

## **A CONTRIBUTION TO THE DEVELOPMENT OF ORGANIC SEMICONDUCTOR DISPLAYS BY THE INKJET TECHNIQUE**

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Organic Light Emitting Diodes - OLEDs - is a promising field of study and a huge market opportunity for the semiconductor players. Thanks to its potential characteristics to replace the today' s main display technologies like lightweight, low operation voltage, wide viewing angle, high resolution, fast switching, broad color range and the possibility to produce flexible devices, makes the organic semiconductors a potential candidate to develop, in a near future, devices and systems that even could not be imagined.

This work aims to contribute to the manufacturing process field and to the characterization of displays prepared by the ink jet deposition technique. In this work, a study was done on the morphology of the ink jet deposition of polyfluorene over Indium Tin Oxide (ITO) substrates treated with different procedures. An adapted commercial desktop ink jet printer was used to deposit the polymer films. The devices were characterized by optical, electrical and performance measurements.