

APPLICATION FORM FOR PARTICIPATION IN SHORT COURSE

(At Central institute for Research on Cotton Technology, Mumbai)

1. Full name (in block letters) :
2. Designation :
3. Present employer and address :
4. Address to which reply should be sent
(including email, mobile and fax)
5. Permanent Address:
6. Date of Birth :
7. Sex : Male/Female
8. Teaching/research/professional experience (mention post held during last 5 years and number of publication in refereed journals) :
9. Marital status : Married/Unmarried
10. Mention if you have participated in any research seminar, Summer/Winter School/ Short Course, etc. during the previous years under ICAR/Other organizations:
11. Whether accommodation is required: Yes / No
12. Academic record

Examination passed	Subject Main / subsidiary	Year of passing	Class / Ranks / Distinctions etc.	University or Institution	Other information
Bachelor's					
Master's					
Ph.D					
Others					

Date _____

Place _____ Signature of the applicant

13. Recommendations of forwarding Institute

CERTIFICATE

It is certified that the information furnished above
has been verified and found to be correct.

Signature _____

Date _____ Director / Head of the organization

Institute Seal _____

How to reach CIRCOT

From Airport (Domestic) : 10 km
From Airport (International) : 12 km
Nearest Railway Station : Dadar (1.0km)
Nearest Bus Stop: Kopol Nivas in Dr. Ambedkar Rd,
Matunga East and Five Gardens bus stop
Landmark: Five Gardens

Weather

January is the coolest month of the year for Mumbai with mean daily minimum being 16°C and mean daily maximum being 30°C. The days are dry, the nights relatively humid.

Important dates to remember

Last date for receipt of nomination: Nov 25, 2011

Intimation to selected participants: Nov 28, 2011

Confirmation by participants : Dec 5, 2011

Course commencement : Jan 2, 2012

Address for Correspondence

Dr. N. Vigneshwaran
Scientist & Course Director
Central Institute for Research on Cotton Technology,
Adenwala Road, Matunga, Mumbai – 400 019.
Maharashtra

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Short Course
On

Application of Nanotechnology in Agriculture

January 2-12, 2012

Organized by
**Central Institute for Research on Cotton
Technology (CIRCOT),**
Adenwala Road, Matunga,
Mumbai – 400 019, Maharashtra, India



Sponsored by
Indian Council of Agricultural Research

Krishi Anusandhan Bhawan-II,
New Delhi – 110012.

Updates are available at
www.nanocellulose.in OR www.circot.res.in

Introduction

Nanotechnology refers to the manipulation / self-assembly of atoms, molecules, or molecular clusters into functional structures to create materials and devices vastly different properties. Nanotechnology can work from the top down approach (mechanical / physical processes) or the bottom up (chemical / self-assembly / bio-synthesis). The definition of nanotechnology is based on the prefix “nano” which is from the Greek word meaning “dwarf”. In more technical terms, the word “nano” means 10^{-9} , or one billionth of something. For comparison, a virus is roughly 100 nanometres in size. The word nanotechnology is generally used when referring to materials with the size of 0.1 to 100 nanometres, however it is also inherent that these materials should display different properties from bulk materials as a result of their size. These differences include physical strength, chemical reactivity, electrical conductance, magnetism, and optical effects.

The first use of the concepts found in 'nanotechnology' was in "There's Plenty of Room at the Bottom", a talk given by physicist Richard Feynman at an American Physical Society meeting at California Institute of Technology (Caltech) on December 29, 1959. Feynman described a process by which the ability to manipulate individual atoms and molecules might be developed, using one set of precise tools to build and operate another proportionally smaller set, and so on down to the needed scale.

Now nanotechnology does not remain as a theoretical science; rather it is being applied in all fields and gained the status of applied science and it is a multidisciplinary subject. Agriculture and Food Production are no exception to it. This has realized the potential of nanotechnology in each stage starting from crop production to consumption. Although no precise figure is available, a largely cited 2006 consultant report estimated that agricultural and food nanotechnologies would represent about \$20 billion of investment in 2010. The reported advantages of nanotech applications range from improved food quality and safety to reduced agricultural inputs and improved processing and nutrition.

Objectives

The major objectives of the training course are:

- √ To acquaint participants with basics of nanotechnology
- √ To impart training on preparation and characterization of nanomaterials
- √ To demonstrate the application of nanomaterials in Agriculture and allied sectors

Curriculum

A series of lectures and practical demonstrations will cover the basics of nanotechnology, preparation and characterization of nanomaterials by different processes and their application in agriculture and allied sectors. A visit to nearby nanotechnology laboratory is also planned. This Institute is well equipped with machineries for nanomaterials synthesis (homogenizer, ball mill, refiner, membrane reactor & fermentor) and characterization (atomic force microscope, particle size analyzer, scanning electron microscope).

How to apply

Interested candidates can apply in the enclosed proforma. The application duly forwarded by the competent authority of the sponsoring organization should reach the Course Director on or before 25th November 2011.

Eligibility & Registration

Applicant should be a post-graduate in any discipline of agriculture or related basic science and working as Scientist in ICAR institutes or as Assistant Professor and above in any of SAUs / Central Agricultural University / Deemed University / General University with agriculture faculty and Krishi Vigyan Kendra. A registration fee of Rs. 50/- (Rupees Fifty only) needs to be paid during the course commencement.

Boarding and 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 during this training programme. Free lodging shall be provided on first come first serve basis. Since the accommodation is very limited at this institute, participants are requested to arrange for their stay. Cash allowance in lieu of boarding & lodging are not permitted. Local participants will be provided with lunch and inter-sessions tea only.