SCDT – FlexE Centre Webinar Series

The webinars aim to bring together researchers in Flexible Electronics and allied areas from across India (and other countries) on a single platform to promote professional interaction.

Webinar by

Dr. Ben Breitung
Institute of Nanotechnology
Karlsruhe Institute of Technology (KIT)
Germany

on
"Materials and Manufacturing of Printed Electronic Devices"

Date: 13th January 2026
Time: 7:30 PM to 8:30 PM

Visit www.iitk.ac.in/scdt/webinars.html to access the zoom link to join the webinar.

The event will be chaired by
Dr. Poonam Sundriyal
Indian Institute of Technology Kharagpur

Abstract of the Webinar

The talk will provide an overview of recent research activities in the field of printed electronics at the Karlsruhe Institute of Technology, Institute of Nanotechnology. It will introduce key scientific concepts, methodologies, and technological developments that have shaped printed electronic devices over the past years.

Fundamental principles of printed electronics will be explained, with particular emphasis on materials selection, ink formulation, and printing strategies. The presentation will cover the complete process chain, ranging from the development of functional inks and the fabrication of electronic components, such as transistors and memristors, to their electrical, structural, and functional characterization. In addition, insights into current challenges, performance limitations, and reliability aspects of printed electronic devices will be discussed. The talk will conclude with an outlook on emerging printing technologies, novel material concepts, and future application fields, highlighting the potential of printed electronics for next-generation electronic systems.

Information about the speaker

Ben Breitung studied chemistry and completed his diploma thesis in materials science with a focus on rechargeable battery materials. He conducted his postdoctoral research at the BELLA – Battery and Electrochemistry Laboratory, a joint research laboratory of the Karlsruhe Institute of Technology and BASF, where he worked closely with industry partners on the development of rechargeable battery technologies.

He completed his habilitation as a group leader at the Institute of Nanotechnology at KIT under the supervision of Horst Hahn, focusing on high-entropy materials for rechargeable batteries.

Following this, he became a group leader in the research unit of Jasmin Aghassi at KIT, where he currently leads the group Nanomaterials for Electronic and Energy Applications. His research interests include high-entropy materials, printed electronics, laboratory automation, and high-throughput synthesis and characterization methods.