assessment of the Siâ€“Zn, Mnâ€“Si, Mgâ€“Siâ€“Zn and Mgâ€“Mnâ€“Si systems. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2008, 32, 470-477.	0.7	34
38	Modeling short-range ordering in solutions. International Journal of Materials Research, 2007, 98, 907-917.	0.1	73
39	Thermodynamic Database Development of the Mg-Ce-Mn-Y System for Mg Alloy Design. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 1231-1243.	1.1	22
40	Critical Evaluation and Thermodynamic Optimization of the Binary Systems in the Mg-Ce-Mn-Y System. Journal of Phase Equilibria and Diffusion, 2007, 28, 342-354.	0.5	48
41	Thermodynamic database developmentâ€”modeling and phase diagram calculations in oxide systems. Rare Metals, 2006, 25, 473-480.	3.6	13
42	Thermodynamic Modeling of the MgO-Al2O3-CrO-Cr2O3 System. Journal of the American Ceramic Society, 2005, 88, 1921-1928.	1.9	33
43	Critical thermodynamic evaluation and optimization of the CaOâ€“MgOâ€“SiO2 system. Journal of the European Ceramic Society, 2005, 25, 313-333.	2.8	122
44	Critical Thermodynamic Evaluation and Optimization of the CaO-MnO-SiO2 and CaO-MnO-Al2O3 Systems. ISIJ International, 2004, 44, 965-974.	0.6	42
45	Assessing corrosion in oil refining and petrochemical processing. Materials Research, 2004, 7, 163-173.	0.6	20
46	Thermodynamic modeling of the Niâ€“S system. International Journal of Materials Research, 2004, 95, 672-681.	0.8	46
47	Thermodynamic evaluation and optimization of the (NaCl+KCl+MgCl2+CaCl2+MnCl2+FeCl2+CoCl2+NiCl2) system. Journal of Chemical Thermodynamics, 2004, 36, 809-828.	1.0	48
48	Thermodynamic evaluation and optimization of the MnO-Al2O3 and MnO-Al2O3-SiO2 systems and applications to inclusion engineering. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2004, 35, 259-268.	1.0	72
49	A thermodynamic model for deoxidation equilibria in steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2004, 35, 493-507.	1.0	145
50	Critical thermodynamic evaluation and optimization of the FeO-Fe2O3-MgO-SiO2 system. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2004, 35, 877-889.	1.0	55
51	Critical thermodynamic evaluation and optimization of the MgO-Al2O3, CaO-MgO-Al2O3, and MgO-Al2O3-SiO2 Systems. Journal of Phase Equilibria and Diffusion, 2004, 25, 329-345.	0.5	116
52	Critical thermodynamic evaluation and optimization of the Feâ€“Mgâ€“O system. Journal of Physics and Chemistry of Solids, 2004, 65, 1683-1695.	1.9	65
53	Thermodynamic evaluation and optimization of the (NaCl+KCl+AlCl3) system. Journal of Chemical Thermodynamics, 2004, 36, 683-699.	1.0	50
54	Thermodynamic evaluation and optimization of the (MgCl2+CaCl2+MnCl2+FeCl2+CoCl2+NiCl2) system. Journal of Chemical Thermodynamics, 2004, 36, 793-808.	1.0	27

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55	Thermodynamic evaluation and modeling of the Feâ€“Coâ€“O system. Acta Materialia, 2004, 52, 507-519.	3.8	73
56	Nonâ€equilibrium concepts lead to a unified explanation of the formation of chondrules and chondrites. Meteoritics and Planetary Science, 2004, 39, 1897-1910.	0.7	10
57	Computer Applications of Thermodynamic Databases to Inclusion Engineering. ISIJ International, 2004, 44, 527-536.	0.6	124
58	Phase Equilibria and Thermodynamic Properties of the CaO-MnO-Al2O3-SiO2 System by Critical Evaluation, Modeling and Experiment. ISIJ International, 2004, 44, 975-983.	0.6	42
59	Phase equilibria and thermodynamic properties of the Cu2O-CaO-Na2O system in equilibrium with copper. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2003, 34, 631-638.	1.0	8
60	Thermodynamic Modeling of the FeOâ€“Fe₂O₃â€“MgOâ€“SiO₂ System. Journal of the American Ceramic Society, 2002, 85, 2903-2910.	1.9	36
61	Nucleation Constraints Lead To Molten Chondrule Precursors in the Early Solar Systemâ€. Journal of Physical Chemistry B, 2001, 105, 11823-11827.	1.2	6
62	The modified quasi-chemical model: Part II. Multicomponent solutions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 1355-1360.	1.1	457
63	Thermodynamic evaluation and optimization of the LiF-NaF-KF-MgF2-CaF2 system using the modified quasi-chemical model. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 1385-1396.	1.1	82
64	The modified quasi-chemical model: Part IV. Two-sublattice quadruplet approximation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 1409-1416.	1.1	218
65	Thermodynamic evaluation and optimization of the Li, Na, K, Mg, Ca//F, Cl reciprocal system using the modified quasi-chemical model. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 1417-1430.	1.1	49
66	Experimental study of phase equilibria and thermodynamic optimization of the Fe-Zn-O system. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2001, 32, 643-657.	1.0	113
67	A general â€œgeometricâ€•thermodynamic model for multicomponent solutions. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2001, 25, 319-328.	0.7	202
68	Thermodynamic Evaluation and Optimization of the LiCl-NaCl-KCl-RbCl-CsCl-MgCl₂-CaCl₂-SrCl₂-BaCl₂ System Using the Modified Quasichemical Model. Canadian Metallurgical Quarterly, 2001, 40, 13-32.	0.4	2
69	On the choice of â€œGeometricâ€•thermodynamic models. Journal of Phase Equilibria and Diffusion, 2000, 21, 141-147.	0.3	90
70	Thermodynamic Modeling of Zinc Distribution Among Matte, Slag and Liquid Copper. Canadian Metallurgical Quarterly, 2000, 39, 43-54.	0.4	10
71	Thermodynamic Evaluation and Optimization of the LiCl-NaCl-KCl-RbCl-CsCl-MgCl₂-CaCl₂-SrCl₂ System Using The Modified Quasichemical Model. Canadian Metallurgical Quarterly, 2000, 39, 405-420.	0.4	0
72	Modeling the charge compensation effect in silica-rich Na2O-K2O-Al2O3-SiO2 melts. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1999, 23, 219-230.	0.7	47

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73	Thermodynamic modeling in glass-forming melts. Journal of Non-Crystalline Solids, 1999, 253, 178-191.	1.5	47
74	Thermodynamic Analysis of Binary and Ternary Silicate Systems by a Structural Model.. ISIJ International, 1999, 39, 399-408.	0.6	15
75	Thermodynamic modelling of the system Al2O3î—¸SiO2î—¸CaOî—¸FeOî—¸Fe2O3 to predict the flux requirements for coal ash slags. Fuel, 1998, 77, 77-84.	3.4	87
76	Thermodynamic optimisation of the systems CaO-Pb-O and PbO-CaO-SiO. Canadian Metallurgical Quarterly, 1998, 37, 41-47.	0.4	23
77	Thermodynamic modeling of liquid Fe-Ni-Cu-Co-S mattes. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1998, 29, 591-601.	1.0	35
78	Thermodynamic Optimisation of the Systems Cao-Pb-O and Pbo-CaO-SiO₂. Canadian Metallurgical Quarterly, 1998, 37, 41-47.	0.4	38
79	The polynomial representation of thermodynamic properties in dilute solutions. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1997, 28, 869-876.	1.0	29
80	Thermodynamic optimization of the systems PbO-SiO2, PbO-ZnO, ZnO-SiO2 and PbO-ZnO-SiO2. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1997, 28, 1011-1018.	1.0	73
81	Critical evaluation and optimization of the thermodynamic properties and phase diagrams of the CrO-Cr2O3-SiO2-CaO system. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1997, 28, 235-242.	1.0	31
82	The inorganic chemistry of the combustion of wheat straw. Biomass and Bioenergy, 1997, 12, 295-298.	2.9	38
83	Critical evaluation and optimization of the thermodynamic properties of liquid tin solutions. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1996, 27, 810-828.	1.0	39
84	The inorganic chemistry of wood combustion for power production. Biomass and Bioenergy, 1995, 8, 29-38.	2.9	14
85	Model calculations of phase stabilities of oxide solid solutions in the Coî—¸Feî—¸Mnî—¸O system at 1200Â°C. Journal of Physics and Chemistry of Solids, 1994, 55, 391-404.	1.9	9
86	Critical Evaluation and Optimization of the Thermodynamic Properties and Phase Diagrams of the MnOâ€“SiO₂ and CaOâ€“SiO₂ Systems. Canadian Metallurgical Quarterly, 1994, 33, 13-21.	0.4	32
87	Critical Evaluation and Optimization of the Thermodynamic Properties and Phase Diagrams of the MnOâ€“SiO₂and CaOâ€“SiO₂Systems. Canadian Metallurgical Quarterly, 1994, 33, 13-21.	0.4	144
88	Optimization of the Thermodynamic Properties and Phase Diagrams of the Na2O-SiO2 and K2O-SiO2 Systems. Journal of the American Ceramic Society, 1993, 76, 2059-2064.	1.9	85
89	Critical Evaluation and Optimization of the Thermodynamic Properties and Phase Diagrams of the CaO-FeO, CaO-MgO, CaO-MnO, FeO-MgO, FeO-MnO, and MgO-MnO Systems. Journal of the American Ceramic Society, 1993, 76, 2065-2075.	1.9	129
90	Critical evaluation and optimization of the thermodynamic properties and phase diagrams of the MnO-TiO2, MgO-TiO2, FeO-TiO2, Ti2O3-TiO2, Na2O-TiO2, and K2O-TiO2 systems. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1993, 24, 795-805.	0.5	134

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91	Critical evaluation and optimization of the thermodynamic properties and phase diagrams of the CaO-Al2O3, Al2O3-SiO2, and CaO-Al2O3-SiO2 systems. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1993, 24, 807-816.	0.5	270
92	Calculation of sulfide capacities of multicomponent slags. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1993, 24, 817-825.	0.5	59
93	Prediction of vapor-liquid and liquid-liquid equilibria and thermodynamic properties of multicomponent organic systems from optimized binary data using the Kohler method. Fluid Phase Equilibria, 1993, 85, 101-128.	1.4	6
94	Critical evaluation and optimization of the thermodynamic properties and phase diagrams of the MgOî—¸Al2O3, MnOî—¸Al2O3, FeOî—¸Al2O3, Na2Oî—¸Al2O3, and K2Oî—¸A12O3 systems. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1993, 17, 189-205.	0.7	64
95	Prediction of the Thermodynamic Properties and Phase Diagrams of Silicate Systems-Evaluation of the FeO-MgO-SiO2 System.. ISIJ International, 1993, 33, 26-35.	0.6	123
96	Coupled thermodynamic-phase diagram assessment of the rare earth oxide-aluminium oxide binary systems. Journal of Alloys and Compounds, 1992, 179, 259-287.	2.8	206
97	Prediction of vapor-liquid equilibria and thermodynamic properties for a quinary hydrocarbon system from optimized binary data using the kohler method. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1992, 16, 93-106.	0.7	3
98	The unified interaction parameter formalism: Thermodynamic consistency and applications. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1990, 21, 1997-2002.	1.4	82
99	Coupled Phase Diagram/Thermodynamic Analysis of the Nine Commonâ€ion Binary Systems Involving the Carbonates and Sulfates of Lithium, Sodium, and Potassium. Journal of the Electrochemical Society, 1990, 137, 2941-2950.	1.3	42
100	Coupled Phase Diagram-Thermodynamic Analysis of the 24 Binary Systems, A2CO3-AX and A2SO4-AX Where A=Li, Na, K and X=Cl, F, NO3, OH. Journal of Physical and Chemical Reference Data, 1990, 19, 1149-1178.	1.9	26
101	A database and sublattice model for molten salts. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1988, 12, 127-142.	0.7	44
102	Electromotive force measurements in liquid Kâ€“Te solutions with a potassium Î² alumina electrolyte. Journal of Chemical Physics, 1988, 89, 5070-5077.	1.2	26
103	Electromotive Force Measurements in Molten Rbâ€Bi Alloys with a Rubidium Î²â€³â€Alumina Electrolyte. Journal of the Electrochemical Society, 1988, 135, 2754-2760.	1.3	36
104	Phase Diagrams and Thermodynamic Properties of the 70 Binary Alkali Halide Systems Having Common Ions. Journal of Physical and Chemical Reference Data, 1987, 16, 509-561.	1.9	240
105	Thermodynamic analysis of binary liquid silicates and prediction of ternary solution properties by modified quasichemical equations. Geochimica Et Cosmochimica Acta, 1987, 51, 85-95.	1.6	151
106	Simultaneous optimization of binary phase equilibrium and thermodynamic data for organic systems. Industrial & Engineering Chemistry Research, 1987, 26, 1774-1781.	1.8	3
107	Measurement and calculation of the phase diagram of the Licl-BaCl2-SrCl2 system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1987, 11, 277-286.	0.7	8
108	An Efficient Procedure for Computing Isothermal Predominance Diagrams. Canadian Metallurgical Quarterly, 1986, 25, 107-112.	0.4	15

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109	Thermodynamic analysis of ordered liquid solutions by a modified quasichemical approachâ€"Application to silicate slags. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1986, 17, 805-815.	0.5	371
110	A modified interaction parameter formalism for non-dilute solutions. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1986, 17, 1211-1215.	1.4	115
111	Phase diagram measurements and thermodynamic analysis of the PbCl2â€"NaCl, PbCl2â€"KCl, and PbCl2â€"KClâ€"NaCl systems. Canadian Journal of Chemistry, 1985, 63, 3276-3282.	0.6	18
112	Coupled phase diagram and thermodynamic analysis of the 18 binary systems formed among Li2Co3, K2Co3,Na2Co3, Lioh, Koh, Naoh, Li2So4, K2So4 and Na2So4. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1982, 6, 255-278.	0.7	31