Charge and Discharge of Methane on Corn-based Carbon Monolith

M. S. Balathanigaimani, 이민주, 심왕근, 김 찬, 서숭혁[1], 문 희*
전남대학교; [1]계명대학교
(hmoon@chonnam.ac.kr*)

The Department of Energy (DOE) in the United States fixed a target of 180 V/V for the feasible utilization adsorbed natural gas storage. Using monolith instead of powder activated carbon is also one of the best opt ways to achieve this target. By making monolith we can enjoy the following advantages such as, high packing density, narrow micropore distribution and so on. Monoliths which were used in this study were prepared by using various corn-based activated carbon and binders such as, PVA, PVP and PTEF. The important purpose of this work is that to check the deliverable capability of these monoliths. Based on the charge and discharge experiments the deliverable ability of these monoliths was calculated. Numbers of charge and discharge cycles were also conducted for the selection of the best activated carbon at different isotherm temperatures.