

## Solubility Measurement and Prediction of Carbon Dioxide in Ionic Liquids

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Ionic liquids are actively studied as reacting media and green solvents for benign chemical process. In particular, ionic liquids + carbon dioxide systems are important in the recovery of solutes in supercritical fluid extraction. But few measurements and modeling of phase equilibria containing ionic liquids were reported. In the present study, the solubility of carbon dioxide in ionic liquids, [bmim][PF<sub>6</sub>], [C6mim][BF<sub>4</sub>] and [Emim][BF<sub>4</sub>], was experimentally studied. Nonrandom lattice fluid equation of state based on the group contribution method was used for prediction of the solubility of carbon dioxide in ionic liquids for low to high pressure. The agreements between literature data and calculation were generally good.