

## Ion Conductivity of Poly(styrene-ethylene-butylene-styrene)/SiO<sub>2</sub> and Nanoclay Composite Membranes

김효주<sup>1,2</sup>, 강신영<sup>3,\*</sup>, 조동련<sup>3,2</sup>, 홍창국<sup>4,2</sup>  
<sup>1</sup>전남대학교 신화학소재공학과;  
<sup>2</sup>기능성나노신화학소재사업단(BK21);  
<sup>3</sup>전남대학교 응용화학공학부; <sup>4</sup>전남대학교  
(kaang@chonnam.ac.kr\*)

A ion conducting polymer membranes were prepared by solution casting method, from poly(styrene-ethylene-butylene-styrene) (SEBS) solution. Fumed silica and nanoclay were using the inorganic fillers. Poly(styrene-ethylene-butylene-styrene) composite membranes were sulfonated chlorosulfuric acid(CSA) as a sulfonation agent at room temperature by immersing method. The ion conductivity of the fabricated membranes were measured by AC impedance analyzer, the structural properties were examined by AFM and FT-IR spectroscopy. Thermal stability and mechanical properties were each studied by TGA and DMA.