

عنوان مقاله:

Experimental measurement of carbon dioxide solubility into novel amino acid-functionalized protic Ionic Liquid

محل انتشار:

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خلاصه مقاله:

Treatment of the sour natural gas is major step in natural gas processing so that the acid gases such as CO₂ are removed from natural gas stream. The acid gases are harmful to environment and destroy the production equipment, as their presence in gas stream leads to corrosion and lowering heating value. An amino acid-functionalized protic ionic liquid (IL), monoethanolamine glycinate has been synthesized. An experimental study has been performed to explore the equilibrium solubility of CO₂ absorption in the Ionic Liquid using pressure-decay method at temperatures of 303.15 K, 313.15 K, and 323.15 and solution concentrations of 25 wt %. Results showed that decreasing temperature enhanced the solubility of CO₂ in the solvent. Performance of Monoethanolamine Glycinate was also compared with that of conventional amine, MEA.

کلمات کلیدی:

Functionalized ionic liquid Monoethanolamine glycinate; Solubility; Synthesis

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