

N. D. Chatterjee: Applied Mineralogical Thermodynamics

Mineralogical thermodynamics evolved into a mainstream discipline of earth sciences during the last four decades. In response, the curricula in many universities now prescribe a course on basic chemical thermodynamics to the students of geochemistry and petrology. With that background in mind, this book introduces the beginners to the thermodynamic treatment of equilibria between minerals and fluids. The emphasis throughout is on "learning by doing". The book should be equally suitable for a thermodynamics course or for self-study.

Selected topics: The basic concepts. – Measurement, evaluation, and tabulation of thermodynamic properties. – Equations of state for fluids and fluid mixtures. – Derivation of an internally consistent thermodynamic dataset by mathematical programming. – Thermodynamics of crystalline solutions. – Computation of phase equilibria between minerals and fluids. – Outlines of geothermometry and geobarometry.



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Contents

1	Summary of Basic Thermodynamic Concepts: A Refresher	
1.1	Introduction	1
1.2	Gibbs Energy as a State Function	2
1.2.1	Temperature and Pressure Dependence of Gibbs Energy, and the Choice of a Standard State	2
1.2.2	Composition Dependence of Gibbs Energy	7
1.2.2.1	Chemical Potential and the Gibbs-Duhem Equation	7
1.2.2.2	Property Changes on Mixing	14
1.2.2.3	Activity, Activity Coefficient, and Standard State .	16
1.2.2.4	Ideal, Excess, and Total Molar Properties	20
1.2.2.5	Some Properties of Ideal Solutions	22
1.2.2.6	Excess Molar Properties of Mixing	24
1.3	Mineral Equilibria, Equilibrium Constant	30
2	Measurement, Evaluation, and Tabulation of Thermodynamic Properties	
2.1	Introduction	33
2.2	Outlines of Some Calorimetric Methods	34
2.2.1	Calorimetry of Non-Reacting Systems	34
2.2.2	Calorimetry of Reacting Systems	39
2.3	Outlines of Electrochemical Cell Measurements .	42
2.4	Evaluation and Tabulation of Thermodynamic Data	43
2.5	Worked Examples of Evaluation and Manipulation of Data	49
3	Equations of State for Fluids and Fluid Mixtures	
3.1	Introduction	55
3.2	Some Fundamental Concepts: Standard States, Fugacity, Activity	55

3.3	Utility of the Volume Equations of State	59
3.4	Volume Equations of State for Pure Fluids	60
3.4.1	General Comments and Literature Overview	60
3.4.2	Some Examples of Analytical Equations of State	64
3.4.3	A Modified Redlich-Kwong (MRK) Equation of State for H_2O	70
3.4.4	Calculation of Phase Relations and Thermodynamic Properties of H_2O from MRK	73
3.4.4.1	Calculation of the Saturation Curve of H_2O	73
3.4.4.2	Calculation of Fugacity and Molar Gibbs Energy of H_2O	75
3.5	Modified Redlich-Kwong Equation of State for a Fluid Mixture	78
3.5.1	Theoretical Background	78
3.5.2	A Modified Redlich-Kwong Equation for the $\text{H}_2\text{O}-\text{CO}_2$ Mixture	80
3.6	Concluding Remarks	83
4	Phase Relations Among End-Member Solids	
4.1	Introduction	85
4.2	Thermodynamic Formalism	85
4.3	Error Propagation Calculation	88
4.3.1	Basic Formalism	88
4.3.2	Covariance of the Tabulated Thermodynamic Data	91
4.4	Worked Examples	93
4.5	Concluding Remarks	105
5	Phase Relations Among End-Member Solids and a Pure Fluid	
5.1	Introduction	107
5.2	Theoretical Background	107
5.3	Error Propagation Formalism for Solid-Fluid Equilibria	109
5.4	Sample Calculations of Dehydration Equilibria	111
5.5	Thermodynamic Interpolation and Extrapolation of Reaction Reversal Data, and Linear Summation of Independent Equilibria	122
5.5.1	Theoretical Basis	122
5.5.2	Worked Examples of Dehydration Reactions	126
5.5.3	Worked Examples of Redox Reactions	135

6	Phase Relations Among End-Member Solids and a Binary Fluid Mixture	
6.1	Introduction	141
6.2	Thermodynamic Background	141
6.3	Sample Calculation of Mixed-Volatile (H ₂ O-CO ₂) Equilibria	145
6.4	Interpolation, Extrapolation, and Linear Summation of Reaction Reversal Data . . .	154
6.5	Concluding Remarks	164
7	Derivation of an Internally Consistent Thermodynamic Dataset by Mathematical Programming	
7.1	Introduction	165
7.2	The Nature of the Problem	166
7.3	A Thermodynamic Model for Mathematical Programming	169
7.4	Outlines of Mathematical Programming	170
7.4.1	Input Constraints	170
7.4.2	Basic Formalisms and Definitions	172
7.5	Worked Example: The System Al ₂ SiO ₅	173
7.5.1	Input Database	173
7.5.2	Thermodynamic Analysis	174
7.5.2.1	Introduction	174
7.5.2.2	Phase Equilibria Constraints	176
7.5.2.3	Application of Linear Programming	179
7.5.2.4	Phase Property Constraints	181
7.5.2.5	Application of Quadratic Programming	182
7.5.2.6	An Internally Consistent Thermodynamic Dataset for the Three Al ₂ SiO ₅ Phases by Quadratic Programming	184
7.6	Future Perspectives and Concluding Remarks . . .	190
8	Thermodynamics of Crystalline Solutions	
8.1	Introduction, Scope, Definitions	193
8.2	Extension of the Thermodynamic Theory of Molecular Solutions to Crystalline Solutions . . .	194
8.2.1	Introduction	194
8.2.2	Derivation of Equations for Simple Crystalline Solutions	195
8.2.2.1	Solutions with Site Mixing on One Sublattice . . .	195
8.2.2.2	Simple Crystalline Solutions with Charge-Coupled Site Mixing on Two Sublattices	204

8.2.3	Thermodynamic Treatment of Complex Crystalline Solutions	207
8.3	Some Equations for Excess Properties of Crystalline Solutions	211
8.4	Phase Relations in a Binary Solution	213
8.4.1	Isostructural Solution	213
8.4.2	Non-Isostructural Solution	218
8.5	Formulation of Equations of State for Crystalline Solutions	219
8.5.1	Introduction	219
8.5.2	Manipulation of Molar Quantity vs Composition Data	220
8.5.2.1	General Formalisms	220
8.5.2.2	An Example of Processing Calorimetric Data . . .	223
8.5.2.3	Examples of Fitting $V(X)$ Data for Crystalline Solutions	227
8.5.3	Handling Experimental Data on the Composition Dependence of Partial Molar Quantities of Mixing of a Component	230
8.5.3.1	Formalisms of Gibbs-Duhem Integration	230
8.5.3.2	Worked Examples of Gibbs-Duhem Integration . .	232
8.5.3.3	An Alternative to Gibbs-Duhem Integration . . .	237
8.5.4	More on Equations of State for Crystalline Solutions: Some Worked Examples . .	240
8.5.4.1	An Equation of State for the Halite-Sylvite Crystalline Solution, $(\text{Na},\text{K})\text{Cl}$	240
8.5.4.2	Excess Mixing Properties of the Monticellite-Forsterite Crystalline Solution, $(\text{Ca},\text{Mg})\text{MgSiO}_4$.	244
8.5.4.3	Thermodynamic Mixing Properties of $\text{Zn}(\text{Al},\text{Cr})_2\text{O}_4$ Spinel	247
8.5.4.4	Solution Modeling of Grossular-Almandine Garnets	252
8.6.	An Epilogue	256
9	Phase Equilibria Involving Nonideal Solutions and Outlines of Geothermometry and Geobarometry	
9.1	Introduction and Scope	257
9.2	Calculation of Heterogeneous Phase Equilibria Involving Nonideal Solutions	258
9.2.1	General Considerations	258
9.2.2	A Qualitative Look at the Gibbs Energy Minimization Method	258
9.2.2.1	Theoretical Basis	258
9.2.2.2	Graphical Analysis of Isobaric-Isothermal G-X Sections	259

9.2.2.3	From Isobaric-Isothermal G-X Sections to Phase Diagrams	261
9.2.3	Alternative Techniques for Phase Diagram Calculations with Nonideal Solutions, and Some Worked Examples	262
9.2.3.1	Calculation of P-T-X Phase Diagram for the NaAlSi ₃ O ₈ -KAlSi ₃ O ₈ Binary	263
9.2.3.1.1	Calculation of the Isobaric T-X _{kf} Section for the NaAlSi ₃ O ₈ -KAlSi ₃ O ₈ Binary: the Analbite-Sanidine Solvus	263
9.2.3.1.2	Calculation of the P-X _{kf} Section Through the NaAlSi ₃ O ₈ -KAlSi ₃ O ₈ Pseudobinary, and the P-T Diagram	268
9.2.3.2	NaAl ₂ [AlSi ₃ O ₁₀ (OH) ₂]-KAl ₂ [AlSi ₃ O ₁₀ (OH) ₂] Pseudobinary: Computation of Phase Relations for Multiple Equilibria	272
9.2.3.3	Computation of a T-X _{CO2} Phase Diagram with a Crystalline Solution	276
9.3	Outlines of Geothermometry and Geobarometry	279
9.3.1	Scope	279
9.3.2	Some Fundamental Considerations	280
9.3.2.1	Identification of Equilibrium Mineral Assemblages	280
9.3.2.2	Thermodynamic Basis for the Evaluation of the Intensive Variables	281
9.3.2.3	Choice of Equilibria Appropriate for Geothermometry and Geobarometry	281
9.3.3	Setting up Geobarometers and Geothermometers	282
9.3.3.1	Calibration of Geobarometers	284
9.3.3.2	Calibration of Exchange Geothermometers	288
9.3.4	Limits of Applicability and Evaluation of Uncertainties in Geothermometry and Geobarometry	294
9.3.4.1	Limits of Applicability	294
9.3.4.2	Evaluation of Uncertainties	295
9.3.5	Two Worked Examples of Geothermometry, Geobarometry, and Geohygrmetry	297
9.3.5.1	Staurolite- and Sillimanite-Bearing Metapelitic Rocks, Rangeley Quadrangle, Maine	297
9.3.5.2	Staurolite-Kyanite-Bearing Metapelites from the Great Smoky Mountains, North Carolina	301
9.3.6	Concluding Remarks	304
	References	305
	Subject Index	319