Proton conductive membrane`s heteropolyacid characteristics comparision of SiWA in MCM and Fused silica

의진우, 최승혁, 안재인, 한학수*, 최준석
연세대학교 대학원 화학공학과
(hshan@yonsei.ac.kr*)

The method to form stable proton conductor materials constituted of silicotungstic acid sdsorption into mcm / fused silica were investigated . These materials, after preparation, were characterized in order to evidence their intrinsic structure and conductivity. One of them, that at higher proton conductivity consisting of 50wt. % of SiWA on SiO2, was used, in combination with 2,5-polybenzimidazole, for the preparation of proton conductor membranes. The membranes were thermally stable and the conductivity measured on a sample of membrane with 50% of inorganic proton conductive component gave a value characterized. The introduction on the polymer of phosphoric acid groups increased the conductivity of the membranes.