

Abstract Submitted
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Efficient electron and hole injection in organic transistors with carbon nanotube electrodes FABIO CICOIRA, CNR-IFN, RICHARD MARTELL, University of Montreal — Single Wall Carbon Nanotubes (SWCNTs) are of great interest as electrode materials in Organic Field Effect Transistors (OFETs) since they are easy to process and stable in ambient conditions. Thanks to their field emission properties, SWCNTs electrodes, in principle, are able to inject both electrons and holes into organics with low injection barriers, promoting tunneling injection. We will present recent results on the electrical properties of p-type and n-type OFETs using hairy SWCNTs electrodes, where the CNTs are attached on the substrate by means of metallic Ti contact pads. Devices with SWCNTs electrodes show improved injection characteristics compared with those using conventional metallic electrodes both for p-type (pentacene) and n-type (fullerene) materials.

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