

A study on the supercritical carbon dioxide micro/macroemulsion and its applications

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Recently, the supercritical fluids technologies have been paid extremely increasing attention at home. From now on, the supercritical technologies such as extraction/ purification, supercritical CO₂ photo-resist removal, drug delivery system, formation of functional structure of polymer or ceramic materials, preparation of metal oxide nano-particles, construction of database, etc., will be investigated and developed more actively. The study on the supercritical emulsion among supercritical fluid technologies has been performed rigorously in advanced countries by recognizing its importance, however, a few researches are on progress in the country. The purpose of researching supercritical emulsion is mainly focused on the non-polar supercritical CO₂ and enhancing its application with polar substances. In this work, we measured the phase behavior of water/CO₂ microemulsion for thermodynamic data and carried out an Ni-electroplating on Cu as application. By carrying out the researches using the supercritical CO₂ macro/microemulsion, we are aimed to promote the research foundation of supercritical emulsion.