"vnm" <vnm@iitk.ac.in> From:

[Scdt] SOTA on 8 Sept at 5pm: Printing 2D materials for electronic device applications Subject:

Date: Fri, September 2, 2022 6:51 am "FACULTY" <faculty@lists.iitk.ac.in> To:

MS698A@iitk.ac.in,"Scdt" <scdt@lists.iitk.ac.in> Cc:

## INDIAN INSTITUTE OF TECHNOLOGY KANPUR

## Materials Science Programme

State of The Art Seminar (SOTA)

Mr. Puneet Singh Parmar (Roll No.: 19112263), a PhD student in Materials Science Programme will deliver his SOTA seminar as per the following schedule:

Title: Printing of 2-D Materials for Flexible Electronic Device Applications

Sept. 8<sup>th</sup>, 2022 (Thursday) Date:

Time: 5:00 PM

Venue: **ACMS Conference Room** 

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## **ABSTRACT**

The ability to print the electronic devices brings many advantages in comparison to the conventional photolithographic technique of device fabrication. It brings the possibility of large-area applications, flexibility, low cost, reduced complexity, and lesser time consumption. The required functional ink is typically prepared in two steps, viz., material synthesis and ink formulation.

In this presentation, the most viable methods reported in the literature for the development of inks based on 2D materials and the role of parameters involved will be extensively discussed. In addition to this, the aspects of ink formulation in relation to material synthesis will be argued in detail. Finally, the challenges of ink formulation based on MoS<sub>2</sub> and its state-of-the-art status of applications will be discussed to delineate the problem focus.

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