

Development of Printable Electronics on Flexible Substrate

Ta-Ya Chu

In this presentation, I'll give an introduction to the "NRC Printable Electronics Flagship Program" and review the technologies for organic photovoltaics and printed transistors. The achievements for the development of organic photovoltaics at NRC will be presented and discuss the challenges ahead for commercialization. The different printing techniques will be presented to address the difficulties of printing process instead of spin coating process in the lab. The development of inkjet-printed PMOS inverters and logic gates on flexible substrates will be presented. The manufacturing yield of 97% of inkjet-printed OTFTs has been demonstrated. Optimized enhancement-load PMOS inverters on PET substrate obtained a high voltage gain up to 11 v/v.