

Contents

<i>List of Abbreviations</i>	vii
<i>Preface</i>	ix
1. A Thermodynamic Model for Vapor–Liquid Equilibrium Data for the Two Binary Systems.....	1
2. Practical Hints on Measurement of Densities and Excess Molar Volumes.....	7
3. A Mathematical Model to Control the Liquid–Liquid Equilibrium Data.....	11
4. Computer Calculations for Multicomponent Vapor–Liquid and Liquid–Liquid Equilibria.....	27
5. Densities and Refractive Indices of the Binary Systems.....	43
6. Potential Applications of Artificial Neural Networks to Thermodynamics.....	49
7. A Note on Application of Non-random Two-liquid (NRTL) Model.....	61
8. Some Practical Hints on Application of UNIQUAC Solution Model.....	65
9. Control of Liquid Membrane Separation Process.....	75
10. Development of Artificial Neural Network (ANN) Model for Estimation of Vapor Liquid Equilibrium (VLE) Data.....	91
11. Some Aspects of a Fluid Phase Equilibria and UNIFAC Model.....	101
12. Molecular Thermodynamics Process Control in Fluid-phase Equilibria.....	115
13. Estimation of Liquid-liquid Equilibrium Using Artificial Neural Networks.....	125
14. Optimization of Process Control of Water + Propanoic Acid+ 1-Octanol System.....	135
15. Practical Hints on Optimization of UNIQUAC Interaction Parameters.....	147
16. A Mathematical Approach to Control the Water Content of Sour Gas.....	155
17. Modling and Control of Thermodynamic Properties by Artificial Neural Networka (ANNs).....	165
18. A Study on Liquid–Liquid Equilibria using HYSYS and UNIQUAC Models.....	173
19. Optimization and Control of Laboratory Production of Ethanol.....	185
Index.....	199