

## Progress on Printed Low Voltage Electrolyte Gated OTFTs and Circuits

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Gel electrolytes consisting of a dissolved salt and a polymer matrix can be used as high capacitance gate dielectrics in low voltage organic thin film transistors. One useful gel formulation consists of an ionic liquid and a gelating triblock copolymer. These so-called ion gels offer specific capacitances in excess of  $10 \mu\text{F}/\text{cm}^2$ , low voltage operation ( $< 2\text{V}$ ), and short polarization response times  $< 1 \text{ms}$ . Ion gel dielectrics can also be printed from a solvent-based ink. In this talk, I will describe recent progress on fabrication and characterization of printed ion gel gated OTFTs, including device yields and reproducibility, switching speed, ON/OFF current ratio, threshold voltages and integration into circuits.