

[Scdt] SCDT-FlexE Centre Weekly Tuesday Seminar - 08.02.2022 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>
Date 2022-02-07 19:25
Priority Normal

Zoom Meeting for joining the webinar:

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

Meeting ID: 998 6367 8964

Passcode: 064022

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Dear Colleagues,

Prof. Vivek Verma of the Material Science and Engineering Department in our institute has kindly agreed to give a seminar on an extremely pertinent topic of the the current times - "Biodegradable Substrates for Flexible Electronics". Please join for the seminar on an approach to build electronics which allows us to move towards a more sustainable planet.

With regards

S.K.I.

~~~~~ Details of the Seminar ~~~~~

Weekly Seminar Title:

Title: "Biodegradable Substrates for Flexible Electronics"

Date: 8th February, 2022

Time: 7:30 PM to 8:30 PM

Zoom link details for the event is given above

Abstract of talk:

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Flexible electronic devices have applications ranging from solar cells and displays to biomedical devices and advanced packaging. At present non-biodegradable polymer substrates are used for such devices, which pose serious environmental concerns. Biodegradable polymers, on the other hand, offer a welcome approach towards substrates for flexible electronics. However, their high moisture absorption during device fabrication and usage poses concern. We develop processes that help resist water absorption while maintaining biodegradability. For example, agarose was functionalized with hexamethyl disilazane (HMDS) and patterns were fabricated using photolithography. A functional battery was also fabricated using the substrate. We plan to work on biodegradable stretchable substrates. In addition, we are aiming towards time varying switchable water-resistant properties.

Bio:

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Dr. Vivek Verma is faculty of MSE department at IIT Kanpur. His research interests are biodegradable polymers for packaging and wound dressing applications. He did his B. Tech. in Metallurgical Engineering from IIT Madras and PhD from Pennsylvania State University. He likes to play football.

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