

scdt@iitk.ac.in <scdt@iitk.ac.in>
To: scdt@lists.iitk.ac.in

Fri, Feb 26, 2021 at 7:21 PM

Zoom Meeting for joining the webinar:
<https://zoom.us/j/99863678964?pwd=ZVJvdFN5T1UyQjdZbmxxwS0htRUJOUT09>

Meeting ID: 998 6367 8964
Passcode: 064022

~~~~~

Dear Colleagues,

I would welcome you to attend the SCDT-FlexE Centre Weekly Tuesday Seminar by our colleague Mr. Pradeep Kumar Mahato. The details of the seminar (to be given in webinar format) are given below:

Title: "Towards high density non-volatile memory array based on P(VDF-TrFE) ferroelectric polymer"

Date: 2nd March, 2021 (Tuesday)  
Time: 7:30 PM to 8:30 PM  
Presentation will be on zoom. The link is given above.

The talk abstract and a brief bio of the speaker are given below. Please join if you are in a position to do so.

With regards  
S.K.I.

Abstract of talk sent by Mr. Mahato:

~~~~~

P(VDF-TrFE) ferroelectric polymer based memory devices have unique advantages due to their low processing temperature, flexibility, endurance, and a symmetric and square shaped hysteresis loop.

Because of above properties, such devices have gained broad interest in flexible electronics applications in smart packaging, healthcare and wearable electronics domains. One of the challenges is to achieve P(VDF-TrFE) based high density memory arrays using scalable processes as it would require micron level high-resolution features that are typically not achievable using standard printing processes. In this talk we would report on P(VDF-TrFE) based ferroelectric field effect transistors (FeFETs) for non-volatile memory applications. FeFET devices down to 5 micron channel lengths have been fabricated with ON/OFF ratio > 10⁶, programming voltages < 25V, and retention time > 4000 second. Such devices would enable fabrication of high density memory arrays.

Bio:

~~~~~

Mr. Pradeep Kumar Mahato is currently working as a Sr. Project Engineer in the TFT group at FlexE Centre. He joined the centre in 2018 and is involved in developing TFTs and P(VDF-TrFE) based memory devices. Mr. Mahato did his B.Tech in Electronics and Communication Engineering from West Bengal University of Technology, Kolkata and M.Tech in Glass and Ceramic Engineering from CSIR- Central Glass and Ceramic Research Institute, Kolkata.

---

Scdt mailing list  
[Scdt@lists.iitk.ac.in](mailto:Scdt@lists.iitk.ac.in)  
<http://lists.iitk.ac.in/mailman/listinfo/scdt>