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Organic materials to organic thin film transistor devices

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Abstract

Organic Thin Film Transistors (OTFT) technology is poised to be an important component in coming years in printed and hybrid electronics segment. This is because the OTFT technology platform enables manufacturing of high performance, ultra-thin, high definition display screens on flexible plastic substrates, particularly suitable for portable devices such as smartphones and tablets and the emerging market for wearable devices. NeuDrive have developed FlexOSTM – a proprietary organic semiconductor formulation based on soluble small molecules/high permittivity semiconductor binders as well as a novel organic thin film transistor form factor and fabrication process. FlexOSTM has world-leading mobility, stability and uniformity performance validated for flexible display backplanes. NeuDrive's OTFT technology can be integrated with printing- based manufacturing processes to produce low-cost and large-area electronic transistor circuits on flexible circuits. The performance of the device largely depends on the materials used. The paper will discuss the challenges and achievements of new materials, their processing limits and the performance in fabricated OTFT carried out by NeuDrive.

Biography

Shashi Pandya has been researcher at UJF, Grenoble, France and Durham University working on bio-active heterocycles, organometallics, natural products, asymmetric synthesis, catalysis, lanthanide complexes for MRI and materials for OLEDs. For last 6 years she has worked in the field of organic electronic materials. She has published 19 papers and 3 patents. Dr Shashi Pandya joined NeuDrive in 2016. Shashi is responsible for the day to day operations, finance and general management of the company. She is involved in shaping the strategic direction & execution of business growth through international collaborations and investments. Shashi also manages the IP portfolio of the company.

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