ABSTRACT

N-CHANNEL TRANSISTOR

An n-channel or ambipolar field-effect transistor including an organic semiconductive layer having an electron affinity $EA_{semicond}$; and an organic gate dielectric layer forming an interface with the semiconductive layer; characterised in that the bulk concentration of trapping groups in the gate dielectric layer is less than $10^{18}cm^{-3}$, where a trapping group is a group having (i) an electron affinity EA_X greater than or equal to $EA_{semicond}$ and/or (ii) a reactive electron affinity EA_{rxn} greater than or equal to $(EA_{semicond}.-2eV)$.

[Figures 1a and 1b]