## 547.704569 VIL

## **CONTENTS**

1	Introduction		11
	1.1	Classification of chromatographic methods	12
	1.2	Principles of construction of gas chromatographs	15
		References	19
2	Elements of chromatography with gas mobile phase		21
	2.1	The mechanism of separation in gas chromatography	22
	2.2	Retention parameters	30
	2.3	Theories of gas chromatography columns	35
3	Thermodynamics of solutions as related to gas-liquid chromatography		
	3.1	Quantities of solution thermodynamics	45
	3.2	Statistical models of solutions	49
	3.3	Application of models to gas-liquid chromatography	78
		References	81
4	Thermodynamics of direct gas chromatography		84
	4.1	Thermodynamics of dissolution	84
	4.2	Thermodynamics of adsorption at a gas-solid interface	106
	4.3	Thermodynamics of vaporization	117
	4.4	Molecular properties of single substances	120
5	Thermodynamics of inverse gas chromatography		127
	5.1	Thermodynamics of dissolution	128
	5.2	Thermodynamics of adsorption	148
	5.3	Phase transitions	154
	5.4	Glass transitions	168
	5.5	Other second order transitions in polymers	190
	5.6	Determination of diffusion coefficients	191
	5.7	Segregation of block copolymers	193
	5.8	Other applications of inverse gas chromatography	194
		References	195
	Subj	ject index	201