

OECTs as a multipurpose device for biosensing

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OECTs are based on highly conductivity polymer as poly(3,4-ethylenedioxythiophene) polystyrene sulfonate PEDOT:PSS, which modulates its conductivity, in response to a gate voltage, by bulk effects of doping and de-doping in a electrolyte solution. This unique characteristic allows for obtaining sensors able to monitor, with high sensibility, biomolecules as DNA and proteins, bio-signals as neuronal synaptic activity and so on. Materials and processing of these devices are extremely interesting due to the simple deposition of the polymers on flexible substrates by clean room processes or printing technology.