

Supporting Information

Density and viscosity of binary mixtures composed by anisole with dodecane, hexadecane, decalin or 1,4-dioxane:

Experiments and modeling

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Supporting Information

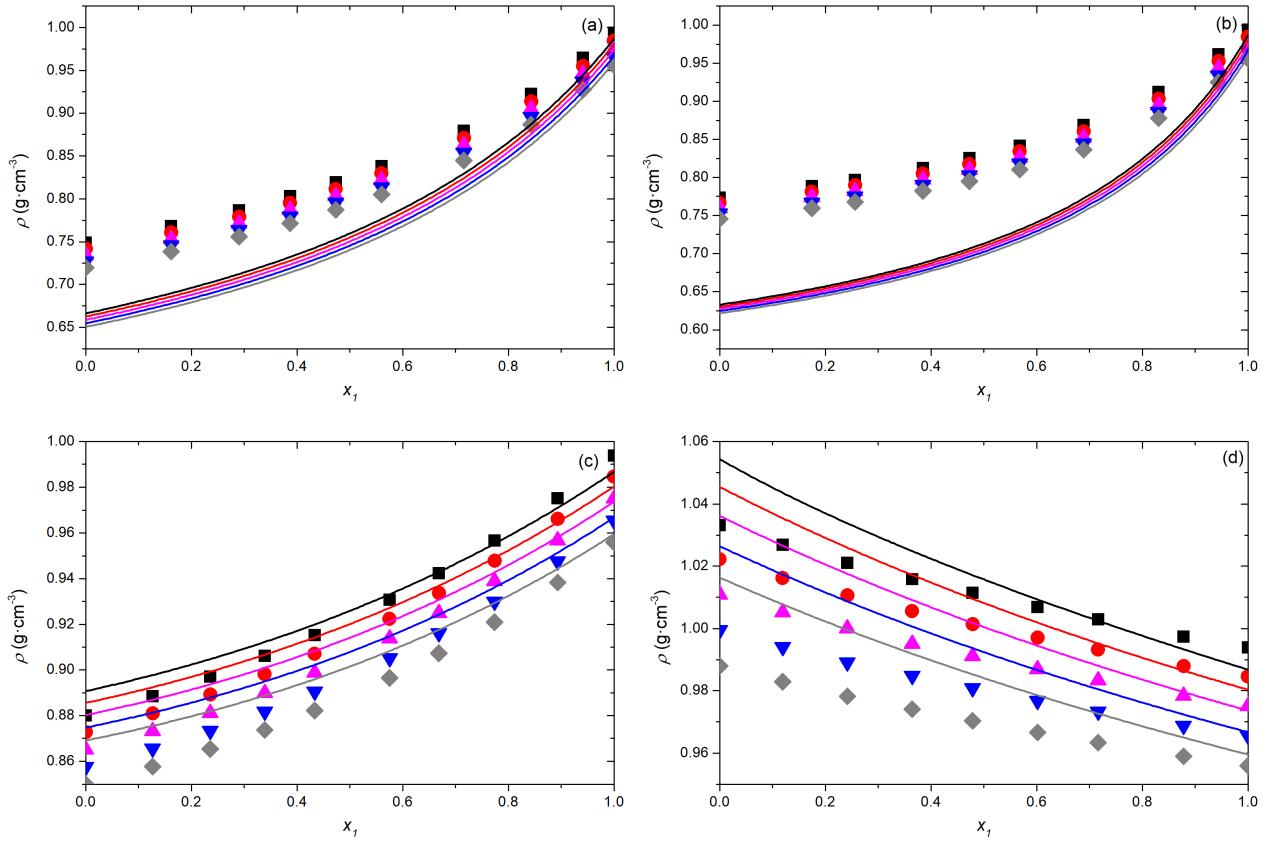


Figure S1: Mixture density ($\text{g}\cdot\text{cm}^{-3}$) in terms of the mole fraction of anisole for the binary mixtures of (a) anisole + dodecane, (b) anisole + hexadecane, (c) anisole + decalin and (d) anisole + 1,4-dioxane at a pressure of 101.3 kPa and different temperatures: 293.15 K (■), 303.15 K (●), 313.15 K (▲), 323.15 K (▼) and 333.15 K (◆). The continuous line (—) represents the PR-EoS using MHV + NRTL mixing rule.

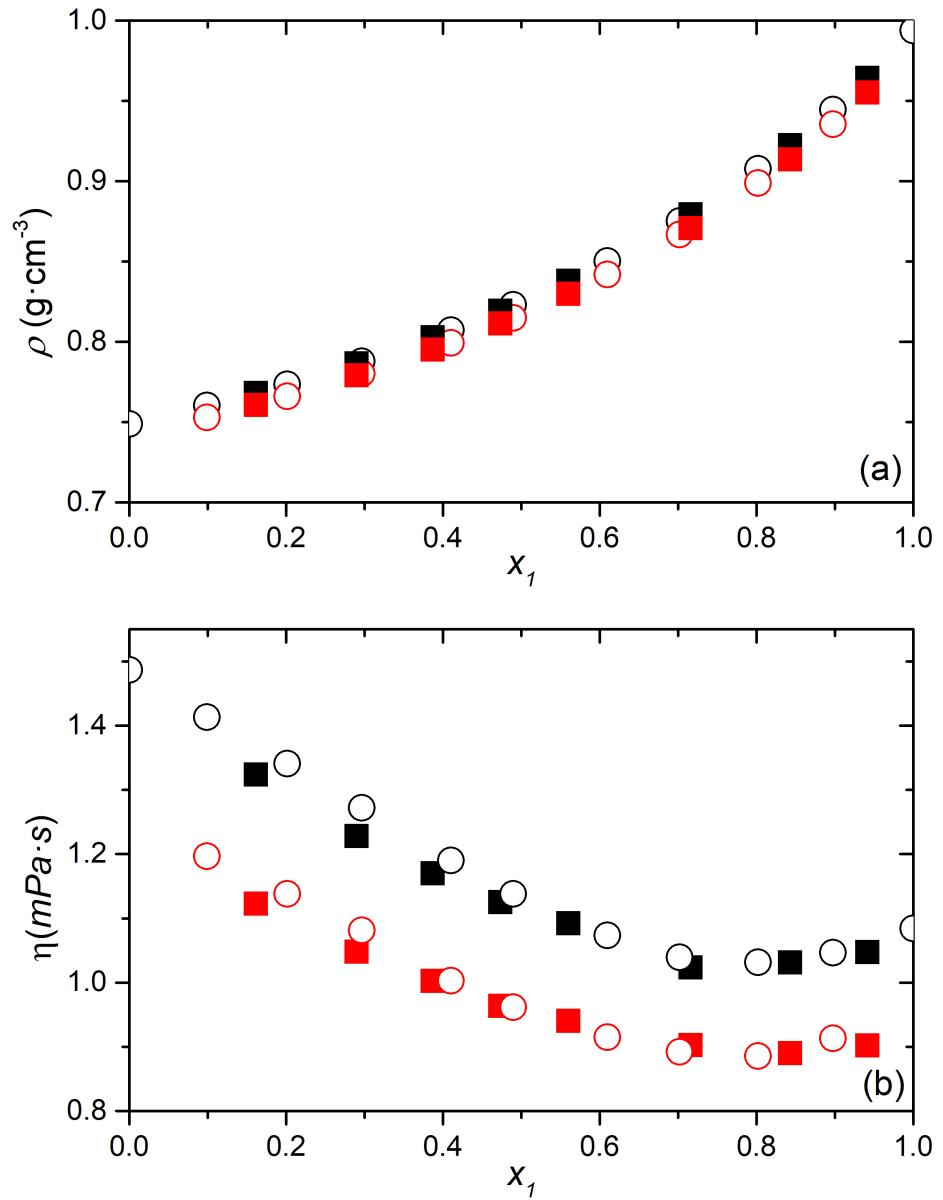


Figure S2: Literature comparison of (a) density ($\text{g}\cdot\text{cm}^{-3}$) and viscosity ($\text{mPa}\cdot\text{s}$) for the binary mixture of anisole + dodecane in terms of the mole fraction of anisole for at a pressure of 101.3 kPa and different temperatures. Data compared with Al-Jimaz¹ at 293.15 K (○) and 303.15 K (○). This work at 293.15 K (■) and 303.15 K (■).

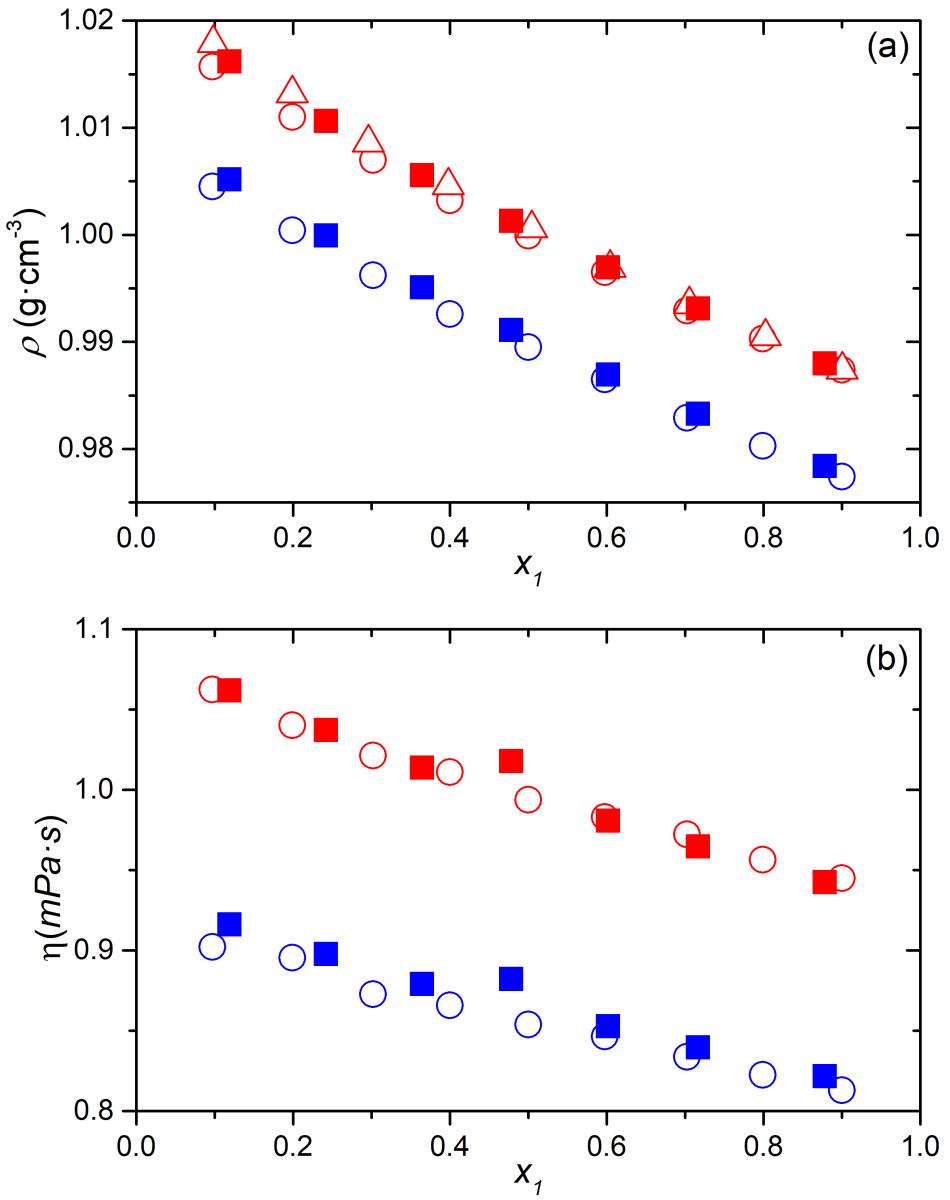


Figure S3: Literature comparison of (a) density (g·cm $^{-3}$) and (b) viscosity (mPa·s) for the binary mixture of anisole + 1,4-dioxane in terms of the mole fraction of anisole for at a pressure of 101.3 kPa and different temperatures. Data compared with Aminabhavi² at 303.15 K (○) and 313.15 K (○), Baragi³ at 303.15 (△). This work at 303.15 K (■) and 313.15 K (□).

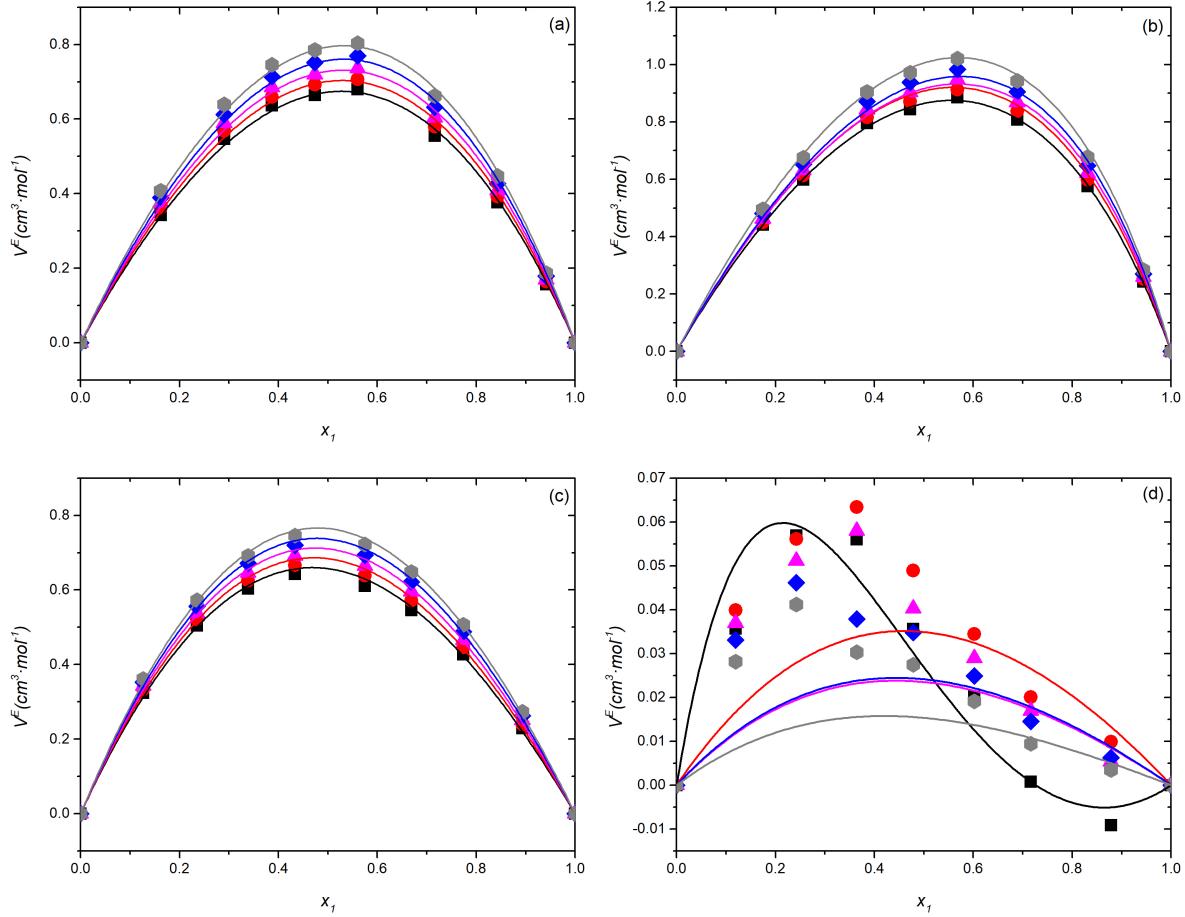


Figure S4: Excess molar volume ($\text{cm}^3 \cdot \text{mol}^{-1}$) in terms of the mole fraction of anisole for the binary mixtures of (a) anisole + dodecane, (b) anisole + hexadecane , (c) anisole + decalin and (d) anisole + 1,4-dioxane at a pressure of 101.3 kPa and different temperatures: 293.15 K (■), 303.15 K (●), 313.15 K (▲), 323.15 K (▼) and 333.15 K (◆). The continuous line (—) represents the PR-EoS using MHV + NRTL mixing rule.

References

- (1) Al-Jimaz, A. S.; Al-Kandary, J. A.; Abdul-latif, A.-H. M.; Al-Zanki, A. M. *The Journal of Chemical Thermodynamics* **2005**, *37*, 631–642.
- (2) Aminabhavi, T. M.; Patil, V. B.; Aralaguppi, M. I.; Phayde, H. T. S. *Journal of Chemical & Engineering Data* **1996**, *41*, 521–525.
- (3) Baragi, J. G.; Aralaguppi, M. I.; Aminabhavi, T. M.; Kariduraganavar, M. Y.; Kittur, A. S. *Journal of Chemical & Engineering Data* **2005**, *50*, 910–916.