

ETFE membrane manufactured by EB-radiation technology for DMFC

박대엽, 이동화, 조현국, 한도흥*
영남대학교
(dhhan@ynu.ac.kr*)

This study could manufacture a good performance of ETFE membrane for DMFC by grafting styrene monomer to EFTE film with electron beam radiation technology. The degree of styrene-grafting is strongly affected by irradiation dose, leading to a maximum degree of grafting at around 20kGy of dose and considerably lowering at high doses. ETFE membrane with 74.0 % of grafting exhibited slightly better electrical characteristics than in 100.3% of grafting degree, even though higher degree of grafting gave higher value of IEC. Maximum electric power existed around 3wt% of MeOH, regardless of cell temperature.