

Functionalization of Ion Gels for Flexible Electrochemical Electronics

문홍철[†]

서울시립대학교

(hcmoon@uos.ac.kr[†])

Polymer gel electrolytes (PGEs) have been widely utilized in diverse electrochemical applications. In particular, ion gels composed of room temperature ionic liquids (ILs) and ABA triblock copolymers with IL insoluble A blocks and a IL soluble B block are considered as promising PGEs, owing to their outstanding ionic conductivity, high capacitance, negligible vapor pressure, and good solution processability. We functionalized ion gels to include electrochemiluminescence (ECL) and electrochromism (EC) by incorporating redox-active species. Utilizing these functionalized ion gels, we successfully demonstrated solution processable, low-voltage, flexible electrochemical devices on plastic.