

Carbon dioxide utilization using industrial wastewater from refined salt production facility

강동우, 이민구, 조호용, 김은정, 박진원†

연세대학교

(jwpark@yonsei.ac.kr†)

Many nations around the world are concerned about emissions of greenhouse gases (GHGs) from industrial flue gas. Industrial flue gas is mainly consisted of CO₂, N₂, NO_x and SO_x etc. Among them carbon dioxide has high impact on global warming and its derived effects. Hence, researches on carbon dioxide capture and storage have been performed. However, some nations including Korea and some European nations are thought not proper for carbon storage in underground. Even if carbon storage is achieved by deep ocean storage, it has possibility for acidification of ocean and it can lead to destruction of ocean ecology. In order to solve these problems, utilization for captured carbon dioxide has been conducted. One of the method for utilization is to make metal carbonate salts through aqueous carbonation process. To achieve that, sufficient amount of metal ion source should be secured. In this research, process seawater was determined to be used as calcium supplying source and absorption-precipitation process is suggested.