Characterization of OTFT using Conducting Block Oligomers through Simple Solution Casting

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Orientation of conducting oligomers from simple solution casting is an key factor to enhance the charge carrier mobility of organic thin fm transistors (OTFT). For this purpose, we prepared oligo (a-sexithiophene)-block-oligo(ethylene glycol) (OSBPEO) which shows self-orientation property depending on the surface energy of provided substrate. Using ink-jet printer, OTFTs were printed on a flexible plastic film using OSBPEO solution , and electrical characteristics of the printed OTFTs were investigated. Oriented molecular structure of OSBPEO was confirmed with STM and X-ray diffractomater after the deposition using simple ink-jet printing.