

Organised by



AMITY INSTITUTE OF  
MICROBIAL TECHNOLOGY  
Amity University Uttar Pradesh, Noida



AMITY  
UNIVERSITY

# WORKSHOP — ON — APPLICATION of **NANOTECHNOLOGY** in Plant Growth Promotion for Sustainable **Agriculture**

September 9-13, 2024

Sponsored by:

Science Engineering Research Board (SERB)





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### **Dr. Ashok K. Chauhan**

Founder President  
Ritnand Balved Education Foundation  
Amity University Group



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## INTRODUCTION

Nanotechnology is a branch of science that deals with materials having a size ranging from 1-100 nm. Nano Particles are one such nanoparticle that has gained enough importance due to their versatile properties such as high chemical stability, high electrochemical coupling coefficient, high photostability, etc. Currently, it is widely used as fertilizer to improve plant's metabolic processes. In recent years we have seen tremendous expansion in the field of Nanotechnology. This workshop aims to provide an innovative platform for scholars and researchers to gain knowledge regarding the recent trends in nanotechnology.

The proposed workshop aims to provide hands-on training starting from the synthesis (Green and Chemical) and characterization of nanoparticles using Zeta Sizer, SEM, FTIR, and XRD techniques. A series of informative lectures by expert speakers in the field of nano and nanobiotechnology will also be organized.

### **The following broad topics will be considered:**

- Introduction to Nanotechnology and Nanoparticles
- Nanoparticle synthesis and characterization using Zeta analyzer, Scanning Electron Microscope, X-ray Diffraction, and FTIR
- Preparation and Application of Nano formulation
- Hands-on Training

This workshop will aim to expose Ph.D. and M.Sc. students to cutting-edge technologies to enable them to acquire knowledge about the green and chemical synthesis of nanoparticles and how their size, shape, charge, and different functional groups can be analyzed. The workshop will cover lectures by eminent speakers and research work presented by leading experts in the field. Young researchers will be encouraged to learn dos and don'ts to efficiently handle advanced methods of synthesizing and characterization of nanoparticles.

**Keywords:** Nanoparticles, Green and Chemical Synthesis, Nanoparticle Characterisation, High-end tools

# Session Details: Sep. 9-13, 2024

## INAUGURAL PROGRAM

Day 1: Monday, 9 September 2024

**Venue:** Seminar Hall, E-2 Block, Amity University Campus, Sector 125, NOIDA

9:00 – 10.30 hrs	REGISTRATION & NETWORKING TEA
10.30 – 10.35 hrs	Opening Remarks by Organising Secretary
10.35 – 10.40 hrs	Lighting the Lamp with Saraswati Vandana
10:40 – 10:50 hrs	Welcome address by the Head of Institution Prof. Dr. BC Das
10.50 – 11.00 hrs	Special Remarks by Prof. Dr. Ajit Varma Professor Emeritus
11.00 – 11.10 hrs	Glimpses of Amity University Dr. W. Selvamurthy, President, ASTIF Amity University
11.10 – 11.20 hrs	Glimpses of AIMT Dr. Amit C Kharkwal, Deputy Director
11.20 – 11.30 hrs	Introduction of Workshop, Participants and Speakers Organising Secretary
11.30 – 11.40 hrs	Address by Hon'ble Vice Chancellor Prof. Dr. Balvinder Shukla
11.40 – 11.50 hrs	Address by Guest of Honour
11.50 – 11.55 hrs	Few Thoughts – Way Forward Dr. Ashok K Chauhan Hon'ble Founder President, Ritnand Balved Education Foundation
11.55 – 12.00 hrs	Vote of Thanks Organising Secretary
12.00 -12.30 hrs	<b>Networking Tea</b>

<b>Scientific Session I</b>	
12.30 – 1.30 hrs	Theme Lecture I Dr. Pratima Solanki, Jawaharlal Nehru University
1.30 – 2:30 hrs	<b>Lunch Break</b>
<b>Scientific Session II</b>	
2.30 –5.00 hrs	Demonstration and Hands-On
5:00 – 7:00 hrs	CULTURAL PROGRAMME FOLLOWED BY NETWORKING DINNER

## **Day 2:Tuesday, 10 September 2024**

<b>Scientific Session III</b>	
10.00 -11.00 hrs	Theme Lecture II Dr. Manika Khanuja, Jamia Millia Islamia
11.00 –11.30 hrs	NETWORKING TEA
11:30-12:30 hrs	Theme Lecture III Malvern Pvt. Ltd.
12:30- 1:00 hrs	Discussion
1.00 –2.00 hrs	<b>Lunch</b>
<b>Scientific Session IV</b>	
2.00 – 5.00 hrs	Hands on training
5:00 – 5:15 hrs	Appraisal & achievement of the day
5:15- 5:30 hrs	<b>Networking tea</b>

## Day 3: Wednesday, 11 September 2024

<b>Scientific Session V</b>	
10.00- 11.00 hrs	Theme Lecture IV Dr. Machiavelli Singh, Amity University Manesar
11.00 – 11.30 hrs	<b>Networking tea</b>
11.30 –12.30 hrs	Theme Lecture V Dr. Ramesh N Pudake, Amity University Noida
12.30 – 1.00 hrs	Discussion
1.00 -2.00 hrs	Lunch
<b>Scientific Session VI</b>	
2.00 – 5.00 hrs	Demonstration and Hands-On
5.00 - 5.15 hrs	Appraisal and Achievement of the day
5.15- 5.30 hrs	Networking Tea

## Day 4: Thursday, 12 September 2024

<b>Scientific Session VII</b>	
10.00- 11.00 hrs	Theme Lecture VI Dr. Ruchi Agarwal, TERI
11.00 – 11.30 hrs	<b>Networking tea</b>
11.30 –12.30 hrs	Demonstration and Hands- On
12.30 – 1.00 hrs	Discussion
1.00 -2.00 hrs	Lunch

<b>Scientific Session VIII</b>	
2.00 – 5.00 hrs	Demonstration and Hands-On
5.00 - 5.15 hrs	<b>Appraisal and Achievement of the day</b>
5.15- 5.30 hrs	Networking Tea

## Day 5: Friday, 13 September 2024

<b>Scientific Session IX</b>	
10.00- 11.00 hrs	Theme Lecture VII Dr. Yugal Kishore Mohanta, University of Science and Technology Meghalaya
11.00 – 11.30 hrs	<b>Networking tea</b>
11.30 –12.30 hrs	Demonstration and Hands- On
1.30 – 2.30 hrs	Lunch
<b>Scientific Session X</b>	
2.30 – 4.00 hrs	Demonstration and Hands-On
4.00 - 5.00 hrs	Valedictory Session
5.00 – 5.30 hrs	Networking Hi-Tea





# AMITY INSTITUTE OF MICROBIAL TECHNOLOGY

## ABOUT AIMT

The Amity Institute of Microbial Technology (AIMT) was established in September 2004. AIMT aims at performance excellence, committed to providing quality educational opportunities and services that meet or exceed the needs of learners, industry/business, and our community. AIMT is now supported by the Department of Science & Technology (DST) under the Fund for Improvement of S&T Infrastructure (DST-FIST) to rebuild the Science & Technology infrastructure in the country.

AIMT has the most modern state of the art infrastructural facilities including four practical labs fully devoted to teaching B.Sc. and M.Sc. students, two research labs for carrying out research projects, and specialized labs for plant tissue culture, greenhouse, controlled environment plant/ microbes' growth chambers, biochemical analysis and facilities to carry out molecular studies, etc. Apart from routine basic equipment needed for teaching and research, the labs are equipped with state-of-the-art instruments like Confocal Microscope, RT-PCR, GC, Zeta Potential Analyzer, Bioreactors, etc.

Apart from B.Sc./M.Sc. degree programs, AIMT enrolls Ph.D. & D.Sc. students and is undertaking research in a wide range of specializations including plant-microbe interaction for improving the value of medicinal plants, medicinal mushrooms as a nutraceutical, micro-nutrient management, and crop quality improvement, especially oil seed brassica, nanoagriculture, CRISPAR-CAS9 gene editing etc. A total of 15 projects were completed during 2015 – 2024 worth Rs. 594.7084 Lakhs Funded by: ICAR, NASF - ICAR, SERB DST (5), DST - Nanomission, DST (Indo-Australia), DST-FIST, DST - SEED, DST SARTHI, SBIRI, DBT - BBSRC (Indo-UK), DBT – BIRAC. The institute is presently running 2 research projects, sponsored by Indian government funding agencies like DST, and CSIR for sum of Rs. 51 Lakhs.



# ANNOUNCEMENT

SERB sponsored Workshop on  
**“Application of Nanotechnology in Plant Growth Promotion  
for Sustainable Agriculture”**

**Venue:** Amity Institute of Microbial Technology, Amity University, Noida

**Date:** 9<sup>th</sup> to 13<sup>th</sup> September 2024

## SELECTION CRITERIA

This workshop will accommodate a maximum of 20 participants. Each Participants is required to submit a small write-up explaining the “statement of purpose” regarding the importance of Nanotechnology in Sustainable Agriculture. The applicants must substantiate the relevance of attending this training program to their current research project or interest.

## REGISTRATION LINK

<https://www.linkgoeshere.com>

## FOR THE SELECTED CANDIDATES

- Registration Fee: Rs.500
- Late Registration Fee- Rs.300 (applicable after 31<sup>st</sup> August 2024)

**NOTE:** The course fee does not include boarding and stay. Participants are advised to arrange boarding and stay well ahead of the training. The registration fee includes lunch with morning and evening tea.

\*AMITY HOSTEL CAN BE AVAILED ON PAID BASIS (Charges- Rs.1000 per day including breakfast and dinner).Need to apply well in advance for this.

**Registration starts from- 10 July 2024**

**Last Date for Registration without late fee- 31 August 2024**

**Selected candidates will be informed by 5 September 2024**

**Payment link activation – 15 August 2024 – 5 September 2024**

**After 31 August – 5 September (Late fee - Rs. 300 extra)**