

عنوان مقاله:

Estimation of Density and Heat Capacity of Ionic Liquid [Bmim][PF₆] Using SRK-CPA EoS

محل انتشار:

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خلاصه مقاله:

In the present work, SRK-CPA EoS was extended to estimate density and the constant pressure heat capacity (C_p) of Ionic Liquid (IL) 1-butyl-3-methylimidazolium hexafluorophosphate ([Bmim][PF₆]). In this way, pure component parameters were obtained through fitting the model to liquid density data. The overall AAD% equal to 0.01 was obtained for density correlation. Then, the constant pressure heat capacity relations were derived based on the used EoS. Accordingly, C_p of the IL was predicted using obtained parameters and relation. Finally, the predicted values were compared with the experimental data. Based on the obtained results, good agreements between calculated and experimental heat capacities are seen so that overall AAD% equal to 15.25 was achieved.

کلمات کلیدی:

[SRK-CPA, Heat Capacity, Thermophysical properties, Ionic Liquid, [Bmim][PF₆]

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