# Investigation sealing ability of silver-glass composite in intermediate temperatures for honeycomb SOFC

Nguyen Xuan Phuong Vo[1,2], Quang Nhu Ho[1], 남석우[1],
윤성필[1,*]
[1]KIST; [2]UST
(spyoon@kist.re.kr*)

The sealant material used for our honeycomb SOFC operated in intermediate temperature range (600-800°C) is decided to be the silver-glass composite due to its acceptable performance in high temperature reported elsewhere. Here we describe further research work on sealing ability of several compositions of the composite at operating conditions of the honeycomb SOFC and long-term monitoring of leaking rates of the sealant. To achieve the foregoing objective, an appropriate apparatus was built to test performance of the sealant in different environments at different temperatures for long periods of time. It was shown that when the sealant was exposed to hydrogen atmosphere at 2 bar (the inner side) and to air atmosphere (the outer side), it exhibited acceptable rates of leakage in the range of 600 to 800°C and survived through twenty cycles of heat, lasting for more than 3000 hours.