

[Scdt] SCDT-FlexE Centre Weekly Tuesday Seminar- 07.12.2021 at 7:30 PM



From SCDT, IIT Kanpur <scdt@iitk.ac.in>
Sender <scdt-admin@lists.iitk.ac.in>
To <scdt@lists.iitk.ac.in>
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Zoom Meeting for joining the webinar:

<https://zoom.us/j/99863678964?pwd=ZVJvdFN5T1UyQjdZbmxwS0htRUJOUT09>

Meeting ID: 998 6367 8964

Passcode: 064022

Dear Colleagues,

I would welcome you to attend the SCDT-FlexE Centre Weekly Tuesday Seminar by Ms. Madhu Rawat from the FlexPV Team. The details of the seminar (to be given in webinar format) are given below.

Title: "Effect of lowering annealing temperature for PCDTBT: PCBM photoactive layer (PAL) and PEDOT: PSS hole transport layer (HTL)"

Date: 7th December, 2021 (Tuesday)

Time: 7:30 PM to 8:30 PM

Presentation will be on zoom. The link is given above.

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

With regards
S.K.I.

Abstract of talk by Ms. Madhu Rawat:

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Achieving high efficiency in an organic solar cell requires optimization of the different fabricating layers in the device. The fabrication process has a strong relationship with the device parameters and it is necessary to control nano scale morphology of the different layer during the device fabrication to improve charge generation, extraction and collection. The aim is to lower the processing temperature to the extent possible, especially since some of the flexible substrates might not be able to withstand higher temperatures of processing. In this work the effect of lowering annealing temperature for PAL (PCDTBT:PC60BM) and HTL (PEDOT:PSS) is presented. The relation between thermal annealing and device characteristics is studied. The improvement in device performance is correlated with results from morphological studies of the PAL and HTL under various thermal treatments.

About the Speaker:

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Ms. Madhu Rawat is a scientist at the National Centre for Flexible Electronics, IIT Kanpur where she is part of the core team building flexible photovoltaic (PV) devices and modules. Ms. Rawat completed her Master's Degree in organic chemistry from Kanpur University (today CSJMU). She then joined the Semiconductor Laboratory in the Department Electric

Engineering IIT Kanpur, where she was involved in material synthesis (polymer as well as small molecules) for a variety of devices including organic PV and organic light emitting diodes (OLED). The primary focus of Ms. Rawat in the last few years has been to build PV devices using benign solvents and material, with a focus of fabricating the devices on eco-friendly flexible substrates such as paper.

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Scdt@lists.iitk.ac.in

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