

Selective monitoring of neurotransmitters with a porphyrin-embedded poly(ethylenedioxythiophene):poly(sodium 4-styrenesulfonate) film

진준형<sup>†</sup>, 송민정<sup>1</sup>

경기대학교 화학공학과; <sup>1</sup>서경대학교

(jjh1023@chol.com<sup>†</sup>)

Porphyrin-embedded poly(ethylenedioxythiophene):poly(sodium 4-styrenesulfonate) (PEDOT:PSS) film was prepared on a fluorine-doped tin oxide (FTO) substrate by the self-assembled monolayer formation and electropolymerization in order, and further employed as a sensor electrode for selective monitoring of neurotransmitters. Compared to PEDOT:PSS/FTO electrode, the porphyrin-embedded PEDOT:PSS/FTO showed better selectivity and sensitivity, especially in detection of serotonin in the presence of interfering agents. Furthermore, the latter showed an excellent pH resistance in the selective detection of serotonin.