

2024 Newsletter

National Centre for Flexible Electronics
NCFlexE - Letter

IIT KANPUR

www.ncflexe.in



National Centre for Flexible Electronics
Indian Institute of Technology Kanpur



01 About the National Centre for Flexible Electronics

The Centre: Redefining Possibilities with Flexible Technology

The National Centre for Flexible Electronics (NCFlexE), established at the Indian Institute of Technology Kanpur (IIT Kanpur), is a pioneering research initiative aimed at advancing flexible electronics technology. It focuses on developing innovative solutions in printed, flexible, and organic electronics to cater to industries like healthcare, smart packaging, strategic sectors and many more. The center collaborates with academic institutions, industries, and international organizations to bridge the gap between research and commercialization.



02 Message from the Coordinator

Welcome! The National Centre for Flexible Electronics (NCFlexE) was set up as a Centre of Excellence at the Indian Institute of Technology (IIT) Kanpur in 2014 with financial support from the Ministry of Electronics and Information Technology (MeitY), Government of India, and IIT Kanpur. The vision of this Centre is to catalyse the development of domestic industry in the field of large area flexible electronics, and this vision is being executed with the Centre serving as a bridge between the academic ecosystem and the industrial ecosystem.

Large area flexible electronics is an emerging segment of electronics that allows development of new applications by integrating intelligence in the form of electronics directly on flexible substrates such as plastics, paper, textiles or metal foils - and this opens up new possibilities of developing conformal, flexible, lighter and more robust applications. The emerging technology of flexible electronics is rapidly growing worldwide. India, on account of its strength in two critical areas - chemicals (ranked 6th globally) and printing (ranked 4th globally), is well positioned to realize the opportunity to develop as a global manufacturing hub for flexible electronics.

03 Team Achievements

Bending the Limits of Innovation: Where Flexibility Meets Technology!

TECHNOLOGY AND KNOW-HOW TRANSFER

IIT Kanpur transfers a technology for 'Detection of Mastitis in Bovines' to **Prompt Equipments Pvt. Ltd.**

27 Jun 2024: The IIT Kanpur has launched a breakthrough technology in animal health, titled 'Lateral Flow Immunoassay Strip and Method for Detection of Mastitis in Bovines', developed at NCFlexE. This innovative technology aims to revolutionize mastitis detection in dairy cattle. To facilitate its widespread adoption, IIT Kanpur has signed a technology transfer MoU with Prompt Equipments Pvt. Ltd., a leading dairy technology company operating across more than 70,000 villages nationwide.

<https://shorturl.at/DuIWE>

AWARDS

IIT Kanpur was bestowed with a prestigious STEM Impact Award 2024 for engaging in impactful technology transfer activities, during the annual STEM Summit - 2024, held in Bengaluru on Feb 1, 2024, in recognition of the socio-economic impact created with the technology transfer of the invention of a 'Haptic Smart Watch for Blind & Visually Impaired', developed at NCFlexE.

STEM (Society for Technology Management) is a non-profit organization providing a facilitative environment for Technology Transfer Processes and professional development of technology management professionals in Life Sciences, Material Sciences, IT, Engineering, Law, and others.



04 News and Events

NCFlexE regularly hosts and participates in events to showcase its cutting-edge research and foster industry-academia collaboration. It organizes workshops, conferences, and training programs, providing a platform for knowledge exchange in printed and flexible electronics.

PARTICIPATION IN EXHIBITION / CONFERENCE/ WORKSHOP

PAMEX 2024

NCFlexE participated in PAMEX 2024, 6-9 Feb 2024 at Bombay Exhibition Centre. The Exhibition, organised by All India Federation of Master Printers (AIFMP), in association with Print-Packaging.com Private Limited (PPCPL) drew a diverse crowd from all across India and neighbouring countries.

SEMICON India 2024

NCFlexE participated in SEMICON India 2024, 11-13 Sep 2024 at India Expo Mart, Noida. We have showcased our extensive research and development in this rapidly evolving field. We warmly invited industry professionals, researchers, and enthusiasts to visit us and explore the future of electronics.

- 50th Dairy Industry Conference & Exhibition 2024, hosted by Indian Dairy Association (IDA), at HITEX Exhibition Center, Hyderabad, India, 4-6 March 2024.
- 2024 IEEE International Flexible Electronics Technology Conference (IFETC) held in DAMSLab University of Bologna, Italy 16-18 September, 2024.

ANNUAL SHORT-COURSE, INDUSTRY MEET, WEBINARS ORGANISED BY NCFlexE

Short Course Flexible and Printed Electronics: NCFlexE, IIT Kanpur is organized a short course on Flexible and Printed Electronics from 25th -27th July 2024. It was held online, and presentations were made consisting of an overview of key Flexible Electronics technologies such as OLEDs, TFTs, PV, sensors etc., Fundamentals of semiconductors for Flexible Electronic Devices, and Application Case studies.

Industry Meet-2024: NCFlexE, IIT Kanpur organized an "Industry Meet-2024" on 'Enabling Eco-System: Printable Electronics Manufacturing in India' on 13th Dec 2024. It was held online, and presentations/special addresses were delivered by MeitY, Gol, industry and NCFlexE team.

Seminars and Webinars: Details can be found here.

- <https://www.iitk.ac.in/scdt/webinars.html>



On the 25th, 26th and 29th of July 2024, the undergraduate students of the 2024 batch visited the NCFlexE as part of their orientation program.

Smt. Asha Nangia, Scientist G & Group Coordinator, and Sh. Neetesh Kr. Gupta, Scientist D, Industrial Promotion - Electronics & Hardware Manufacturing Division, MeitY, GoI, visited NCFlexE, IIT Kanpur on 27 September 2024.

VISITS HOSTED BY NCFlexE



General Upendra Dwivedi, Chief of the Army Staff (COAS) and his team visit to National Centre for Flexible Electronics, IIT Kanpur, 24 Apr 2024.



On November 21, 2024, a delegation from La Trobe University visited NCFlexE at IIT Kanpur as part of the IIT Kanpur - La Trobe University Research Academy Symposium on Healthcare Technology & Digital Engineering, held from November 18-21, 2024.

05 Contact Us

We would love to hear from you!
Questions and comments can be directed to flexe@iitk.ac.in

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