Understanding of Extraction Efficiency using Deep Eutectic Solvent

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The deep eutectic solvents (DESs) have been actively investigated as an extraction solvent for aliphatic compounds and BTX in certain mixtures. Different DESs show a different degree of efficiency in the separation process depending on their constituents. The extraction efficiency was investigated by COSMO-SAC model as a predictive tool. COSMO-SAC model well describes the effect of various factors, including (1) different HBD types in the DESs, (2) different HBA types in the DES, (3) water content in DESs, and (4) the extraction of aromatic hydrocarbons (i.e., benzene, toluene, and pyridine).