

Preparation of electrospun polyacrylonitrile/SiO₂ composite gel electrolyte for dye-sensitized solar cell

김보경, 이선미, 장보옥, 정홍련, 이완진*
전남대학교
(wjlee@jnu.ac.kr*)

The long-term performance, durability and practical use of DSSC are crucially limited by the leakage and volatilization of liquid electrolytes. The key to improve performance and retention for DSSC is mainly dependent on the enhanced uptake of liquid electrolyte. Gel electrolyte provides the good absorption with the development of porosity, affinity between polymer and the liquid electrolyte, inducing the facile mass transfer. PAN/SiO₂ membranes prepared by electrospinning made the efficiency of DSSC increase to 5.6 % by facilitating mass transfer because of its fully interconnected pore structure.