Isobaric Vapor-Liquid Equilibria for Binary Systems - Benzene + Methyl Ethanoate, Benzene + Butyl Ethanoate and Benzene + Methyl Heptanoate at 101.31 kPa

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Table 1. Experimental $\rho = \rho(x)$ for the binary mixtures at $T = 298.15$ K

x_1	ρ/kg·m^{-3}	x_1	ρ/kg·m^{-3}	x_1	ρ/kg·m^{-3}
Benzene (1) + methyl ethanoate (2)					
0.0000	0.92700	0.3801	0.90164	0.7641	0.88267
0.0640	0.92232	0.4889	0.89557	0.8438	0.87936
0.2087	0.91223	0.5983	0.88989	1.0000	0.87352
0.2996	0.90644	0.6507	0.88773		
Benzene (1) + butyl ethanoate (2)					
0.0000	0.87612	0.4054	0.87478	0.7940	0.87349
0.1024	0.87581	0.4956	0.87443	0.9113	0.87338
0.1831	0.87549	0.5951	0.87403		
0.2895	0.87515	0.7066	0.87366		
Benzene (1) + methyl heptanoate (2)					
0.0000	0.87570	0.4047	0.87434	0.6901	0.87334
0.0291	0.87562	0.4660	0.87413	0.6901	0.87334
0.0747	0.87548	0.4930	0.87401	0.6901	0.87334
0.2028	0.87506	0.6012	0.87362		
0.3024	0.87471	0.6901	0.87334		
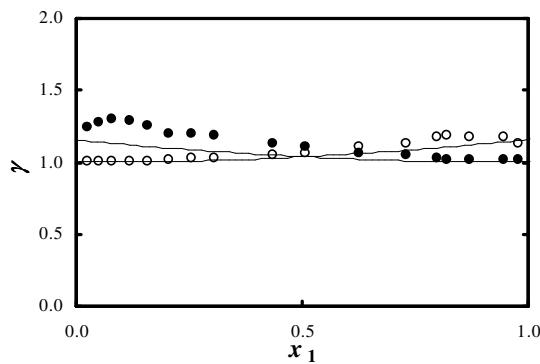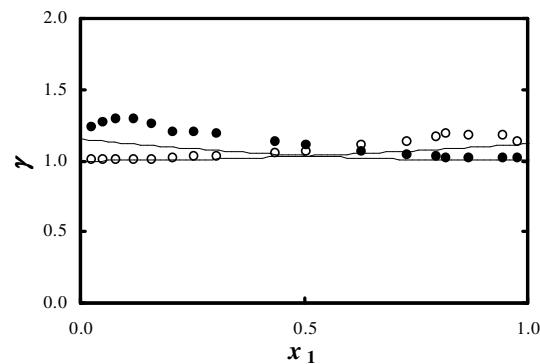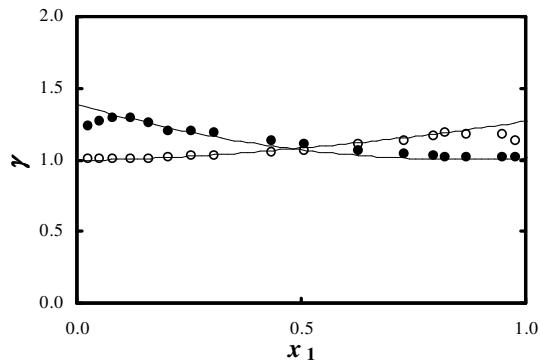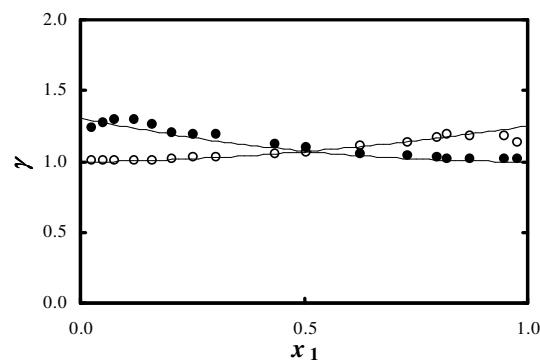
Figure 1. Experimental ●,γ_1; o, γ_2; and —, predicted values of γ_i, for the binary system benzene (1) + methyl ethanoate (2) at $P = 101.31$ kPa. (a) UNIFAC-1, (b) UNIFAC -2, (c) UNIFAC-3 and (d) ASOG.
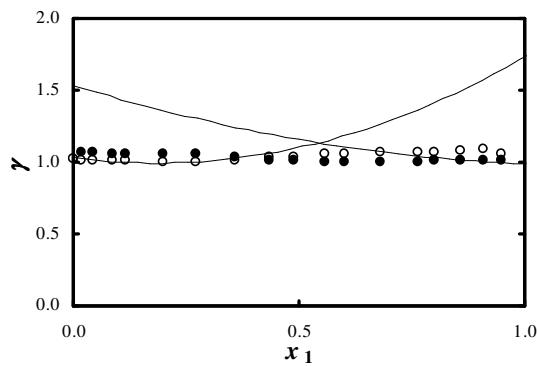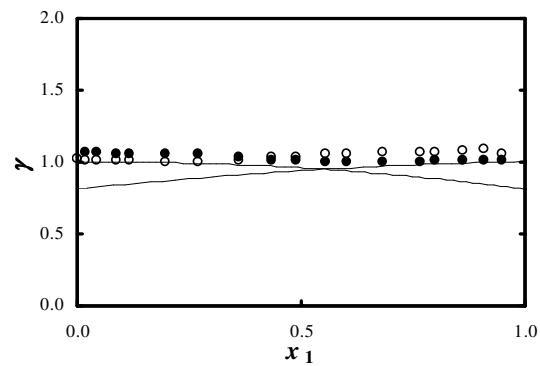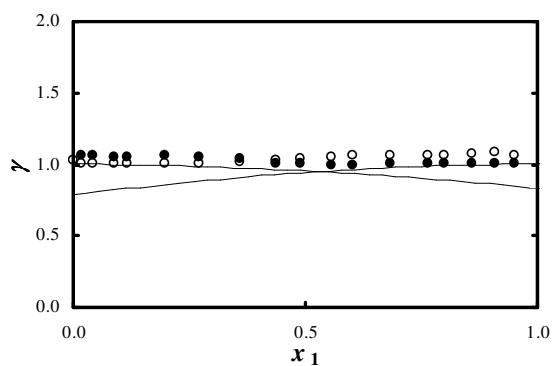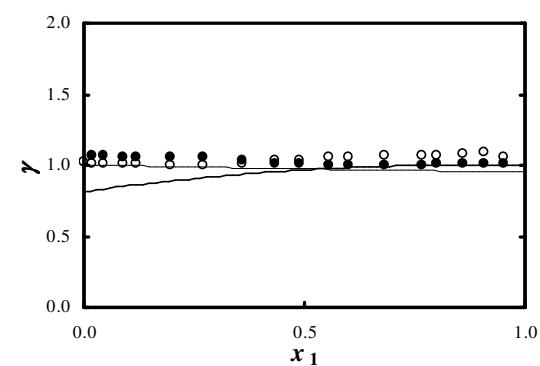
Figure 2. Experimental •,γ_1; o, γ_2; and ——, predicted values of γ_i, for the binary system benzene (1) + butyl ethanoate (2) at $P = 101.31$ kPa. (a) UNIFAC-1, (b) UNIFAC -2, (c) UNIFAC-3 and (d) ASOG.
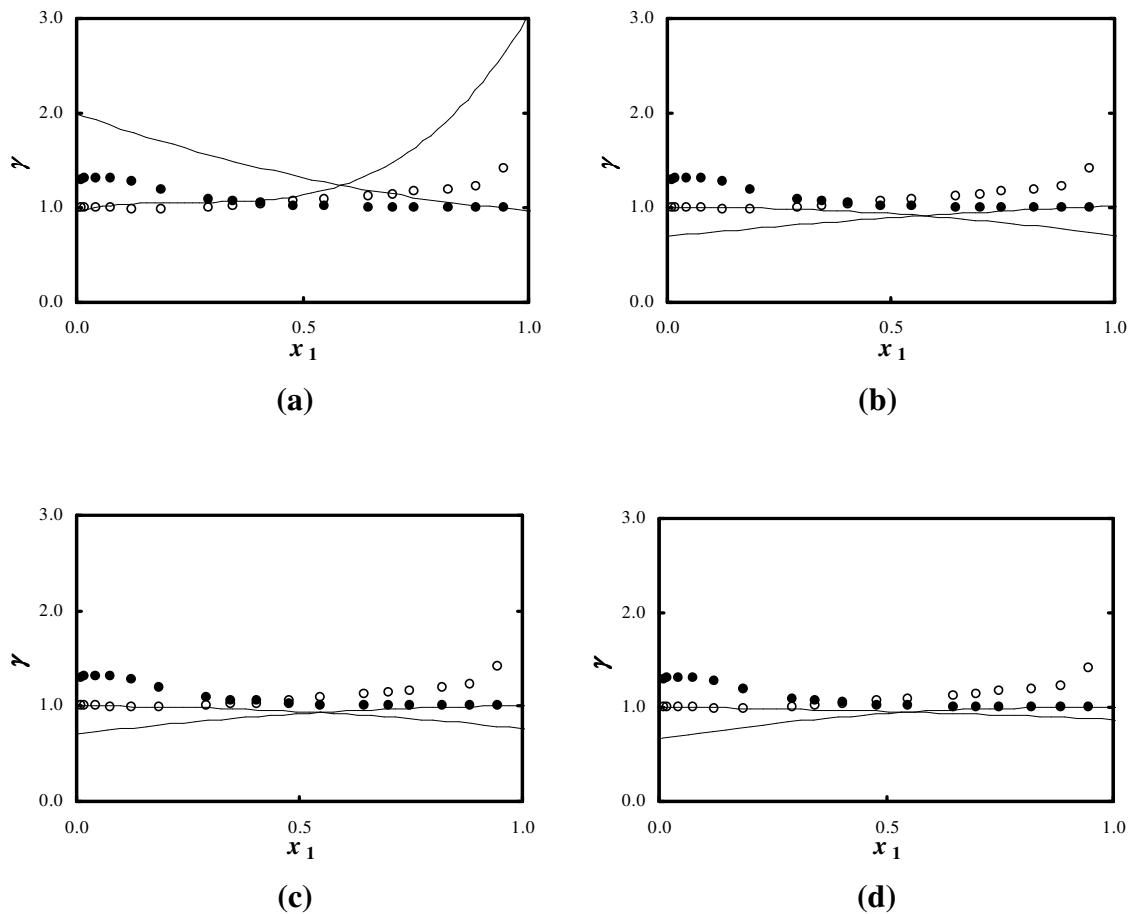
Figure 3. Experimental •,γ_1; o, γ_2; and ——, predicted values of γ_i, for the binary system benzene (1) + methyl heptanoate (2) at P = 101.31 kPa. (a) UNIFAC-1, (b) UNIFAC -2, (c) UNIFAC-3 and (d) ASOG.