



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. Madhusudan Singh

Department of Electrical Engineering
Indian Institute of Technology Delhi
on

“Solution processed piezoelectric devices”

Date: 14th November, 2023

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. Nikhil Chander

Indian Institute of Technology Bhilai

Abstract of the Webinar

High performance piezoelectric materials based on lead, such as lead zirconium titanate (PZT), and its various derivatives have formed the backbone of devices such as energy harvesters. Unfortunately, owing to the use of lead, such devices cannot be a) integrated in a foundry based process, b) used for an increasing number of applications where regulations arising from environmental and human health concerns limit their use. In this webinar, I will talk about our lab's development of potassium sodium niobate (KNN) as an inorganic high performance alternative to PZT, intricacies around the measurement of its electromechanical properties, certain process explorations, and demonstration in flexible devices.

Information about the speaker

Madhusudan Singh received his 5 year integrated M. Sc. (Physics) from IIT Kanpur in 1999. After grad school work at University of Michigan, Ann Arbor, postdoctoral work at MIT, and research work at Arizona State University and UT Dallas, he joined IIT Delhi in 2013, where he built the Functional Material and Devices Laboratory. His research group works at the intersection of materials science, device fabrication and integration, while investigating material/device codesign problems in the domains of piezoelectric, upconversion, sensor, optoelectronic, and energy storage materials, and process development..