Molten Carbonate Fuel Cell : The effect of the supported thin anode

박동녘[1,2], 서동호[1], 윤성필[1], 오인환[1], 남석우[1], 김수길[1],
장성철[1], 설용건[2], 한종희[1,*]
[1]한국과학기술연구원; [2]연세대학교
(jhan@kist.re.kr*)

Confronting with serious energy and environmental challenges at the beginning of 21st century, researchers have been trying their best to find the ways to convert the limited fossil fuels to electrical energy cleanly and efficiently along with their great effort to adopt the renewableenergies.
Recently, MCFCs have been developing to get a good durability and economic feasibility for commercialization. This study tried to reduce the anode thickness(0.7~0.1mm). Less than 0.3mm anode thickness was unable to withstand internal pressure. A low durability of anode was achieved due to the dent made in the support while operating. Therefore, the supports (support A, support B) were used for compensate of this phenomenon. The 0.1mm thickness anode is made by tape-casting with a support, while the 0.3mm thickness anode was used without support. we confirmed that the supported anode showed better performance and durability than that non-support anode during the single cell test.