

## Vapor-Liquid Equilibria Measurement for the system of 1,1-difluoroethane (R-152a) + carbon dioxide (CO<sub>2</sub>) at high pressures

김아람, 임종성\*  
서강대학교 화공생명공학과  
(limjs@sogang.ac.kr\*)

In this work, VLE data for binary mixture of carbon dioxide (CO<sub>2</sub>) + 1, 1-difluoroethane (HFC-152a) were measured at five temperatures of (273.15, 283.15, 293.15, 303.15 and 313.15) K respectively by using a circulation-type equilibrium apparatus in which both vapor and liquid phases were recirculated. The experimental data were correlated with the Peng-Robinson equation of state (PR-EoS) using the Wong-sandler mixing rule combines with the NRTL excess Gibbs free energy model and the Carnahan-Starling-De Santis equation of state (CSD EoS). Almost all the calculated values with this model give good agreement with the experimental data.