Effect of drying zone on structure of mesoporous SiO_2 in spray reactor

송의화, 박승빈*
한국과학기술원
(SeungBinPark@kaist.ac.kr*)

SiO_2 particles with well-ordered pores were synthesized by the ultrasonic spray process. In the hydrothermal process, the structure of pore was influenced by initial concentration of surfactant. However, in the ultrasonic spray process, the drying zone for solvent evaporation played an important role in the final morphology of pore. In this work, the structure of pore was controlled by changing the condition of drying zone.
The morphologies of the prepared SiO_2 particles were observed by scanning electron microscopy (SEM) and transmission electron microscopy (TEM). The specific surface area, pore size and pore volume were obtained by the measurement of nitrogen sorption isotherms.