



**MATERIALS DEPARTMENT / MRL
JOINT COLLOQUIUM**

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“On the Road to Printed Electronics: Status and Challenges”

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Abstract

Organic semiconductors are currently being researched for use in thin-film electronic devices such as thin-film transistors (TFTs), light emitting diodes, and photovoltaic cells. Organic LEDs are commercialized and the first display driven by organic transistors should appear by the end of the year. Despite this progress, there are many remaining challenges for the full realization of organic electronics. I will review the state of the performance of organic circuits and the state of processing methods. Remaining issues for the adoption of organic transistors such as the need for better gate dielectrics and for improvement in device stability will be discussed. Organic devices will not achieve the promise of low cost without improvements in fabrication technology. I will also outline current developments in inkjet printing methods and the challenges in the adoption of flexible substrates.

Host: Professor David Clarke