

Supporting Information

Cytocompatible, Disintegrable, Low-Voltage Operation n-type Organic Thin Film

Transistor

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Table S1. Key materials parameters used as input to the numerical simulation.

Layer	Parameter	OTFT with SiO ₂ /OTS	OTFT with PVA/UV-PCL
Gate	Work function	4.0 eV	4.0 eV
Source/drain	Work function	4.35 eV	4.35 eV
Dielectric	Capacitance	15 nF/cm ²	27 nF/cm ²
	Interface charge	-6 × 10 ¹¹ cm ⁻²	None
Semiconductor	Ionization energy (HOMO)	5.65 eV	5.65 eV
	Electron affinity (LUMO)	3.85 eV	3.85 eV
	HOMO effective density of states	10 ²⁰ cm ⁻³	10 ²⁰ cm ⁻³
	LUMO effective density of states	10 ²⁰ cm ⁻³	10 ²⁰ cm ⁻³
	Electron mobility	0.3 cm ² V ⁻¹ s ⁻¹	0.3 cm ² V ⁻¹ s ⁻¹
	Hole mobility	10 ⁻⁵ cm ² V ⁻¹ s ⁻¹	10 ⁻⁵ cm ² V ⁻¹ s ⁻¹
	Total trap density	10 ¹⁸ cm ⁻³	None
	Trap characteristic temperature	1200 K	None