

*ICAR Short Course
On*

**ADVANCE IN NANOTECHNOLOGY
APPLICATION FOR AGRICULTURE**
(Feb 2-11, 2026)



Organized by

**ICAR-Central Institute for Research on Cotton Technology
(ICAR-CIRCOT)**

Adenwala Road, Matunga, Mumbai 400 019, Maharashtra, India



Sponsored by

Indian Council of Agricultural Research

New Delhi 110012

INTRODUCTION

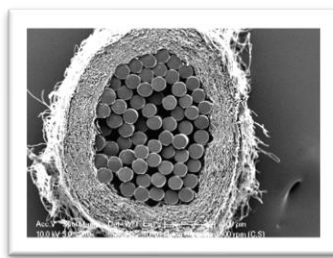
ICAR-Central Institute for Research on Cotton Technology, established in 1924, a premier constituent institute of Indian Council of Agricultural Research, is engaged in carrying out basic and strategic research in processing of cotton & its agro-residues, development of value-added products and quality assessment of cotton. The Institute extends effective technological support to the country's cotton breeding programme for varietal development with improved productivity and quality that suits industry needs. ICAR-CIRCOT is an ISO 9001:2015 certified institute and is an accredited laboratory under NABL (ISO 17025:2015), functioning as Referral Laboratory for cotton textiles.

ABOUT THE TRAINING PROGRAMME

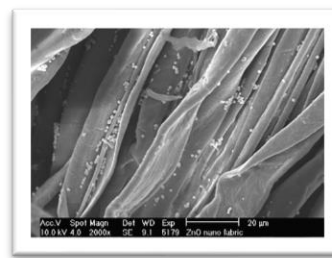
Nanotechnology deals with the manipulation of atoms, molecules, or molecular clusters into functional structures to create functional materials and devices of vastly different properties. The first use of the concept of 'nanotechnology' was in "*There's Plenty of Room at the Bottom*", a talk given by physicist Richard Feynman in 1959. ICAR-CIRCOT, a leader in the field of nanotechnology applications in agriculture & allied sectors, cotton textiles, pulp & paper, sensors and biocomposites, has over two decades of experience and expertise in nanomaterials synthesis, characterization and applications. In 2015, India's first Nanocellulose Pilot Plant was commissioned and dedicated to the nation. This nanotechnology training, **22nd in the series**, is being organized to impart basic and advanced knowledge of nanotechnology and its applications in agriculture and allied sectors. The Ministry of Agriculture & Farmers' Welfare authorizes ICAR-CIRCOT, Mumbai for nanofertilizer testing.



Nanocellulose Pilot Plant



Core-sheath nanofibers



Nanoparticles on cotton fibres

OBJECTIVES

- ✓ To acquaint the participants with recent advances in the field of nanotechnology
- ✓ To impart hands-on training on synthesis & characterization of nanomaterials and their applications
- ✓ To demonstrate the application of nanomaterials in agriculture & allied sectors, textiles, composites, pulp & paper, filtration and sensors
- ✓ To sensitize the participants about business potential of nanotechnology along with life cycle assessment, safety and toxicology of nanomaterials

CURRICULUM

A series of lectures and practical demonstrations will cover the basics of nanotechnology, synthesis and characterization of various nanomaterials their application in agriculture & allied sectors, textiles, composites, pulp & paper, filtration and sensors. This Institute is well equipped with machineries for nanomaterials synthesis (high energy & shear homogenizers, ball mills – planetary & cryogenic, friction grinder, membrane reactor & fermentor) and instruments for characterization (AFM, DLS size and zeta analyzer, Laser diffraction size analyzer, SEM, FTIR, AAS, ICPMS, fluorescence microscope).

HOW TO APPLY

A non-refundable registration fee of Rs. 50/- (Rupees Fifty only) must be paid online to the account of Director, ICAR-CIRCOT (SBI A/c No. 10001710244, IFSC: SBIN0004114). The UPI ID for payment is **circot@sbi**. The transaction details should be provided in the registration form. A recommendation letter from the Head of your organization needs to be uploaded in the registration form. The link for registration form is **<https://tinyurl.com/circotnano2026>**

ELIGIBILITY

Applicant should have Master's Degree in agriculture or related basic science and working not below the rank of Scientist in ICAR institutes or Assistant Professor in any of SAUs / Central Agricultural University / Deemed University / General University with agriculture faculty and Krishi Vigyan Kendra. The total number for participants will be restricted to 25. Selection will be primarily based on the above said eligibility conditions and first-come-first-serve basis.

BOARDING & LODGING

Participants will be paid travel fare of to and fro journey by rail or bus as per their entitlement, restricted to the maximum of AC II Tier. TA will be paid on production of valid tickets. Free boarding will be provided. **Free lodging will be provided on first-come-first-serve basis, on sharing basis.** Since the accommodation is very limited in our guest house, participants are requested to arrange for their stay, if possible. If traveling by air and opting for the AC II Tier restricted fare, tickets must be booked only through the three authorized travel agents, in accordance with Govt of India guidelines. Cash allowance in lieu of boarding & lodging are not permitted. Participants are requested not to bring their family members with them, as the Institute has limited guest house facilities.

HOW TO REACH CIRCOT, MUMBAI

From Airport (Domestic)	: 10 km
From Airport (International)	: 12 km
Nearest Railway Station	: Dadar (1.0 km)
Nearest Bus Stops	: Kopol Nivas in Dr. Ambedkar Rd, Five Gardens
Google Map Location	: https://maps.app.goo.gl/5KQqkzJurvTJFn9A8

WEATHER

February is the winter season in Mumbai and it will be comfortable. The average temperature fluctuates between 18 and 31°C. No rain is expected.

IMPORTANT DATES TO REMEMBER

Last date for receipt of nomination	: Jan 20, 2026
Intimation to selected participants	: Jan 23, 2026
Course commencement	: Feb 02, 2026

ORGANIZERS

Director, ICAR-CIRCOT	: Dr. S. K. Shukla
Course Director	: Dr. N. Vigneshwaran
Course Coordinators	: Dr. A.K. Bharimalla and Dr. A. Arputharaj

ADDRESS FOR CORRESPONDENCE

Dr. N. Vigneshwaran *FNAAS*

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Updates are available at circot.icar.gov.in