

“Agri Nano Technologies & Dilectric Materials-2021”



**ADIKAVI NANNAYA UNIVERSITY**

ఆదికవి నన్నయ విశ్వవిద్యాలయం

RAJAMAHENDRAVARAM, ANDHRA PRADESH INDIA - 533296

**ISO 9001:2015 Certified**



A Brief report on National Webinar

**On**

“Agri Nano Technologies & Dilectric Materials”

**04<sup>rd</sup> August 2021**

Organized by

**Department Of Physics**

**University College of Science & Technology**

**Adikavi nannaya university**

**Rajamahendravaram**

Convener: Dr. S. Rajyalakshmi

[E-mail: srl.phy@aknu.edu.in](mailto:srl.phy@aknu.edu.in)



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# “Agri Nano Technologies & Dielectric Materials-2021”

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“Agri Nano Technologies & Dielectric Materials-2021”



***INTRODUCTION***

## Webinar Focus

### Introduction

Nanotechnology representing a new frontier in modern agriculture is anticipated to become a major thrust in near future by offering potential applications. This integrating approach, i.e., agri-nanotechnology has great potential to cope with global challenges of food production/security, sustainability and climate change. However, despite the potential benefits of nanotechnology in agriculture so far, their relevance has not reached up to the field conditions. The elevating concerns about fate, transport, bioavailability, nanoparticles toxicity and inappropriateness of regulatory framework limit the complete acceptance and inclination to adopt nanotechnologies in agricultural sector.

Integrated Approach of Agri-nanotechnology: Challenges and Future Trends

(i) Mitigating risk assessment factors (responsible for fate, transport, behavior, bioavailability and toxicity) for alleviating the subsequent toxicity of nanoparticles.

(ii) Optimizing permissible level of nanoparticles dose within the safety limits by performing dose dependent studies.

#### **How helpful is nanotechnology in agriculture?**

Nanotechnology has great potential, as it can enhance the quality of life through its applications in various fields like agriculture and the food system. Around the world it has become the future of any nation. But we must be very careful with any new technology to be introduced regarding its possible unforeseen related risks that may come through its positive potential. Carbon nanoparticles such as **graphene**, **graphene oxide**, carbon dots, and fullerenes, are used for improved seed germination. Some of the other nanoparticles that are used in agriculture are zinc oxide, copper oxide nanoparticles, and magnetic nanoparticles.

Dielectrics are the poor electric conductors (non-ideal insulator), most of the materials including living organisms and most agricultural products can conduct electric currents to some degree, but are still classified as dielectrics. Electrical characteristics of every material are different to each other which are dependent on its dielectric properties. These properties provides the valuable information which helps researchers and engineers to utilize these data into their design or for the purpose of material characterization or for monitoring process quality.



***OBJECTIVES***

## “Agri Nano Technologies & Dielectric Materials-2021”

### *Objective*

The objective of the National Webinar is to provide the in-depth knowledge of Nano Technology in the agriculture and dielectrics in the day wise applications. The Programme will focus to create a platform between Academia and Industry to fill the gap between research in laboratory and its industrial applications. Adopting realistic approach by designing the experiments in natural habitat and avoiding in vitro assays for accurate interpretation. Most importantly, translating environmental friendly and non-toxic biosynthesized nanoparticles from laboratory to field conditions for agricultural benefits.

“Agri Nano Technologies & Dielectric Materials-2021”



***ORGANISERS***



“Agri Nano Technologies & Dielectric Materials-2021”

Organisers

Chief Patron

Hon'ble Vice Chancellor, Prof Mokka Jagannadha Rao

Patron

Prof. T. Ashok

Dr. K. Ramaneswari

Registrar

Principal, UCST

Resource Persons

Dr. T. N. V. K. V. Prasad

Principal Scientist

Department of Soil Science

Acharya N.G.Ranga Agricultural University, Tirupathi

Dr. T. Vishwam

Associate Professor

Department Of Physics

Gitam School of Science

Hyderabad Campus

Convener

Dr. S. Rajyalakshmi

Co-conveners

Mrs. Y. Sushma Priya (Course Co-ordinator), Dept. of Physics, UCST, ANUR

Mr. N. S. Subba Rao, Dept. of Physics, UCST, ANUR

Mr. V. Rajasekhar, Dept. of Physics, UCST, ANUR

“Agri Nano Technologies & Dielectric Materials-2021”

**ABOUT  
VICECHANCELLOR**



**Prof. M. Jagannadha Rao**  
**Vice Chancellor**  
**Adikavi Nannaya University**

## **About Prof. Mokka Jagannadha Rao, Vice Chancellor**

I would like to share professional journey and achievements of our Prof. Mokka Jagannadha Rao who is a Vice Chancellor of Adikavi Nannaya University Rajamahendravaram.

He is known for his dynamic personality and his vision is to make this University as an Internationalised choice for education, research, training and consultancy.

### **Coming to his Educational Background:**

He has pursued his Ph D in Coastal Geology, Andhra University, A.P. in the year 1985 and he also holds his Masters in Mineral Preparation & Geological Engineering from the University of Alaska, USA in the year 1995.

### **His Core Specialisation areas include:**

Coastal Geology, Deltas, Mineral Resources and Processing, Petroleum Exploration, Coal, Environmental Geology, Computer, Applications Groundwater, Remote Sensing and GIS, Natural materials, Earth's Evolution.

### **Coming to his Administrative Positions in Andhra University, Visakhapatnam, AP:**

- Since 2018-till date, he is a director of Information Management Centre.
- Since 2019 – till date, he heads the Department of Geology and also a Dean for PG & Professional Examinations.
- Apart from that, he is also a Chairman, Board of Studies, Dept. of Geosciences, Ambedkar University, Srikakulam, AP, since 2012-till date.

### **Patent:**

Title: An Inventive Model that explains the Genesis of Bay of Bengal and Arabian Sea, with the funding of NRDC, Government of India, New Delhi.

### **Research Outcome:**

- He was awarded 29 PhD's and 08 were ongoing.
- He has guided 80 projects for MSc/Mtech
- 08 Research and consultancy projects
- His Publications include 76 journals, of which 30 were presented in National and International Seminars.

### **Funded Projects: As A Principal Investigator**

DOD, APMDC-DMRTUF, DST, UGC, MoES, ISRO

- He handled Major Consultancy Projects funded by ONGC.
- He conducted various National Seminars, Workshops and training Programs.
- 170 Google scholar citations with-hindex 8 and i10-index 3
- He has international collaborative ties with Australia, USA.

### **Honours and appointments**

- Member, Advisory Board on KG-PG Basin, ONGC, Chennai-2011-2014.
- Associate Editor, Indian Journal of Environment and Eco planning.
- Member, International Geological Correlation Group, National Working Group, Environmental Catastrophes.
- Member, NAAC Steering Committee.
- Management Board Member of a Number of Educational Institutions of AP and

## “Agri Nano Technologies & Dielectric Materials-2021”

Telangana.

- “Scientist of the year 2017”, by National Environmental Science Academy (NESA), New Delhi.
- “Dr. Sarvepalle Radha Krishnan Award, Best Academician of the year 2019”, by Andhra University.
- Member, Expert Committee appointed by APPCB, Govt. of AP.

### *International Visits*

- He has visited the International Universities such as University of Alaska, Fairbanks, USA. and WashingtonStateUniversity, Pullman, Seattle, USA.

“Agri Nano Technologies & Dielectric Materials-2021”

**REGISTRAR**  
REGISTRAR



**Prof. T. Ashok**  
**Registrar**  
**Adikavi Nannaya University**

*ABOUT  
PRINCIPAL*



**Dr. K. Ramanswari**  
**Principal, UCST**  
**Adikavi Nannaya University**

**About Dr. K. Ramaeswari, Principal**

Dr. K. Ramaneswari assumed the office of the Principal on 23-01-2019. She joined the University on 10-05-2007 and is currently working as a Associate Professor of Zoology.

- ✚ She has 14 years of teaching and 18 years of tremendous research experience including post-doctoral studies.
- ✚ Her responsibilities at the University include the development and revision of Curriculum by serving as a member on Board of Studies of various affiliated colleges of the University at the Graduate level and for Post Graduate level in the University.
- ✚ As a member of Academic Council, has been responsible for introduction of New courses required to fulfil the local needs of the region and also the industry sector of the Nation at large.
- ✚ She has been nominated on various administrative positions especially as Member Executive Council of The University and Member of Governing bodies of the affiliated colleges of The University, Head Depts. of Zoology, Aquaculture, Biotechnology and Biochemistry, Additional Director of Admissions and Chief Warden Womens' Hostel, besides also working as Member on different committees of the University.
- ✚ By serving as an Advisor of the Placement, Training and Research Guidance Centre, provides on campus and off campus placements and also involved in outreach programs to the community especially through ALEAP, Govt of India.
- ✚ Her contributions till date have been recognized and State Government has bestowed the Best Teacher Award -2018.

**ABOUT  
RESOURCE PERSON-1**



**Dr. T. VISHWAM**

**Associate Professor of Physics**

**GITAM UNIVERSITY-HYD CAMPUS**



# “Agri Nano Technologies & Dielectric Materials-2021”

## About Dr. T.Vishwam

- **Dr. Vishwam Talloju**, working as an Associate Professor, Department of Physics, GITAM UNIVERSITY-Hyderabad campus.
- He did his Ph.D in Physics from Department of Physics, Indian Institute of Technology-Madras.

### His Areas of Research Interest

- Microwave Dielectric Studies of hydrogen bonded liquids
- Quantum Chemistry and Molecular polarizability calculation
- Liquid crystals

**He have published more than 35 research papers in reputed International and National journals and presented the research output in International and National conferences.**

- Proceeding of International and National conference 6

### External Funded Projects:

DST- ECR- 28 lakhs

SERB- DST - 28 lakhs (Submitted)

### **Awards and Achievements**

- **Best paper award**
- **Subject Matter Expert (Physics)**
- **Best Teacher Award**
- **SAP Award of excellence**
- **Chosen as Associate Faculty**
- **Best paper and poster award**
- **Best Student award**
- Best poet award

*He is guiding Ph. D Students*

### **Administrative details**

- B. Sc/M.Sc. Science Exam Coordinator
- BoS committee member, Department of Physics, GITAM-Hyd Campus
- Anti-ragging and discipline committee member

**He organized several** conferences, symposium, etc.,

**He is a member for several Professional bodies**

***ABOUT  
RESOURCE PERSON-2***



Dr. T.N.V.K.V. Prasad

Principal Scientist

Department of Soil Science

Acharya N.G. Ranga Agricultural University, Tirupathi

## *About Dr. T. N. V. K. V. Prasad*

<b>Name</b>	<b>Dr T.N.V.K.V. PRASAD, PhD., ERF (Australia)</b>
<b>Designation</b>	<b>Principal Scientist (Soil Science), Nanotechnology laboratory, Regional Agricultural Research Station, Acharya N G Ranga Agricultural University, Tirupati – 517502,</b>
<b>Post Doctoral Research</b>	<ul style="list-style-type: none"> <li>➤ <b>Endeavour Research Fellow (ERF) – University of South Australia, Australia -2010 – Nanotechnology</b></li> <li>➤ <b>University of Kentucky, Lexington, USA – 2011- Nanotechnology</b></li> </ul>
<b>Research interests</b>	<ul style="list-style-type: none"> <li>➤ <b>Development of agriculturally beneficial nanoscale materials and study of their behaviour in agro-ecosystems including animal and human health.</b></li> <li>➤ <b>Development of customized nano biosensors for the early detection of biotic and abiotic stresses in plant system</b></li> </ul>
<b>External Funded Projects (Ongoing)</b>	<ul style="list-style-type: none"> <li>➤ <b>ICAR, NASF – 1.2 crores</b></li> <li>➤ <b>DST NanoMission – 30 lacs</b></li> <li>➤ <b>DBT, Govt. of INDIA – 60 lacs</b></li> </ul>
<b>Visiting scientist Assignments:</b>	<ul style="list-style-type: none"> <li>➤ <b>Universiti Malaysia Kelantan, Malaysia-2016</b></li> <li>➤ <b>Kansas State University, USA- 2013</b></li> <li>➤ <b>Tuskegee University, USA – 2013</b></li> <li>➤ <b>University of Florida, USA – 2013</b></li> <li>➤ <b>Johns Hopkins University, USA-2013</b></li> </ul>
<b>Awards and Honors</b>	<ol style="list-style-type: none"> <li>1. Received <b>Endeavour Research Award 2010</b> from the Govt. of Australia – 2010</li> <li>2. Selected for foreign training in nanotechnology in USA in 2011 by Indian Council of Agricultural Research, New Delhi, India</li> <li>3. Received prestigious <b>Dr. A.V. Krishnaiah memorial gold medal award</b> for outstanding researcher in agriculture 2013, ANGRAU, India</li> <li>4. Received <b>AUS AID</b> scholarship for attending Cleanup-2013 held at Melbourne, Australia-2013</li> <li>5. Selected <b>as high level delegate</b> to visit Universiti Malaysia Kelantan to study the agricultural curriculum in UMK, Malaysia- 2016</li> <li>6. Received prestigious <b>Smt.Vallabhaneni Lakshamma Gold medal</b> (First person to receive this award)</li> <li>7. Received <b>Australian Endeavour Awards Ambassador Award - 2018</b> from Australian High Commissioner to INDIA</li> <li>8. Received <b>ASN-YSM Young Scientist award-2017</b> from <b>Academy of Sciences, Malaysia</b></li> <li>9. Received <b>Best Scientist Award – Agricultural Sciences – 70<sup>th</sup></b> Republic day celebrations, Chittoor, Andhra Pradesh</li> <li>10. Received <b>Best Poster Award</b> in Indo-Israel meeting on materials and Nanoscience- 2013</li> <li>11. Received <b>Best presentation award</b> in FinSTA’14 held at SSSHL, Puttaparthi, A.P. – 2014</li> </ol>
<b>Achievements</b>	<ul style="list-style-type: none"> <li>➤ <b>Coined the term “Phyconanotechnology”</b></li> <li>➤ <b>Introduced the concept of “Agrinotechnology” (Application of nanotechnologies in agriculture and allied sciences)</b></li> <li>➤ <b>Established state-of-art nanotechnology laboratory at Institute of Frontier Technology, Regional Agricultural</b></li> </ul>

## “Agri Nano Technologies & Dielectric Materials-2021”

	Research station, Tirupati, India
<b>Patents</b>	<b>03</b> (Filed / sanctioned)
<b>Rs / Genbank submissions</b>	<ul style="list-style-type: none"><li>➤ New isolates from drinking water pipelines : <b>14</b></li><li>➤ New isolates from groundnut growing soils : <b>10</b></li></ul>
<b>Research publications (National / International) - Peers</b>	<ul style="list-style-type: none"><li>➤ Publications (Peers): <b>190</b>; Total no.of abstracts: <b>182</b>;</li><li>➤ Popular articles: <b>12</b>;</li><li>➤ Book chapters : <b>06</b></li></ul>
<b>Students guidance</b>	<ul style="list-style-type: none"><li>➤ <b>Ph.D</b> : 04., <b>M.Sc</b> : 21</li></ul>
<b>Mentor</b>	<ul style="list-style-type: none"><li>➤ <b>National Post Doctoral Fellows :02 (Funded by DST-SERB)</b></li></ul>
<b>Conferences organized</b>	<ul style="list-style-type: none"><li>➤ <b>AGRINANO -2015 , March 11-12, 2015</b></li><li>➤ <b>AGRINANO - 2017, November 2-3, 2017</b></li><li>➤ <b>COAN-2019 – 3<sup>rd</sup> AgriNANO, 2019</b></li></ul>
<b>Society</b>	<ul style="list-style-type: none"><li>➤ <b>Founder Secretary to “Society of Agrinanotechnology”</b></li></ul>

**BRIEF REPORT**

# “Agri Nano Technologies & Dielectric Materials-2021”

## Brief report

The Department of Physics, University College of Science & Technology, Adikavi Nannaya University, Rajamahendravaram organised **National Webinar on “Agri Nano Technologies & Dielectric Materials”**. This prestigious Webinar was inaugurated on August 4th 2021 at 10:30 am by Hon’ble Vice Chancellor **Prof. Mokka Jagannadha Rao**, Adikavi Nannaya University. Convener Remarks has given by the Convenor, **Dr. S. Rajyalakshmi**, Assistant Professor, Department of physics, University College of Science & Technology, AKNU. The Principal **Dr. K. Ramaneswari**, UCST, AKNU has delivered the opening remarks of the program. **T. Karthik Sai Ram** (Alumni-2016-18 Batch), Vidyanjali Degree College, Kaikaluru, Krishna has introduced the Chief Patron, **Prof. Mokka Jagannadha Rao**. Hon’ble Vice Chancellor Prof. Mokka Jagannadha Rao, has given his inaugural address to the gathering. The First Technical session was started with an informative talk by **Dr. T. Vishwam** Associate Professor Department Of Physics, Gitam School of Science, Hyderabad Campus and introduction of **Dr. T. Vishwam** has given by Mrs. Poojitha, MSc (Final), Department of physics, UCST, AKNU. The second technical session was presented by **Dr. TNVKV Prasad**,  
**Principal** **Scientist,**  
**Department** **of** **Soil** **Science**  
Achraya N.G.Ranga Agricultural University, Tirupathi, before that introduction of **Dr. TNVKV Prasad** has given by **N. S. S. L. Gayatri**, MSc., (Final) UCST, ANUR. In these two sessions, queries were given by participants in Chat box and the resource persons answered at their end of the session. Concluding remarks was presented by **Dr. Y. Sushma Priya**, Course Coordinator, UCST, ANUR.

The Webinar received an overwhelming response from the faculty and the young research scientists across the country. It gives immense pleasure to share that the Department has received 250 valuable responses and feedback from various Institutions/Universities of the Country.

“Agri Nano Technologies & Dielectric Materials-2021”



***INAGURAL ADDRESS***

*Inaugural address by Hon'ble Vice Chancellor*

*Prof. Mokka Jagannadha Rao*

Nanotechnology representing a new frontier in modern agriculture is anticipated to become a major thrust in near future by offering potential applications. This integrating approach, i.e., agri-nanotechnology has great potential to cope with global challenges of food production/security, sustainability and climate change. However, despite the potential benefits of nanotechnology in agriculture so far, their relevance has not reached up to the field conditions. The elevating concerns about fate, transport, bioavailability, nanoparticles toxicity and inappropriateness of regulatory framework limit the complete acceptance and inclination to adopt nanotechnologies in agricultural sector.

Integrated Approach of Agri-nanotechnology: Challenges and Future Trends

- (i) Mitigating risk assessment factors (responsible for fate, transport, behavior, bioavailability and toxicity) for alleviating the subsequent toxicity of nanoparticles.
- (ii) Optimizing permissible level of nanoparticles dose within the safety limits by performing dose dependent studies.
- (iii) Adopting realistic approach by designing the experiments in natural habitat and avoiding in vitro assays for accurate interpretation.
- (iv) Most importantly, translating environmental friendly and non-toxic biosynthesized nanoparticles from laboratory to field conditions for agricultural benefits.

**How helpful is nanotechnology in agriculture?**

Nanotechnology has great potential, as it can enhance the quality of life through its applications in various fields like agriculture and the food system. Around the world it has become the future of any nation. But we must be very careful with any new technology to be introduced regarding its possible unforeseen related risks that may come through its positive potential. However, it is also critical for the future of a nation to produce a trained future workforce in nanotechnology. In this process, to inform the public at large about its advantages is the first step; it will result in a tremendous increase in interest and new applications in all the domains will be discovered. There is great potential in nano science and technology in the provision of state-of-the-art solutions for various challenges faced by agriculture and society today and in the future. Climate change, urbanization, sustainable use of natural resources and environmental issues like runoff and accumulation of pesticides and fertilizers are the hot issues for today's agriculture.

Carbon nanoparticles such as **graphene, graphene oxide**, carbon dots, and fullerenes, are used for improved seed germination. Some of the other nanoparticles that are used in agriculture are zinc oxide, copper oxide nanoparticles, and magnetic nanoparticles. Dielectrics are the poor electric conductors (non-ideal insulator), most of the materials including living organisms and most agricultural products can conduct electric currents to some degree, but are still classified as dielectrics. Electrical characteristics of every material are different to each other which are dependent on its dielectric properties. These properties provides the valuable information which helps researchers and engineers to utilize these data into their design or for the purpose of material characterization or for monitoring process quality.

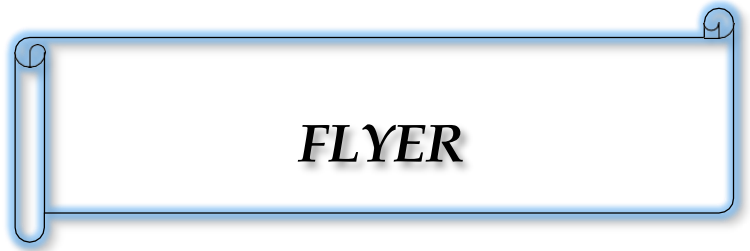
Microwaves are electromagnetic radiation with wavelength ranging from 1 mm to 1 m in free space with a frequency from 300 GHz to 300 MHz, respectively. International agreements regulate the use of the different parts of the spectrum; the frequencies 915 MHz and 2.45 GHz are the most common among those dedicated to power applications for industrial, scientific and medical purposes.

## “Agri Nano Technologies & Dielectric Materials-2021”

Although microwaves have been firstly adopted for communications scope, an increasing attention to microwave heating applications has been gained since World War II. Reasons for this growing interest can be found in the peculiar mechanism for energy transfer: during microwave heating, energy is delivered directly to materials through molecular interactions with electromagnetic field via conversion of electrical field energy into thermal energy. This can allow unique benefits, such as high efficiency of energy conversion and shorter processing times, thus reductions in manufacturing costs thanks to energy saving. Moreover, other effects have been pointed out, such as the possibility to induce new structural properties to irradiate materials (development of new materials) and to apply novel strategies in chemical syntheses (green techniques). Crucial parameters in microwave heating are the dielectric properties of matter; they express the energy coupling of a material with electromagnetic microwave field and, thus, the heating feasibility. On the basis of dielectric properties, microwave devices (applicators) can be adopted in heating operations and optimized working protocols can be used.



“Agri Nano Technologies & Dielectric Materials-2021”



# “Agri Nano Technologies & Dielectric Materials-2021”



**ADIKAVI NANNAYA UNIVERSITY**  
RAJAMAHENDRAVARAM, E.G. Dist. A.P. INDIA

ISO 9001:2015 Certified

**DEPARTMENT OF PHYSICS**  
**NATIONAL WEBINAR**

on

**AGRI NANO TECHNOLOGIES & DIELECTRIC MATERIALS**

4<sup>th</sup> August 2021, Time: 10:00 AM

**Chief Patron**



**Prof. Mokka Jagannadha Rao**

Hon'ble Vice Chancellor  
Adikavi Nannaya University  
Rajamahendravaram

**Patron**



**Prof. T. Ashok**

Registrar  
Adikavi Nannaya University  
Rajamahendravaram

**Co-Patron**



**Dr. K. Ramaneswari**

Principal, UCST  
Adikavi Nannaya University  
Rajamahendravaram

**Speakers**

**Topic**



**Dr. T.N.V.K.V. Prasad**

Principal Scientist  
Department of Soil Science  
Acharya N.G.Ranga Agricultural University  
Tirupathi

Agri Nano Technologies



**Dr. T. Vishwam**

Associate Professor  
Department of Physics  
Gitam School of Science  
Hyderabad Campus

Dielectric materials and their  
characterization studies in the  
microwave frequency region

Who can attend : Research Scholars, Faculty, Students & Academicians

**Registration Free**

Mode of  
Delivery  
Live  
Web Session

WEBLINK :

Click here

<https://forms.gle/YCGHwRPkz1ySat6P6>

Webinar Link will be sent to your registered email

\*\*E -Certificate will be issued to everyone based on the registration and attendance of the Sessions

**CONVENER**

**Dr. S. Rajyalakshmi**

Department of Physics  
Adikavi Nannaya University  
Phone: 9290402635  
e-mail: sri.phy@aknu.edu.in

**Co-Conveners**

**1. Dr. Y. SushmaPriya**  
(Course Coordinator)

**2. Mr. V. Rajasekhar**

Quan “TEAM” Physics Alumni Association  
Adikavi Nannaya University

“Agri Nano Technologies & Dielectric Materials-2021”



***PROGRAM SHEET***

# “Agri Nano Technologies & Dielectric Materials-2021”



**ADIKAVI NANNAYA UNIVERSITY**

ఆదికవి నన్నయ విశ్వవిద్యాలయం

RAJAMAL ENDRAVARAM, ANDHRA PRADESH INDIA - 523256

ISO 9001:2015 Certified



**National Webinar**

on

**“Agri Nano Technologies and Dielectric materials”**

**4<sup>th</sup> August 2021, 10:00 am**

**Program**

<b>Welcome</b>	<b>Dr. S. Rajyalakshmi</b> Dept. of Physics, UCST, ANUR
<b>Opening Remarks</b>	<b>Dr. K. Ramaneswari</b> Principal, UCST, ANUR
<b>Message by Registrar</b>	<b>Prof. T. Ashok</b> Adikavi Nannaya university
<b>Introduction of VC</b>	<b>T. Karthik Sai Ram</b> (Alumni-2016-18 Batch) Vidyanjali Degree College, Kaikaluru, Krishna
<b>Inaugural Address</b>	<b>Prof. Mokka Jagannadha Rao,</b> Hon'ble Vice Chancellor, ANUR
<b>Introduction of Dr. TNVKV Prasad</b>	<b>N. S. S. L. Gayatri</b> MSc., (Final) UCST, ANUR
<b>Speaker Talk</b>	<b>Dr. TNVKV Prasad</b> Principal Scientist Department of Soil Science Acharya N.G.Ranga Agricultural University, Tirupathi
<b>Introduction of Dr. T. Vishwam</b>	<b>Mr. V. Rajasekhar</b> Dept. of Physics, UCST, ANUR
<b>Speaker Talk</b>	<b>Dr. T. Vishwam</b> Associate Professor Department Of Physics Gitam School of Science, Hyderabad Campus
<b>Concluding Remarks</b>	<b>Dr. Y. Sushma Priya</b> Course Coordinator, UCST, ANUR

“Agri Nano Technologies & Dielectric Materials-2021”



***ABSTRACT/FULL PAPER***

**“Dielectric Materials & their characterization studies in the  
microwave frequency region”**

**Dr.T. Vishwam**

*Abstract*


Microwaves are electromagnetic radiation with wavelength ranging from 1 mm to 1 m in free space with a frequency from 300 GHz to 300 MHz, respectively. International agreements regulate the use of the different parts of the spectrum; the frequencies 915 MHz and 2.45 GHz are the most common among those dedicated to power applications for industrial, scientific and medical purposes. Although microwaves have been firstly adopted for communications scope, an increasing attention to microwave heating applications has been gained since World War II. Reasons for this growing interest can be found in the peculiar mechanism for energy transfer: during microwave heating, energy is delivered directly to materials through molecular interactions with electromagnetic field via conversion of electrical field energy into thermal energy.

# "Agri Nano Technologies & Dielectric Materials-2021"

## Full Paper

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



- **Fundamentals of Dielectrics Materials**
  - ✓ Dipole moments
  - ✓ Types of Polarizability
  - ✓ Frequency dependence of Polarizability
  - ✓ Why Microwave Frequencies?
  - ✓ What are the parameters can be studied
  - ✓ Question for you
- **Frequency Characterization studies**
  - ✓ Low frequency region
  - ✓ Microwave frequency region
  - ✓ Relaxation time plots
- **Dielectric relaxation studies of the biological liquids**

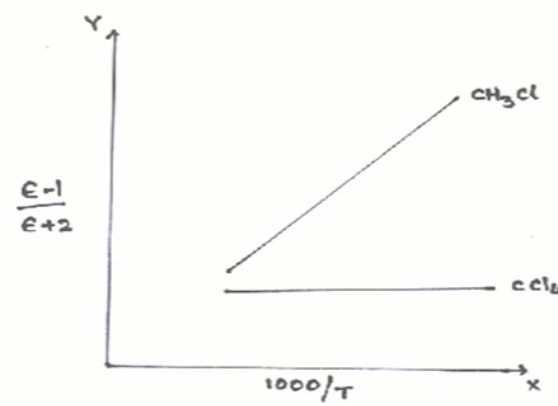
00:32:52 / 02:43:48

Speed

Dr. Vishwam T

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



Dielectric constant variation with respective temperature

00:43:00 / 02:43:48

Speed

Dr. Vishwam T



# "Agri Nano Technologies & Dielectric Materials-2021"

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view

**For Solid samples ( Von Hippel Method)**

Power supply → klystron → Isolator → Attn → Frequency meter → Slide Tuner → Slotted section → E-bend → liquid

Micro voltmeter → Amplifier → Slotted section

probe of standing – wave indicator      dielectric sample

to source      Δx      Δx<sub>s</sub>      Z<sub>0</sub>      Z<sub>s</sub>      short circuit

01:08:48 / 02:43:48      Speed

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view

- The dielectric constant is related to P by
 
$$\epsilon_0 (\epsilon_r - 1) E = P \Rightarrow \epsilon_r = 1 + \frac{Ne^2}{m\omega^2 \epsilon_0} \rightarrow \text{Plasma frequency } \left( \omega_0 = \frac{Ne^2}{m\epsilon_0} \right)$$
- Then  $n^{*2} = \epsilon_r \Rightarrow n^{*2} = 1 - \frac{\omega_0^2}{\omega^2}$
- Case 1: Low frequency**  $\omega < \omega_0$   
then real part of  $n^*$  is zero
- Reflectivity  $R = \frac{(n-1)^2 + k^2}{(n+1)^2 + k^2} = 1$

For frequencies very much below the plasma frequency, the reflectivity's of metals is 1 i.e., 100 % reflectivity

- Case 2: High frequencies**  $\omega > \omega_0$ 
  - $n^*$  is positive and less than 1 and reflectivity value is small and transmittivity is high
  - since  $R+T=1$

For frequencies above than plasma frequency transmittivity is high

00:44:32 / 02:43:48      Speed



# “Agri Nano Technologies & Dielectric Materials-2021”

zoom

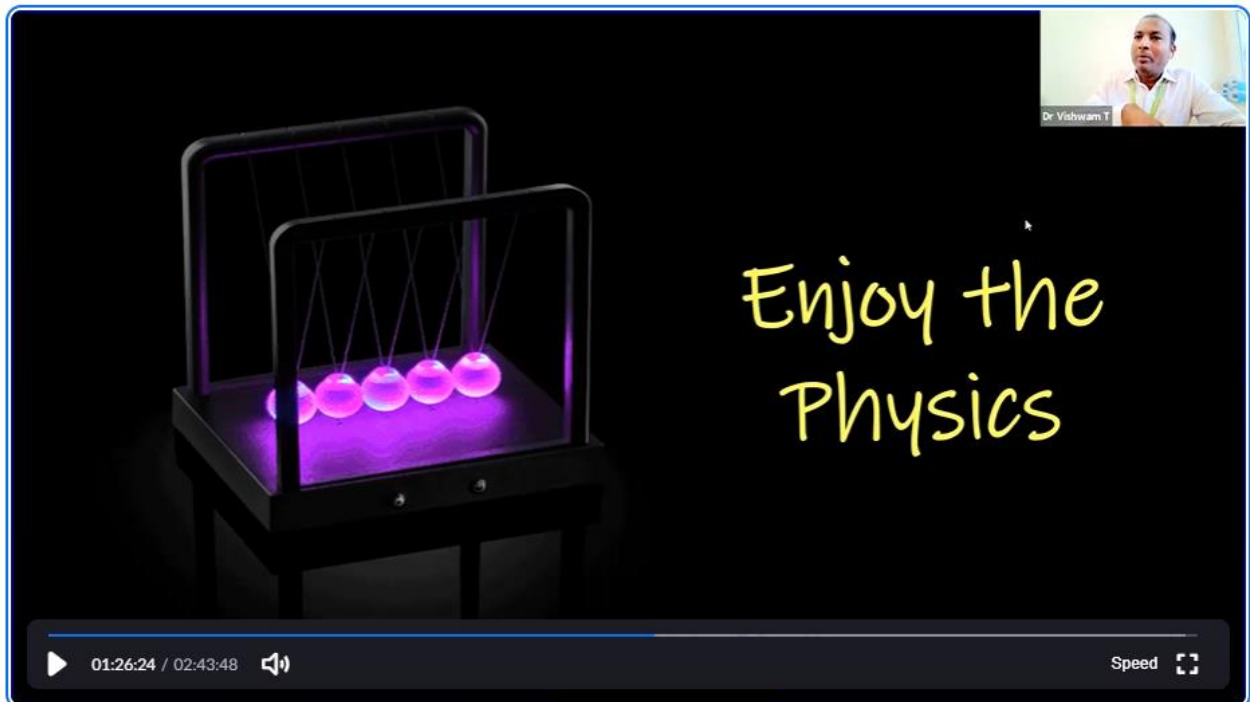
Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



A Zoom video player interface showing a speaker in a laboratory setting. The speaker, Dr. Vishwam T, is wearing a light blue shirt and a green lanyard. He is holding a yellow object and gesturing with his hands. The background includes a microwave, a green bottle, and framed posters on the wall. The video player controls at the bottom show a play button, a progress bar at 01:03:04 / 02:43:48, a volume icon, and a speed control icon.

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



A Zoom video player interface showing a Newton's cradle with five silver spheres on a black stand. The spheres are illuminated with a purple glow. To the right of the cradle, the text "Enjoy the Physics" is written in a yellow, handwritten font. The video player controls at the bottom show a play button, a progress bar at 01:26:24 / 02:43:48, a volume icon, and a speed control icon.

“Agri Nano Technologies & Dielectric Materials-2021”



***ABSTRACT / FULL PAPER***

**“Agrinano Technologies”**

**Dr. T. N. V. K. V. Parsad**

**Abstract**

The integrating approach, i.e., agri-nanotechnology has great potential to cope with global challenges of food production/security, sustainability and climate change. However, despite the potential benefits of nanotechnology in agriculture so far, their relevance has not reached up to the field conditions. The elevating concerns about fate, transport, bioavailability, nanoparticles toxicity and inappropriateness of regulatory framework limit the complete acceptance.

# “Agri Nano Technologies & Dielectric Materials-2021”

## Full Paper

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



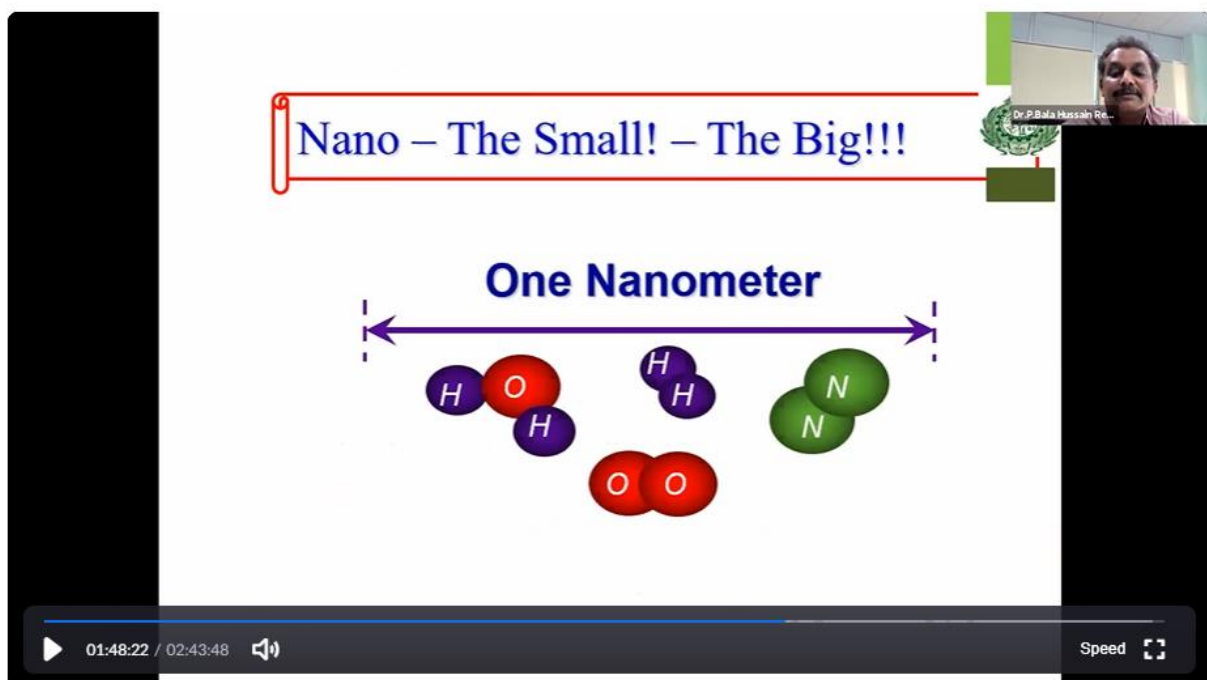
The starting point .....

01:42:27 / 02:43:48

Speed

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



Nano – The Small! – The Big!!!

One Nanometer

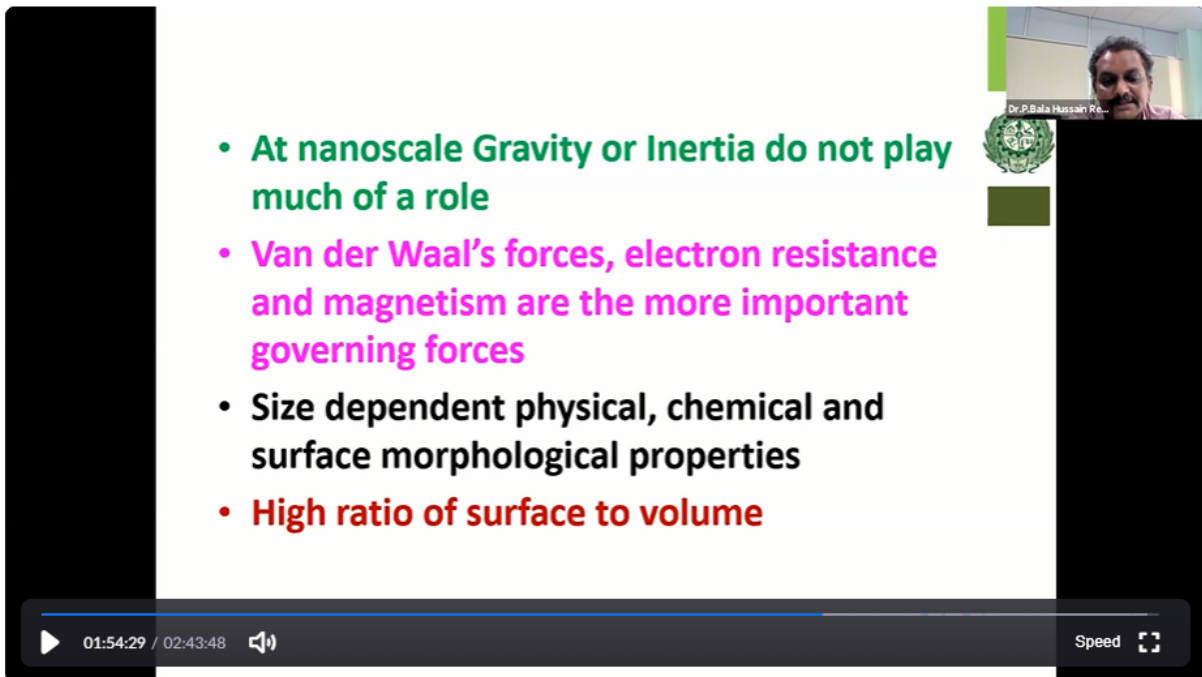
01:48:22 / 02:43:48

Speed

# “Agri Nano Technologies & Dielectric Materials-2021”

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



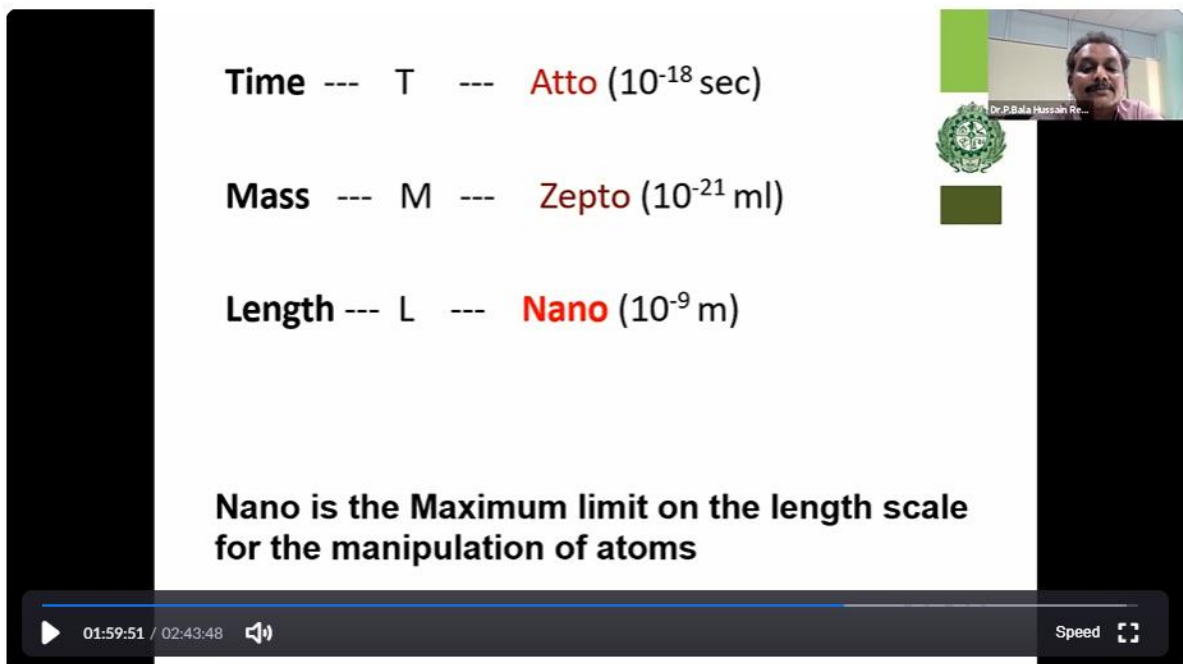
Dr. P. Bala Hassan Re...

- **At nanoscale Gravity or Inertia do not play much of a role**
- **Van der Waal's forces, electron resistance and magnetism are the more important governing forces**
- **Size dependent physical, chemical and surface morphological properties**
- **High ratio of surface to volume**

01:54:29 / 02:43:48 Speed

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



Dr. P. Bala Hassan Re...

**Time --- T --- Atto ( $10^{-18}$  sec)**

**Mass --- M --- Zepto ( $10^{-21}$  ml)**

**Length --- L --- Nano ( $10^{-9}$  m)**

**Nano is the Maximum limit on the length scale for the manipulation of atoms**

01:59:51 / 02:43:48 Speed

# “Agri Nano Technologies & Dielectric Materials-2021”

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view

## Some facts about Indian agriculture .....

- Indian food industry is of US \$ 250 billion
- 2.2 % of total production processed
- Cold storage facility available only 10% of produce
- 2.2 % of fruits processed
- 35% of milk processed
- 6% of poultry processed
- Value addition is only 20%
- **Cost of wastage is 6 times amount spent on subsidy**
- Rising income will lift 291 million out of poverty
- Create 583 million strong middle class
- Share of household expenditure on food and beverages would decline from 34% in 2015 to 25% in 2025
- **Food will remain the largest consumption category**



02:03:51 / 02:43:48

Speed

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view

## Field scale evaluation of nanoscale materials as nutrients on different crops

Nanomaterials	Crop	Method	Significant results achieved
ZnO, CaO	Groundnut	Foliar spray	10-18% yield enhanced (@2g /15 L)
ZnO	Rice	Foliar spray	10% yield enhanced (@2 g/10 L)
ZnO	Maize	Foliar spray	14% yield enhanced (@400 ppm)
ZnO	Blackgram	Foliar spray	9-10% yield enhanced (@2 g/10 L)
ZnO	Greengram	Foliar spray	8% yield enhanced (@2 g/10 L)
ZnO, Iron	Sugarcane	Foliar spray	Zinc and iron content increased in juice
ZnO, Iron	Fingermillet	Foliar spray & Seed priming	8% yield enhanced with seed priming@50 ppm and @1000 ppm foliar spray
ZnO, MgO, CaO	Sweet sorghum	Foliar spray	22% yield enhanced @ 500 ppm Brix percent increased to 18%
ZnO	Cabbage	Foliar spray	10 % yield enhanced (@150 ppm)
ZnO	Cauliflower	Foliar spray	10 % yield enhanced (@150 ppm)
ZnO, CaO, SiO2	Chilli	Foliar spray	15 % yield enhanced (@250 ppm of zinc)
ZnO, MnO, Iron	Sweet orange	Foliar spray	20% yield enhanced (@ 200 ppm)



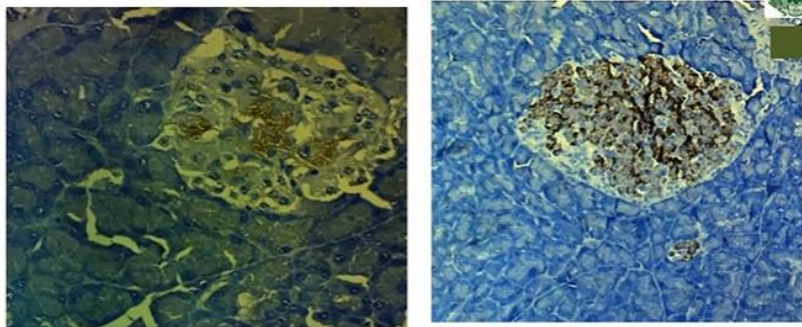
02:17:14 / 02:43:48

Speed

# "Agri Nano Technologies & Dielectric Materials-2021"

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



Dr. P. Bala Hussain Re...

**Group V: Note the positive reaction for insulin**

**Group VI: Note the positive reaction for insulin with increased intensity of staining than Group V**

02:23:21 / 02:43:48

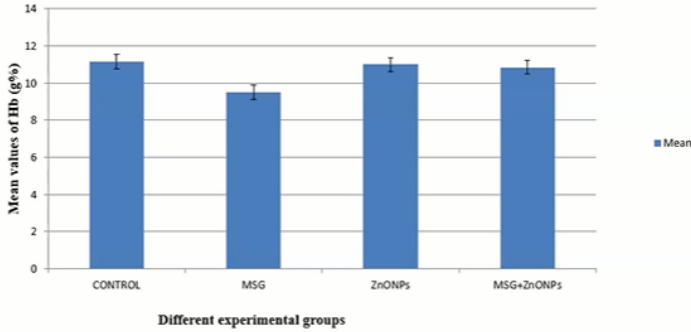
Speed

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view

## HEMOGLOBIN

Mean values of Hemoglobin (g%) in rats of different experimental groups



Experimental Group	Mean values of HB (g%)
CONTROL	~11.2
MSG	~9.5
ZnONPs	~11.0
MSG+ZnONPs	~10.8

02:28:54 / 02:43:48

Speed



# "Agri Nano Technologies & Dielectric Materials-2021"

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view

## Nano Blossom..... First ever NANO product from ANGRAU

**NANO Blossom**  
Great Treat...

**ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY**  
REGIONAL AGRICULTURAL RESEARCH STATION  
Tirupati - 522 302, District Srisailam, A.P.

Flowers are an essential part for aesthetically pleasing and increase of food life. To make the flowers abundant and long, it is essential to use nano technology based products. Nano Blossom is a nanotechnology based product for increasing the yield of flowers. It is a green and safe product for increasing the yield of flowers. It is a green and safe product for increasing the yield of flowers. It is a green and safe product for increasing the yield of flowers.

S1 - Control - Water

S2 - Nano Blossom 2

A nanotechnology based product to increase the yield of flowers

Dr. P. Bala Hussain Reddy

02:30:26 / 02:43:48

Speed



“Agri Nano Technologies & Dielectric Materials-2021”



***PARTICIPANTS LIST***

## “Agri Nano Technologies & Dielectric Materials-2021”

### List of Participants:

The number of participants for registrations was **225** from different organizations.

S.No	Full Name	Organization
1	D.B.N. Murthy	MBA
2	Dinesh Gopal Dommeti	Adikavi Nannaya University
3	Dr Subhan Ali MD	Rayalaseema University Kurnool
4	Dr J MANJUNATH	ANGRAU
5	KURUVA NAGARAJU	S V AGRICULTURAL COLLEGE TIRUPATI CHITTOOR DISTRICT ANDHRA PRADESH STATE INDIA
6	Y Sandhya Rani	Agricultural Research Station, Vizianagaram
7	K R.Tagore	Agricultural Research Station (ANGRAU), Perumallapalle, Tirupati-517 505 Chittoor Dt., A.P.
8	Meduri Singa Rao	ANGRAU, (Retd)
9	Hema Kandru	Acharya N.G. Ranga Agricultural University, Lam,Guntur
10	DASARI GOPAL	Acharya NG Ranga Agricultural University, Guntur
11	K. Phani Kumar	ANGRAU
12	Sujatha vemana	Agricultural research station peddapuram
13	P.MAHESWARA REDDY	RARS, TIRUPATI, ANGRAU
14	Dr. I.Paramasiva	Agricultural research station
15	Dr. Koneru Lakshman	Agricultural College, Bapatla -ANGRAU
16	ADHIKARI PRASANTHI	A.N.G.R.A.U.
17	Dr. B. VAJANTHA	Agricultural Research Station, Perumallapalle, ANGRAU, Andhra Pradesh
18	Pampana Hema Durga Jyothi	Adikavi Nannaya University
19	Yarra vijaya manga lakshmi	Adikavi nannaya university
20	Dr. K JYOTHI	PR Govt. College (A) Kakinada
21	GORRELA SAI DURGA PRASAD	ADIKAVI NANNAYA UNIVERSITY
22	NAGAM PAVANKUMAR	Srichaitanya junior college
23	MUNAKALA SUSHMAREDDI	Dr. B.R. Ambedkar University
24	B.Vijaya Bharatha Lakshmi	Smt kandukuri Rajyalakshmi College for Women
25	C V PRASAD	S K R COLLEGE FOR WOMEN, RAJAHMUNDRY
26	NALLA.KRISHNA VEERA SWAMI NEERAJA	ADI KAVI NANNAYA UNIVERSITY
27	Vanacharla Aswani Satya Sree	Adikavi Nannaya University

## “Agri Nano Technologies & Dilectric Materials-2021”

28	BETHA VEERA VAMSI KRISHNA	Adikavi Nannaya University Campus,Tadepalligudem
29	Rayudu.Satya Sravani	Adikavi Nannaya University
30	KALEPU V MALLIKARJUNA VARA KUMAR	ADIKAVI NANNAYA UNIVERSITY
31	T N KAVITHA	Sri Chandrasekharendra Saraswathi viswa Mahavidyalaya
32	G. L. Naga Sudha	K.G.R.L PG College (A), Bhimavaram
33	Lakshmi latha kondeti	Smt. Jastibullemmai degree college,rjy
34	SAMUEL TALARI	GMR Institute of Technology, Rajam
35	Komali.Amrutha karuna	Smt.jasti bullemmai degree college
36	NEMALA SRINU	Adikavi Nannaya University
37	G. A. Kiran Kumar	Hanna college of Education
38	GEDDA SATYANNARAYANA	ADIKAVINANNAYA UNIVERSITY CAMPUS,TADEPALLIGUDEM
39	Dr.Ch.V.Padma Rao	Adikavi Nannaya University
40	Gayathri.kandhukuri	AKNU Campus Tadepalligudem
41	P Praveen Siva Ram	Tirumala jr college
42	KANCHARLA AJAY KUMAR	GDC AVANIGADDA
43	Teki.Hema Sai Sri	Smt.Jasti Bullemmai women's college
44	Chalumuri. Swathi	Jasti bullemmai degree college
45	Deviprasanna.midde	V.S.M
46	Darla. Mani Gayathri	Smt.Jastibullamai degree college
47	Mamidi rani	Student
48	SURAMPUDI.venkata sai poojitha	SMT.Jasti bullemmai degree college
49	Varagogula Jyothsna	Smt.Jasthibullamai Degree College
50	Sekhar pandrinki	Adikavi nannaya university Tadepalli Gudam
51	S.Anjal Queen	Mother Teresa Women's University
52	R.Geetha madhuri	Smt.jasthi bullamie women's degree college
53	Kudupudi Uma maheswari	Smt .jastibullamai degree college
54	Mr.V.MAARISAMY	KALVI MATRIC HR.SEC.SCHOOL
55	P.Balaji	Muthurangam government arts college
56	Muthabathula Prajna	Adikavi Nannaya University
57	Dr. KALIDINDI V S N RAJU	Adikavi Nannaya University, Rajamundry, E.G.Dt.,A.P.
58	P.kusuma datta Lakshmi	Adhi kavi nannaya University
59	PILLELLI S KISHORE KUMAR	Hanna college of Education
60	Aarathi G	K.Ramakrishnan College of Engineering
61	Nallajani Devika	Set. Jasti bullemmai Degree college
62	Dr. A.VENKATRAJ	Dr.N.G.P. INSTITUTE OF TECHNOLOGY
63	Koppiseti. Bhavana	Smt. Jasthi bulleamma degree college
64	P.S.R.VIDYASAGAR	ADIKAVI NANNAYA UNIVERSITY
65	Mr.A.Ubaitulla Baig	C.Abdul Hakeem College of Engineering and Technology
66	SIRIPADAM REVATHI	Jasti Bullemmai Degree college
67	Umamaheswari Amarthi	Vs laxmi womens college
68	N Maramu	Kakatiya institute of technology and science warangal
69	Pragada sridevi	Adikavi nannaya university
70	Oduri Sri Satya	Adikavi Nannaya University
71	Dr VVMUPHANEENDRA	ADIKAVI NANNAYA UNIVERSITY
72	Nakka Sandhya Sri supriya	Jasthi bulliammai women's college
73	VINAKOTI RAMAKRISHNA	Adikavi Nannaya University, Rajahmundry.
74	Mrs.G.GOWRI SHANMUGAPRIYA	VRS COLLEGE OF ENGINEERING AND TECHNOLOGY
75	Dr E V SURESH KUMAR	SVKP COLLEGE MARKAPUR
76	Dr P.Saraswathi.	SDGSCollege.Hindupur
77	DR.MYLABATTULA RAMAKRISHNA	SMBTAV&SN DEGREE COLLEGE, VEERAVASARAM, W.G.DT.
78	K.Aruna Kumari	Government degree college for women (A) Guntur
79	N.Raja	Anjalai Ammai - Mahalingam Engineering College
80	REDDI SALINI	Government degree college seethampeta
81	Grande Kusuma Priya	Government College (A) Anantapur
82	Dr J V V N KESAVA RAO	Government College Autonomous Ananthapur
83	Nammi anusha	M.s.c

“Agri Nano Technologies & Dielectric Materials-2021”

84	K.Subrahmanya Sarma	MVN JS & RVR College, Malikipuram
85	VADLAMUDI HANUMANTHARAO	Government Degree College, Ramachandrapuram
86	B.Padmavathi Bai	S.N.S.R.Degree College, Velgode, Kurnool(Dt)
87	SRINIDHI BHOGADI	K.G.R.L. COLLEGE
88	V. MEENAKUMARI	guest faculty
89	VOBHILINENI SRINIVASA RAO	Government Degree College, Ramachandrapuram
90	Kch Ganeswari	College
91	Kammili Srilekha	Ch.S.D.St.Theresa's College for Women (A), Eluru
92	Dr.A.Nirmala Jyothsna	Ch.S.D.St.Theresas College for Women (A),Eluru
93	Goteti Naga Satya Neelima	Ch.S.D.St.Theresa's College For Women (A), Eluru
94	Dr Chilaka Anitha	Government College for women(A),Guntur
95	Dr CH MURALI KRISHNA	Adikavi Nannaya University
96	Dr. K. SUDHAKAR	Government Degree College Tiruvuru
97	Surarapu Devi Likshmi	Mpcs
98	Mrs.Pujari.Anusha	Ch.S.D.St Theresa's college for women(A), Eluru
99	J CHALAM PRASAD	GOVERNMENT DEGREE COLLEGE TIRUVURU
100	Abdul Sumayya Mubeena	Aknu campus Tadepalligudem
101	M.REVATHY	Mother Teresa Women's University
102	D.Geethja	Madras Institute of Technology, Chennai-44
103	Ramajothi Jayaraman	Anna University
104	RAMVINOBA J S	UNIVERSITY COLLEGE OF ENGINEERING BIT CAMPUS ANNA UNIVERSITY TIRUCHIRAPPALLI
105	M VISHNUWARAN	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
106	Dr. Jagadish Kumar G.	SRM IST
107	Krishnakumar Muthusamy	University College of Engineering-Dindigul ( A Constituent College of Anna University Chennai)
108	HELEN SELVI M.	Chidabaram pillai college for women, Tiruchirappalli.
109	Mr. S. ALAGURAJA	THIAGARAJAR COLLEGE, MADURAI-625009
110	Indhu.A.R	PSG-IAS
111	Dr.K.Parimala	Nehru Memorial College at Trichy
112	Dr. M. REVATHI	The Madura College, Madurai
113	G.ELANKUMARAN	Thiru.Vi.Ka Govt Arts College,Thiruvarur.
114	V.Sasirekha	Avinashilingam Institute for Home Science and Higher Education for Women
115	Dr S Sundaram	Nehru Institute of Technology
116	Z. Nawas Sherif	Madurai Kamaraj University
117	Dr. A. J. NAGAJOTHI	Mangarayarkarasi College of Arts and Science for Women
118	N.THIRUMOORTHY	B.Sc.,
119	Dr.N.NARAYANA MOORTHY	Saraswathi Narayanan College
120	PRAVINRAJ SELVARAJ	National Changhua University of Education-Taiwan.
121	Mediseti lakshmi sathvika	pragati degree college
122	Dr.Girish Joshi	ICT MARJ
123	Dr. T. Thilagavathi	Government college for women (A), Kumbakonam
124	Mr. RAMESH. P	Nehru Memorial College, Puthanampatti
125	S.Rama krishnan	The Maduracollege
126	.TAMILVEERAPANDIYAN	PERIYAR UNIVERSITY, SALEM -11
127	Jyothi K R	RYM Engineering College Ballari
128	Akhin VP	College of engineering Guindy
129	B. Nisha	MIT Campus, Anna University, Chennai
130	Sindhu Tilak	Siddaganga Institute of Technology
131	Vishwanath T	Mangalore University
132	PROF. PORIA KISHORKUMAR C	VEER NARMAD SOUTH GUJARAT UNIVERSITY,SURAT
133	Pavithra V Ravi	Sri Ramakrishna Engineering College
134	Mr.K.BHARANIDHARAN	VIT CHENNAI
135	Dr.M.Rajkumar	PSG College of Arts and Science
136	SUDHARSANA CHINNAMAYAN	MADURAI KAMARAJ UNIVERSITY
137	R. UMADEVI	Aditanar College of Arts and Science, Tiruchendur
138	A. ANTONY CHRISTIAN RAJA	THE M D T HINDU COLLEGE, TIRUNELVELI
139	M.PRAKASH	SRM IST RAMAPURAM

## “Agri Nano Technologies & Dielectric Materials-2021”

140	steffi Alexander	Sri ramakrishna engineering college
141	Dr.K.PRABHA	Mother Teresa Women's University, Kodaikanal
142	Indhumathi s	Sri rRamakrishna Engineering College
143	Yuvaraja Raji	University of Madras
144	Thrisha K	Ngm College
145	Dr.S.SASIKALA	Vivekananda college of arts and science for women, sirkali.
146	S.SASIKALA	Government Arts College, Tiruvannamalai
147	Gowsalya V	Research Scholar
148	Dr. EUNICE JERUSHA	R. M. D. ENGINEERING COLLEGE, KAVARAI PETTAI
149	Ms. S.PUSHPALATHA	Nehru Memorial College( Autonomous), Puthanampatti-07
150	SELVAKUMAR	DR.JAKIR HUSSAIN COLLEGE
151	M.Kumaresan	Karpagam Academy of Higher Education
152	Mohan Kumar Satyavarapu	Government Degree College, Ravulapalem
153	Dr. R. Ramamoorthy	FC&RI, Tamil Nadu Agricultural University, Mettupalayam
154	Sivakami G	Govt Arts College, Karur
155	SAI SRI LAKSHMI GAYATRI NAGULAPALLI	ADIKAVI NANNAYA UNIVERSITY
156	T. BALU	Aditanar College of Arts and Science
157	M.Anchana	Marudhar Kesari Jain College for Women, Vaniyambadi
158	K P RAGHAVENDRA	MallaReddy Engineering College-Autonomous
159	Prasad Tnvkv	ANGRAU
160	Indhu Navetha.C	Sarah Tucker College
161	SIVAPRAKASH S	<a href="#">M.Sc</a>
162	B V Rama	Au
163	Dr. B. Vikram Babu	Aditya Engineering College (A), Kakinada
164	DrMVKMehar	PRGovt.College(A),kakinada
165	Dr. Suneetha Rani Jupudi	P. B. Siddhartha College of Arts&Science, Vijayawada
166	PRAVEENA.D	SRM Valliammai Engineering College
167	Dr. A. Jegatha christy	Jayaraj annapackiam college for women Periyakulam
168	Dr. SUBBARAO MATHANGI	Dr. B.R. Ambedkar University
169	Dr.B.Helina	St.Xavier's College, Palayamkottai-2.
170	E.Jegalakshmi	Mother Teresa Women's University, Kodaikanal
171	Kannan M R	SRM Institute of Science and Technology
172	Pallepamu Tirupathi Rao	Adhikavi nannaya University rajamahendravaram
173	SHIVAPRASAD N	Sri Jayachamarajendra College of Engineering, JSSSTU
174	DrV.Dharmalingam	Mahendra Engineering College
175	Dr. GANAPATHI RAO GAJULA	Sree Vidyanikethan Engineering College
176	N.B.MERCY EBEN	Sarah Tucker College
177	K SANTOSH	CHRIST University
178	PRABHAKARAN C	ANNA UNIVERSITY
179	MATHARASI A	LOYOLA COLLEGE
180	Naveen Kumar K	V.S.K P.G Courses.Bhimavaram
181	D Vijayalakshmi	Anna University
182	Anbazhakan K	Bannari Amman institute of Technology, Sathyamangalam
183	CHINNADHURAI.S	Bwda Arts & Science College
184	K. Vijaya Lakshmi	Govt. College (A), Anantapuramu
185	Dr.N.S.Minimala	Saraswathi Narayanan College, perungudi, Madurai-22
186	surya selvaraj	srmist
187	Piyushkumar Pravinsinh Rajput	Sardar Patel University, Vallabh Vidyanagar
188	Vaishnavi J Darji	Sardar Patel Univeristy
189	Dr. S. Fathhoor Rabbani	C. Abdul Hakeem College, Melvisharam
190	Anitta	Alagappa University
191	Mamidiseti Gangadhara Rao	Sri Surya Degree College
192	Dr.V.RAGAVENDRAN	SCSVMV DEEMED UNIVERSITY
193	Dr. S. Karpagavalli	Govindammal Aditanar College for Women, Tiruchendur
194	JINITHA C G	Holy Cross College (Autonomous), Nagercoil - 629004
195	JAYANTA VISHNU BHARATI	INSTITUTE OF CHEMICAL TECHNOLOGY, ICT- IOCB, BHUBANESWAR, ODISHA
196	Dr. P. MANIKANDAN	Krishnasamy College of Engineering and Technology,

“Agri Nano Technologies & Dielectric Materials-2021”

		Cuddalore
197	Mr.B. SURENDAR	SRM institute of science and technology
198	N. Suresh	Sri Vidya Mandir Arts and Science
199	SHIVPAL YADAV	University of Allahabad
200	R.SELVAPRIYA	AVINASHILINGAM INSITITUTE FOR HOME SCIENCE AND HIGHER EDUCATION FOR WOMEN
201	VINOTHKUMAR LOURDHUSAMY	NATIONAL CHANGHUA UNIVERSITY OF EDUCATION, TAIWAN
202	Mrs. M. MUTHUPRIYA	Govindammal Aditanar College For Women, Tiruchendur
203	Kutafale Puja Dhuraji	CSIR-NGRI, Uppal Road Hyderabad.
204	Dr. J.N. KIRAN	VFSTR DEEMED TO BE UNIVERSITY
205	AJITH A	ANNAMALAI UNIVERSITY
206	Dr. P. Maheswari	VISTAS
207	SUMATHI P	St.Antony's College of Arts and Sciences for Women
208	P. Arockia Michael Mercy	Arulanandar college
209	ARUN RAJ R S	BISHOP MOORE COLLEGE, MAVELIKARA
210	Aruna Joseph	Bishop Moore college
211	J.PRABHA	Anna University
212	Dr. Kotla Revathi	Adikavi Nannaya University
213	P.Sai Madhuri	Good
214	BEERAM SIVA KRISHNA	AdiKavi Nannayya University
215	Nadhiya k	Sri Ramakrishna Engineering college
216	SUNKARA NAGENDRA KISHORE	Spruha Psychology Alumni Association
217	RAYUDU SURYA SUNDAR	ZPP High School SAMPATHNAGARAM
218	V V S KUMAR KHANDAVILLI	PRIVATE
219	M V RAMAKANTH	APSWREIS, AMARAVATHI
220	Selvarajan P	Aditanar College of Arts and Science, Tiruchendur
221	SESETTI ANIL KUMAR	Zphs
222	Santha kumar	Klr degree & Pg college palvoncha
223	SIVA KRISHNA BEERAM	KLR COLLEGE OF ENGINEERING AND TECHNOLOGY
224	P VAMSIKRISHNA	MALLAREDDY ENGINEERING COLLEGE (AUTONOMOUS)
225	Chowdary Aswini	KGRL PG College(A), Bhimavaram

“Agri Nano Technologies & Dielectric Materials-2021”



# “Agri Nano Technologies & Dielectric Materials-2021”

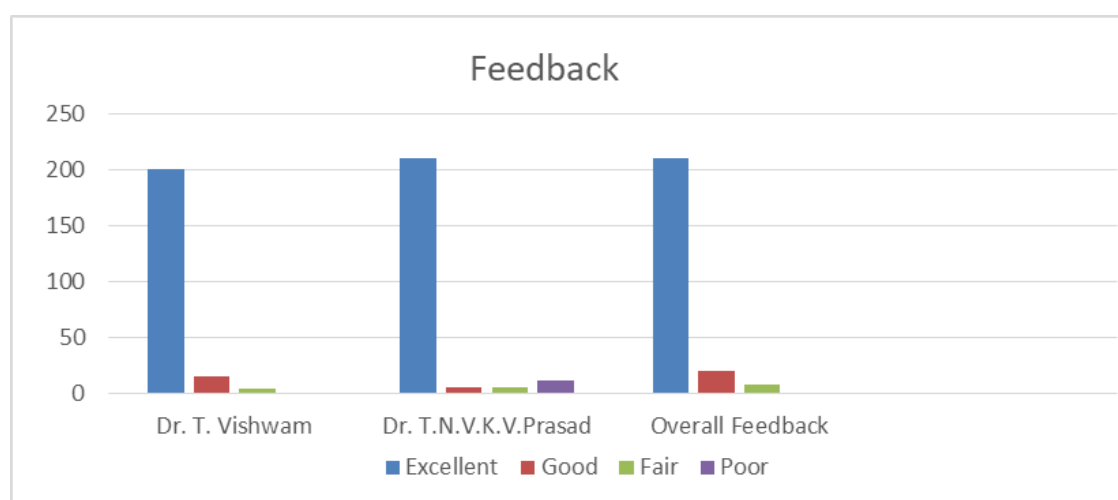
## Feedback

As the feedback form is linked with the automatic generation of e-Certificates, Participants who faced overlapping issues in their certificates, submitted the form again.

**So, the responses were finally 220**

How do we find the content of the session?

FEEDBACK	EXCELLEN T	GOO D	FAIR	POO R
DR. T. Vishwam	20 0	15	04	0 1
Dr. T.N.V.K.V. Prasad	21 0	05	05	0 0
OVERALL FEEDBACK	21 0	20	08	0 1





“Agri Nano Technologies & Dielectric Materials-2021”



***E-CERTIFICATE***

“Agri Nano Technologies & Dielectric Materials-2021”



**ADIKAVI NANNAYA UNIVERSITY**  
RAJAMAHENDRAVARAM, E.G. Dist. A.P. INDIA  
**DEPARTMENT OF PHYSICS**

**CERTIFICATE**

Dr / Mrs. / Mr. ....

from ..... has participated

in the one day National Webinar on “ **AGRINANOTECHNOLOGIES & DIELECTRIC MATERIALS** ”

Organized by the Department of Physics, University College of Science and Technology ANUR,

Rajamahendravaram on 4<sup>th</sup> August 2021, on a virtual platform.

*S. Rajyalakshmi*

**Dr. S.Rajya Lakshmi**  
Convener  
Department of Physics  
ANUR

*K. Rameswari*

**Dr. K.Ramaneswari**  
Principal, UCST  
ANUR

*T. Ashok*

**Prof. T. Ashok**  
Registrar  
ANUR

# “Agri Nano Technologies & Dielectric Materials-2021”

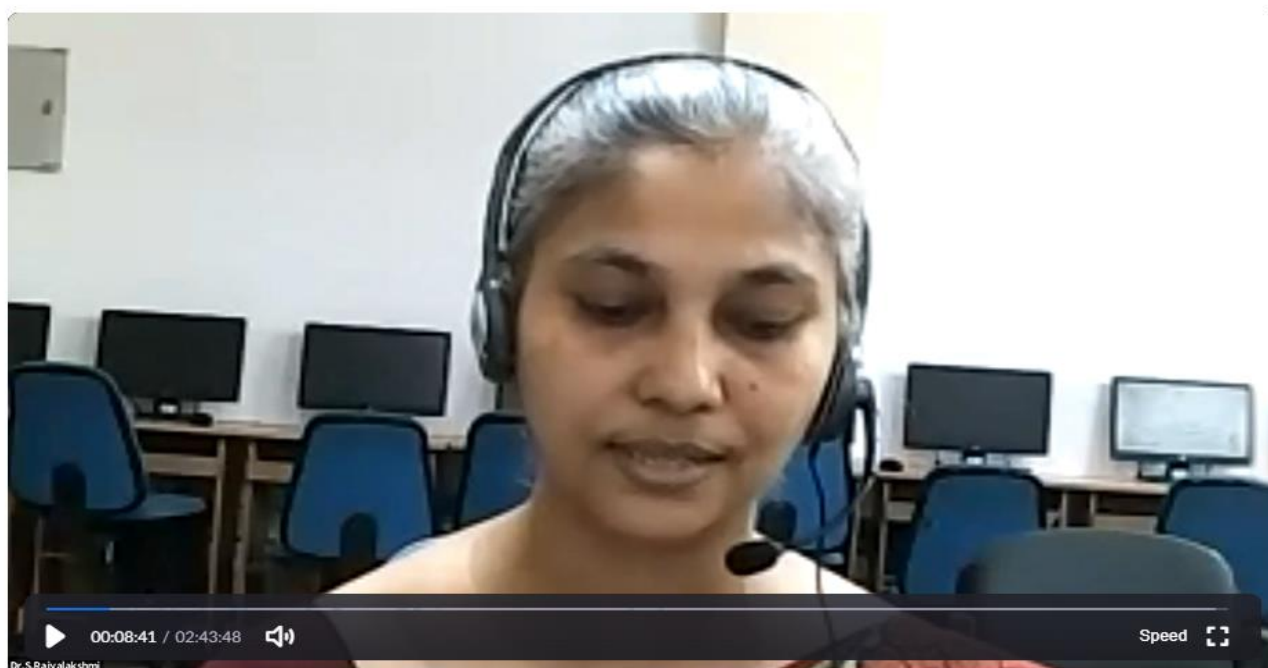
## Photo Gallery Brochure Release



**Convenor, Dr. S. RAJYALAKSHMI Message:**

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



# “Agri Nano Technologies & Dielectric Materials-2021”

## Opening Remarks by DR. K. Pamanswari, Principal UCST,AKNU

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



## Introduction of Chief Guest, Prof. Mokka Jagannadha Rao, Vice chancellor by T. Karthik Sai Ram, Alumni-Dept. of Physics, AKNU

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view

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Chat Messages

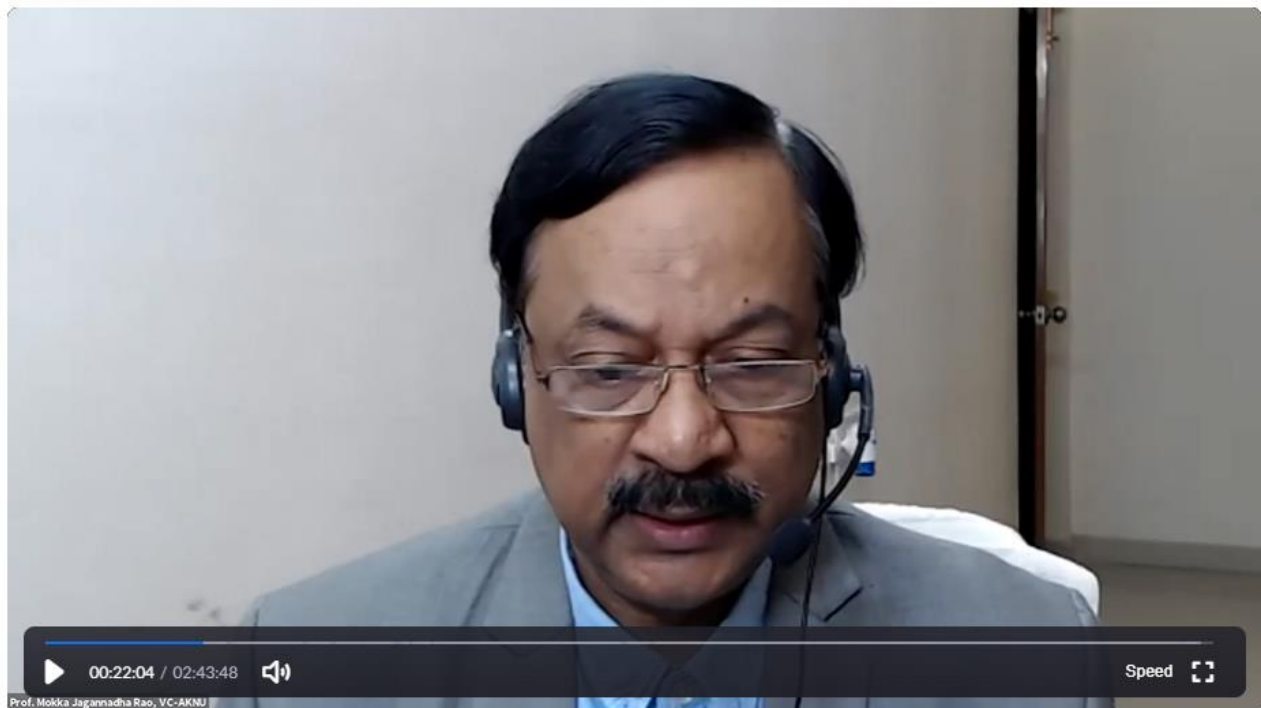
- AJITHA 03:03:19  
thank you sir
- Ramajothi 03:03:25  
thank you sir
- Dhurai S 03:03:27  
Thanks sir
- S.TAMILVEERAPANDIY... 03:04:36  
is there feedback session to get certificate
- PROF. PORIA KISHORKUMAR C 03:04:41  
FEEDBACK FORM.PL
- R.Umadevi 03:07:59  
madam please send feedback form

# “Agri Nano Technologies & Dielectric Materials-2021”

**Chief Guest, PROF.M. JAGANNADHA RAO’S Message:**

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



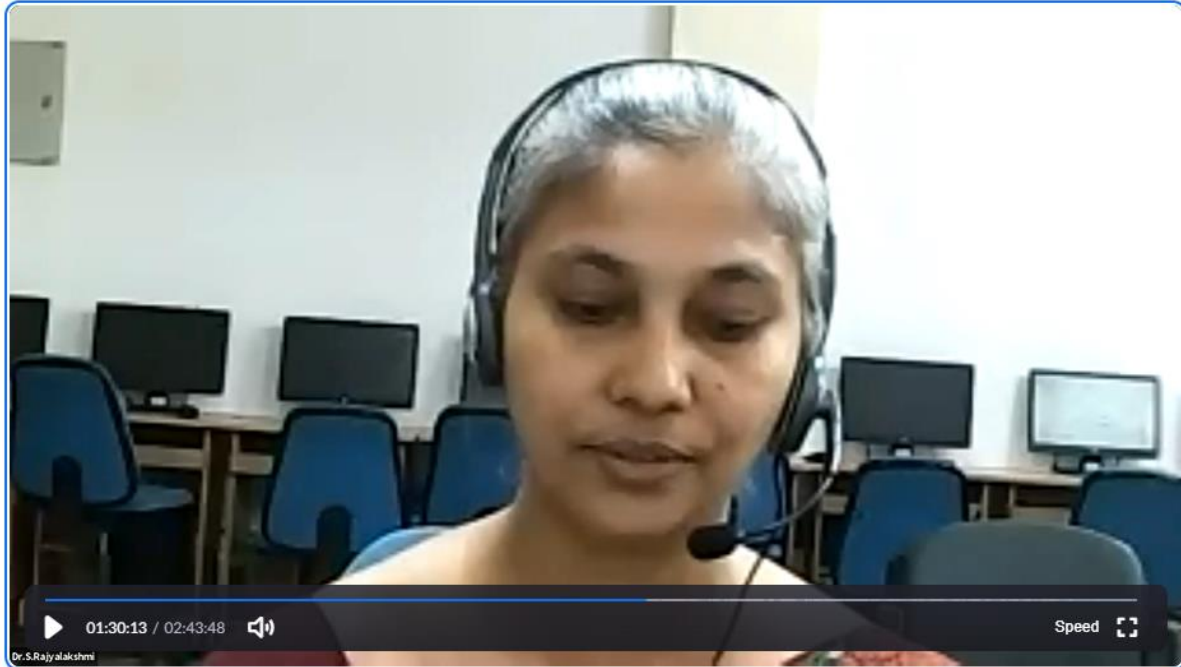
**Introduction of Rsource Person, Dr. G. Ramalingam by Dr. S. Rajyalakshmi, Dept. of Physics, AKNU**



# “Agri Nano Technologies & Dielectric Materials-2021”

zoom

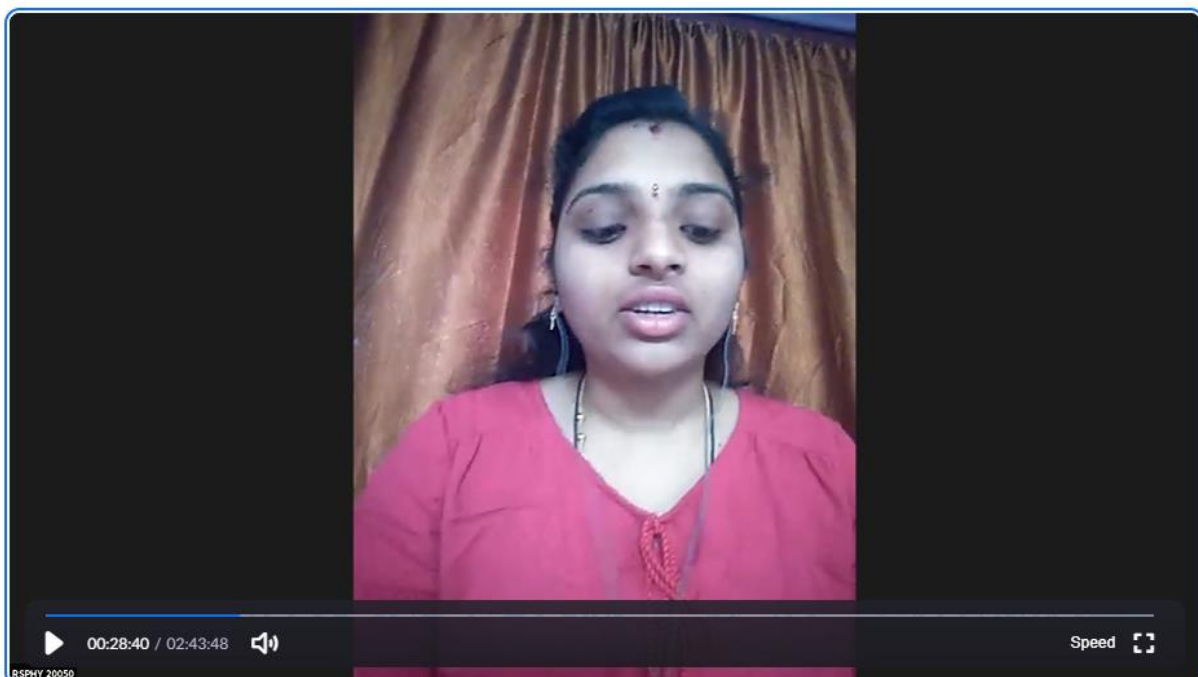
Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



**Introduction of Resource Person, Dr. T. Visham by Poojitha, II MSc Physics, Dept. of Physics, AKNU**

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



**Presentation of the Resource Person Dr. T. Vishwam during the**

# “Agri Nano Technologies & Dielectric Materials-2021”

session:

zoom

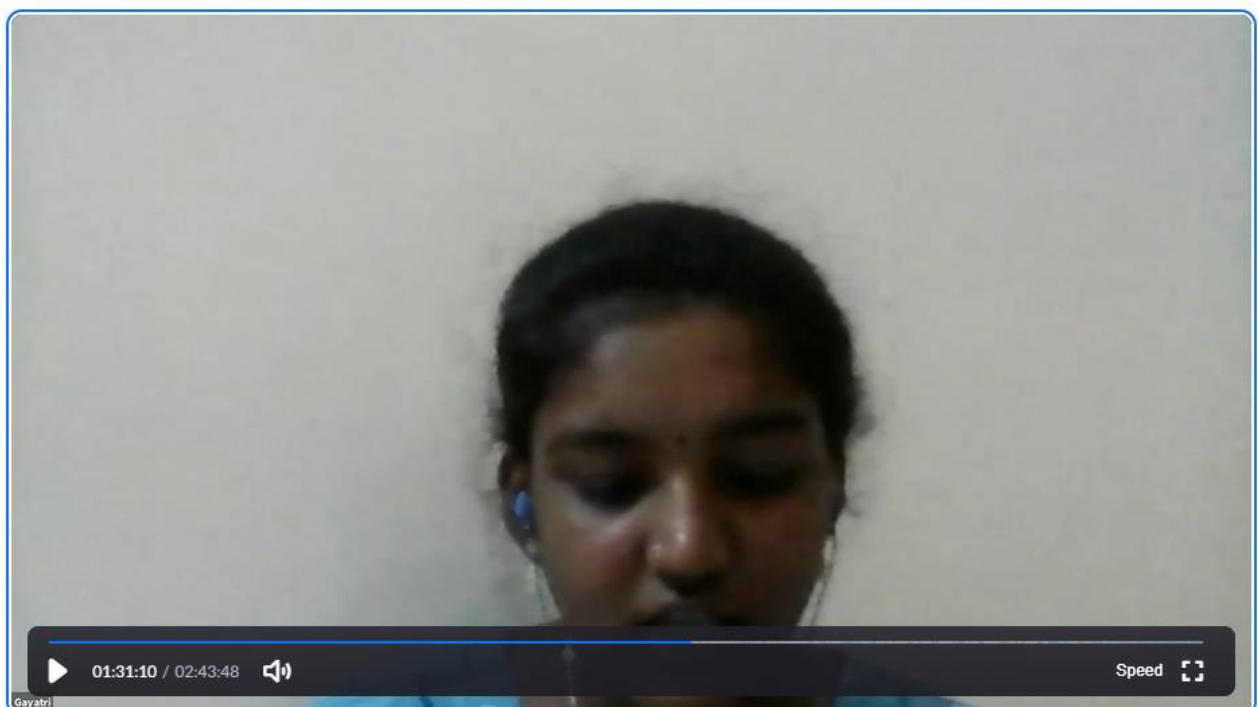
Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



**Introduction of Resource Person, Dr. T.N.V.K.V.Prasad by N.S.S.L.Gayathri, II MSc-Dept. of Physics, AKNU**

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view

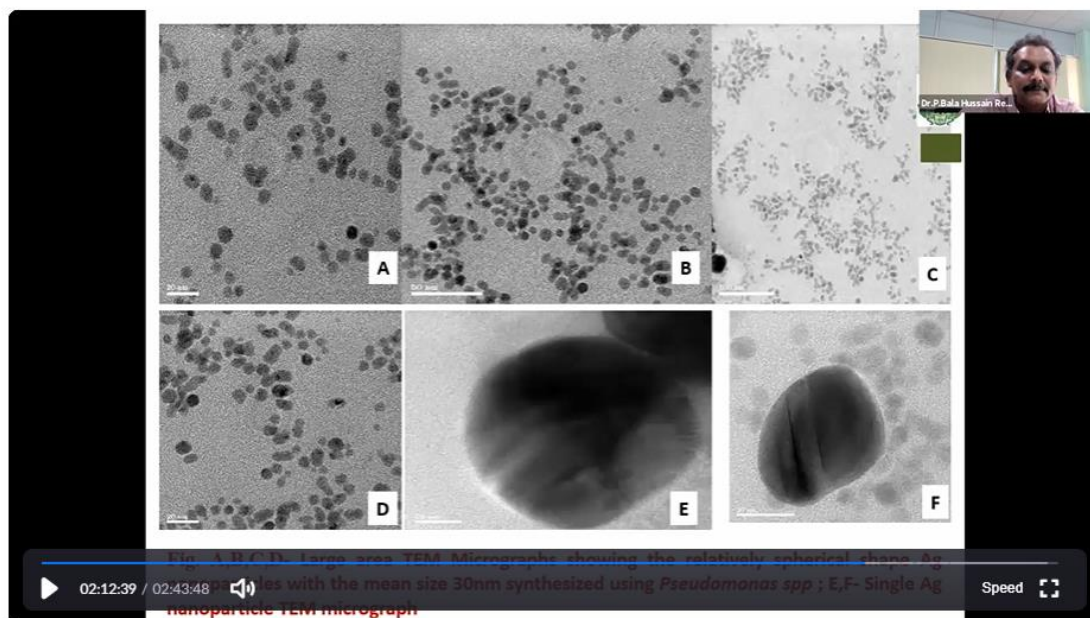


# “Agri Nano Technologies & Dielectric Materials-2021”

Presentation of the Resource Person Dr. T.N.V.K.V.Prasad, during the session:

zoom

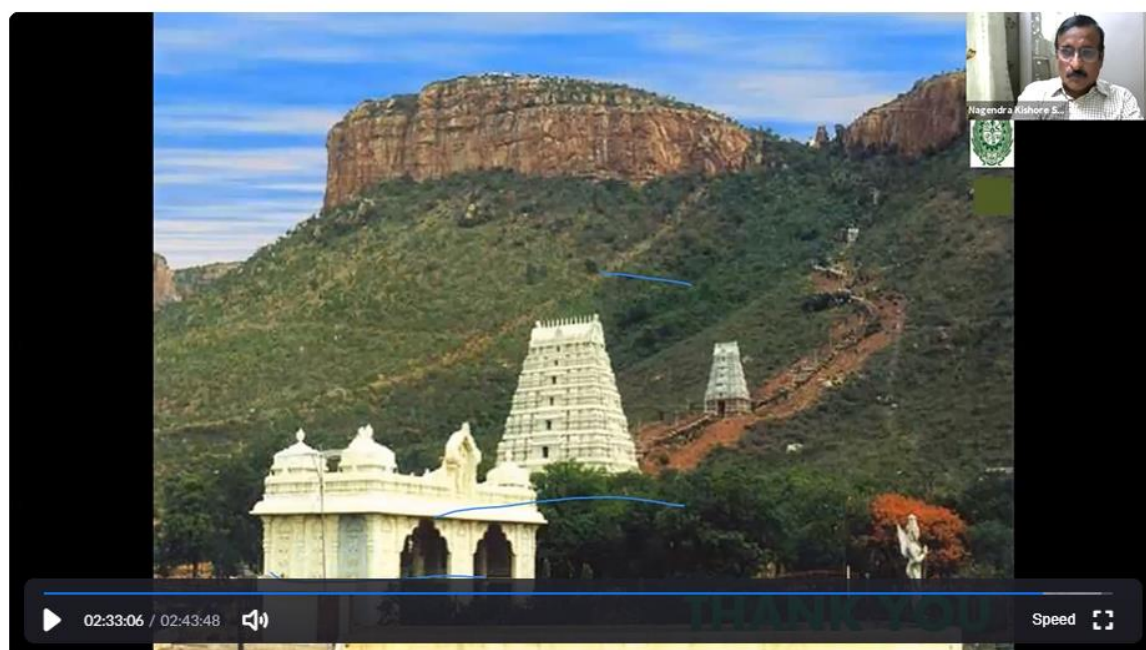
Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



Dr. S. Nagendra Kishore, President, Spruha Alumni Association.

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



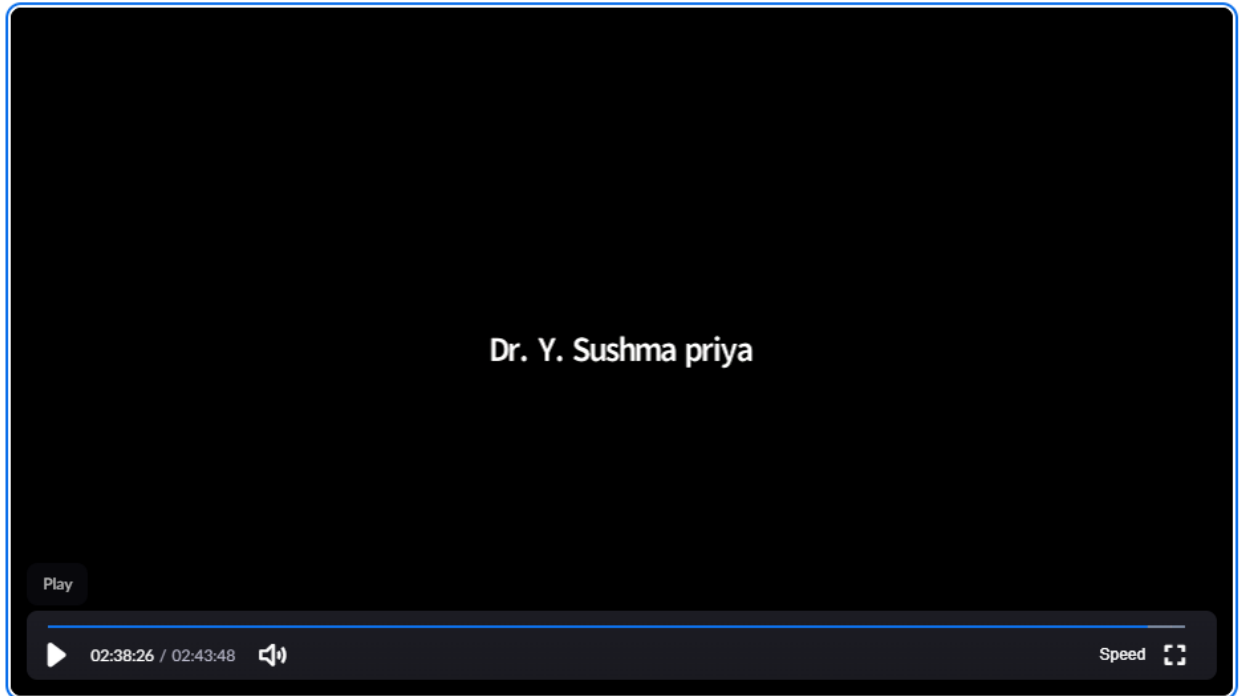


# “Agri Nano Technologies & Dielectric Materials-2021”

**Concluding Remarks by Dr. Y. sushma Priya, Assistant Professor,  
Department of Physics, AKNU**

zoom

Webinar on "Agri-nanotechnologies and Dielectr... - Shared screen with speaker view



“Agri Nano Technologies & Dielectric Materials-2021”



***PAPER CLIPPINGS***

SCIENCE OF FUTURE

# AKNU V-C spells out role, scope of nanotech

EXPRESS NEWS SERVICE  
@ Rajamahendravaram

NANOTECHNOLOGY is the science of the future. It will dominate the world in the coming decade, Adi Kavi Nanaya University Vice-Chancellor Prof Mokka Jagannatha Rao said.

Inaugurating a national webinar on 'Agri Nanotechnologies & Dielectric Materials', organised by AKNU Department of Physics, he elaborated the scope, and rapid development of Nanotechnology and various applications.

Prof Rao explained that Advanced Nanotechnology applications will play a significant role in a gamut of sectors, including environment and agriculture.

Emphasising the scope of research, he indicated about

the collaborative programmes being taken up by the AKNU with top notch universities in India and abroad.

Resource persons—Acharya NG Ranga Agricultural University, Tirupati, principal scientist Dr TNVKV Prasad and Dr T Viswam of Gitam School of Sciences, Hyderabad—enthralled the audience with their expert presentation on nanotechnology.

Registrar T Ashok, College of Science principal Dr K Ramneswari, webinar convener or Dr S Rajya Lakshmi, co-convener Dr Sushma Priya, V Raja Sekhar, Physics department alumni Khartik, M Sc final-year students Pujitha, Gayathri and Spruha Psychology Alumni Association president Sunkara Nagendra Kishore among others also spoke.



## ఎన్ఎంఆర్ స్వేచ్ఛాసాక్షితో అతి సూక్ష్మ పదార్థాల నిర్ధారణ

నన్నయ విశ్వవిద్యాలయం ఉపకులపతి జగన్నాథరావు



జ్రోచర్ ఆవిష్కరిస్తున్న ఉపకులపతి జగన్నాథరావు

దివాన్ చెరువు, జూలై 27: రసాయనశాస్త్రంలో అతి సూక్ష్మపదార్థాల నిర్ధారణకు, విశదీకరణకు న్యూక్లియర్ మాగ్నెటిక్ రెసొనెన్స్ (ఎన్ఎంఆర్) స్వేచ్ఛాసాక్షిపే ఉపయోగపడుతుందని ఆదికవి నన్నయ విశ్వవిద్యాలయం ఉపకులపతి మొక్కా జగన్నాథరావు అన్నారు. రసాయనిక పరిశోధకులు దీనిపై మరిన్ని అధ్యయనాలు చేయాలని చెప్పారు. నన్నయ విశ్వవిద్యాలయం కాలేజ్ ఆఫ్ సైన్స్ అండ్ టెక్నాలజీలోని రసాయనశాస్త్ర విభాగం ఆధ్వర్యంలో ఐఆర్ అండ్ ఎన్ఎంఆర్ స్వేచ్ఛాసాక్షిపే అనే అంశంపై మంగళవారం జూలీయ వెబినార్ జరిగింది. కార్యక్రమానికి వీసీ ముఖ్యఅతిథిగా విచ్చేసి మాట్లాడుతూ ఇన్వార్డెడ్ (ఐఆర్) స్వేచ్ఛాసాక్షిపే అణువులతో సంకరణ చెందుతుందని వివరించారు. రిసోల్ ర్బ్ పర్ఫర్మన్, సీనియర్ శాస్త్రవేత్త ఏపీ రమణారెడ్డి మాట్లాడారు.

### 4న అగ్రి నానో టెక్నాలజీస్ పై వెబినార్

నన్నయ పర్మిట్ రసాయనికశాస్త్ర విభాగం ఆధ్వర్యంలో ఆగస్టు 4న అగ్రి నానో టెక్నాలజీస్, డైలెక్ట్రిక్ మెటీరియల్స్పై జూలీయ వెబినార్ నిర్వహించనున్నట్లు ఈసీ జగన్నాథరావు తెలిపారు. దీనికి సంబంధించిన జ్రోచర్ను మంగళవారం వీసీ ఆవిష్కరించారు. అధ్యాపకులు, విద్యార్థులు, పరిశోధకులు దీనిని సద్వినియోగం చేసుకోవాలని కోరారు. కార్యక్రమాల్లో రిజిస్ట్రార్ ఆచార్య టి.ఆశోక్, కన్వీనర్, విభాగాధిపతి బి.జగన్నాథరావు, ప్రెసిపాల్ కె.రమణేశ్వరి, కన్వీనర్ ఎన్.రాజ్యలక్ష్మి, కో-కన్వీనర్లు వై.సుప్రీయ, వి.రాజశేఖర్ పాల్గొన్నారు.

### 4న అగ్రి నానో టెక్నాలజీస్ వెబినార్

రాజానగరం: యూనివర్సిటీలోని కాలేజ్ ఆఫ్ సైన్స్ అండ్ టెక్నాలజీ కళాశాల, ఫిజిక్స్ విభాగం ఆధ్వర్యంలో 'అగ్రి నానో టెక్నాలజీస్ అండ్ డైలెక్ట్రిక్ మెటీరియల్స్' అనే అంశంపై ఆగస్టు 4న నేషనల్ వెబినార్ నిర్వహించనున్నామని ఆదికవి నన్నయ యూనివర్సిటీ వీసీ ఆచార్య ఎం. జగన్నాథరావు తెలిపారు. ఇందుకు సంబంధించిన జ్రోచర్ని మంగళవారం విడుదల చేశారు. హెచ్.ఓ.డి డాక్టర్ ఎన్.రాజ్యలక్ష్మి కన్వీనర్గా వ్యవహరిస్తారన్నారు.

**సాక్షి** Wed, 28 July 2021  
<https://epaper.sakshi.com/c/62095443>



### నిపుణుల సహకారంతో విజ్ఞానం

రాజానగరం: వివిధ రంగాల్లో నిపుణుల సందేశాలను వినడానికి కొద్ది అందించిన గొప్ప అవకాశం ఆన్లైన్ ఫోర్మ్ షామ్ ఆని నన్నయ విశ్వవిద్యాలయ వీసీ ఆచార్య ఎం.జగన్నాథరావు అన్నారు. వర్చిటీలో కాలేజ్ ఆఫ్ సైన్స్ అండ్ టెక్నాలజీలోని కెమిస్ట్రీ విభాగం ఆధ్వర్యంలో మంగళవారం నిర్వహించిన వెబినార్లో మాట్లాడారు. డాక్టర్ రమణారెడ్డి తదితరులు పాల్గొన్నారు. ఫిజిక్స్ విభాగం ఆధ్వర్యంలో నిర్వహిస్తున్న అగ్రి నానో టెక్నాలజీస్ అండ్ డైలెక్ట్రిక్ మెటీరియల్స్ అంశంపై వచ్చే నెల 4న నిర్వహించనున్న నేషనల్ వెబినార్ను సద్వినియోగం చేసుకోవాలని వీసీ అన్నారు.



### నానో టెక్నాలజీ కీలక పాత్ర

రాజానగరం : శాస్త్ర, నానో టెక్నాలజీ కీలక పాత్ర హాజరై మాట్లాడారు. సాంకేతిక రంగాలలో ప్రస్తుత ఆధునిక నానో టెక్నాలజీ కీలక పాత్ర అని నన్నయ విశ్వవిద్యాలయ వీసీ ఆచార్య ఎం.జగన్నాథరావు అన్నారు. వర్చిటీ ఫిజిక్స్ విభాగం ఆధ్వర్యంలో బుధవారం అగ్రి-నానో టెక్నాలజీ అండ్ డైలెక్ట్రిక్ మెటీరియల్స్ అంశంపై వెబినార్ నిర్వహించారు. ఫిజిక్స్ విభాగాధ్యాపకులు ఎన్ రాజ్యలక్ష్మి కన్వీనర్గా వ్యవహరించిన ఈ వెబినార్లో వీసీ ముఖ్యఅతిథిగా యుగంలో అన్ని రంగాల్లో నానో టెక్నాలజీ విప్లవాత్మక మార్పులను తీసుకు వస్తోందని అన్నారు. రిసోల్డ్ పెద్దపేజీగా ఆచార్య ఎన్.జి. రంగా అగ్రికల్చర్లో యూనివర్సిటీ (తిరుపతి) ప్రిన్సిపల్ సైంటిస్ట్ టి.ఎన్.కె. ప్రసాద్, గీతమ్ సూజల్ ఆఫ్ సైన్స్ (హైదరాబాద్) సహాయాధ్యాయి టి.విశ్వం అగ్రి-నానో టెక్నాలజీపై పలు విషయాలను వివరించారు.

## రానున్న కాలం నానో టెక్నాలజీదే

**‘నన్నయ’ వీసీ ఆచార్య జగన్నాథరావు**

రాజానగరం: శాస్త్ర, సాంకేతిక రంగాల్లో నానో టెక్నాలజీ కీలకపాత్ర పోషిస్తుందని, రాబోయే కాలంలో అన్ని రంగాల్లోనూ దీనిని ఉపయోగిస్తారని ఆదికవి నన్నయ యూనివర్సిటీ వీసీ ఆచార్య ఎం.జి గన్నాథరావు అన్నారు. యూనివర్సిటీలో ఫిజిక్స్ విభాగం ఆధ్వర్యంలో ‘అగ్రి నానో టెక్నాలజీస్ అండ్ డైలెక్ట్రిక్ మెటీరియల్స్’ అనే అంశంపై బుధవారం నేషనల్ వెబినార్ నిర్వహించారు. ఆహార ఉత్పత్తిలో అగ్రి - నానో టెక్నాలజీ ప్రపంచ సవాళ్లను ఎదుర్కొనే సామర్థ్యాన్ని కలిగి ఉంటుందన్నారు. ఉత్పత్తి, భద్రత, వాతావరణ మార్పు, రవాణా వంటి అనేక వ్యవసాయ, వ్యవసాయ అనుబంధ అంశాలపై నానో టెక్నాలజీ ప్రభావం ఉంటుందన్నారు. దీనిపై మరిన్ని

పరిశోధనలు చేయవలసిన అవసరం ఉందని, తద్వారా సమాజాభివృద్ధికి అనేక సత్ఫలితాలను అందుకోవచ్చన్నారు. డాక్టర్ ఎస్.రాజ్యలక్ష్మి కన్వీనర్గా వ్యవహరించిన ఈ వెబినార్కి రీసోర్సుపర్సన్గా ఆచార్య ఎన్జీరంగా అగ్రి కల్చరల్ యూనివర్సిటీ (తిరుపతి) ప్రిన్సిపాల్ సైంటిస్టు డాక్టర్ టీఎన్వీకేపీ ప్రసాద్ వ్యవహరించారు. గీతమ్ స్కూల్ ఆఫ్ సైన్సెస్ (హైదరాబాద్) సహాయచార్యులు డాక్టర్ టి.విశ్వం తదితరులు మాట్లాడుతూ అగ్రి - నానో టెక్నాలజీస్ అండ్ డైలెక్ట్రిక్ మెటీరియల్స్పై పలు విషయాలను తెలియజేశారు. కార్యక్రమంలో రిజిస్ట్రార్ డాక్టర్ టి. ఆశోక్, ఈసీ మెంబర్స్ డాక్టర్ కేఎస్ రమేష్, డాక్టర్ బి.జగన్మోహన్రెడ్డి, ప్రిన్సిపాల్ డాక్టర్ కె.రమణేశ్వరి, కో కన్వీనర్స్ డాక్టర్ వై.సుబ్బప్రియ, వి.రాజశేఖర్, స్పృహ అలూమ్ని అసోసియేషన్ సభ్యులు పాల్గొన్నారు.

## 4న అగ్రి నానో టెక్నాలజీస్ వెబినార్

రాజానగరం: యూనివర్సిటీలోని కాలేజ్ ఆఫ్ సైన్స్ అండ్ టెక్నాలజీ కళాశాల, ఫిజిక్స్ విభాగం ఆధ్వర్యంలో ‘అగ్రి నానో టెక్నాలజీస్ అండ్ డైలెక్ట్రిక్ మెటీరియల్స్’ అనే అంశంపై ఆగస్టు 4న నేషనల్ వెబినార్ నిర్వహించనున్నామని ఆదికవి నన్నయ యూనివర్సిటీ వీసీ ఆచార్య ఎం. జగన్నాథరావు తెలిపారు. ఇందుకు సంబంధించిన ట్రోచర్ని మంగళవారం విడుదల చేశారు. హెచ్.ఓ. డాక్టర్ ఎస్.రాజ్యలక్ష్మి కన్వీనర్గా వ్యవహరిస్తారన్నారు.

**సాక్షి**

Thu, 05 August 2021

<https://epaper.sakshi.com/c/62271660>

**సాక్షి**

Wed, 28 July 2021

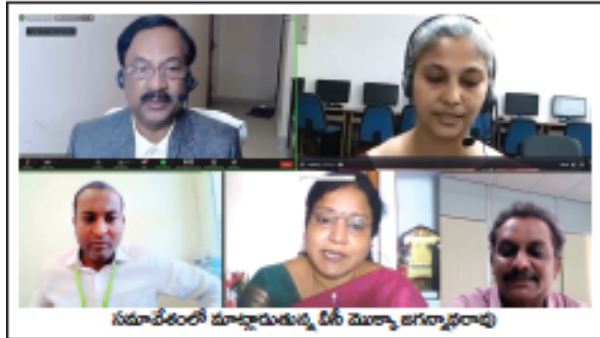
<https://epaper.sakshi.com>



# Nannaya Vani

## నానో టెక్నాలజీదే భవిష్యత్

వీసీ ఆచార్య మొక్కా జగన్నాథరావు



04.08.21 (వీడియోకాన్ఫరెన్స్) శాస్త్ర సాంకేతిక రంగాల్లో నానో టెక్నాలజీ కీలక పాత్రను పోషిస్తుందని, భవిష్యత్ లో అన్ని రంగాల్లోనూ నానో టెక్నాలజీని ఉపయోగిస్తారని వీసీ ఆచార్య మొక్కా జగన్నాథరావు అన్నారు. అతికలి నవ్వు యూనివర్సిటీ ఫిజిక్స్ విభాగం అధ్యక్షులుగా బాధ్యత వహించిన “అగ్రి నానో టెక్నాలజీస్ అండ్ డైలెక్ట్రిక్ మెటీరియల్స్” అనే అంశంపై నేషనల్ వెబినార్ ను నిర్వహించారు. ఫిజిక్స్ విభాగాధ్యక్షురాలు డా.ఎన్.రాజ్యలక్ష్మి కన్వీనర్ గా వ్యవహరించిన ఈ వెబినార్ కు ముఖ్య అతిథిగా వీసీ ఆచార్య మొక్కా జగన్నాథరావు హాజరై ఉపస్థానించారు. వీసీ మాట్లాడుతూ ప్రస్తుత అధునిక యుగంలో నానో టెక్నాలజీకి డిమాండ్ ఎక్కువగా ఉందని అన్ని రంగాల్లో నానో టెక్నాలజీ విప్లవాత్మక మార్పులను తీసుకువస్తుందని అన్నారు. నానో టెక్నాలజీ అధునిక వ్యవసాయంలో కొత్త మార్పులను తీసుకువస్తుందని చెప్పారు. అగ్రి-నానో టెక్నాలజీ అవ్వడం యొక్క ప్రపంచ సవాళ్లను ఎదుర్కోవే గొప్ప సామర్థ్యాన్ని కలిగి ఉంటుంది. ఉత్పత్తి, భద్రత, వాతావరణ మార్పు, రవాణా వంటి అనేక వ్యవసాయ, వ్యవసాయ అనుబంధ అంశాలపై నానో టెక్నాలజీ ఉపయోగ పడుతుంది. వ్యవసాయ ఉత్పత్తులు, రక్షణ కోసం నానో పార్టికల్స్ వివిధ రూపాలలో ప్రయోగిస్తున్నారు. నానో టెక్నాలజీ శాస్త్ర సాంకేతిక రంగాలలో పాటు వ్యవసాయ రంగంలో కూడా ఎన్నో ప్రయోజనాలను చేకూర్చుతుంది. దీనిపై మరిన్ని లోతైన పరిశోధనలు జరిగి సమాజహితంగా నానో సాంకేతిక పరిష్కారాన్ని ఉపయోగిస్తే మంచి ఫలితాలు వస్తాయన్నారు. రిసోర్స్ పర్సన్ గా ఆచార్య ఎన్.జి.రంగ అగ్రికల్చర్ యూనివర్సిటీ తిరువతి ప్రిన్సిపాల్ సైంటిస్ట్ డా.జి.ఎన్.వి.కె.వి ప్రసాద్, గీతమ్ సూర్య అఫ్ సైన్సెస్ సైరంబాల్ సహాయాచార్యులు డా.జి.విశ్వం హాజరై అగ్రి నానో టెక్నాలజీస్ అండ్ డైలెక్ట్రిక్ మెటీరియల్స్ పై పలు అసక్తికర విషయాలను తెలియజేశారు. ఈ కార్యక్రమంలో రిజిస్ట్రార్ ఆచార్య డి.అశోక్, ఈసీ మెంబర్స్ ఆచార్య కె.శ్రీరమేష్, డా.బి.జగన్మోహనరెడ్డి, ప్రిన్సిపాల్ డా.కె.రమణేశ్వరి, కన్వీనర్ డా.ఎన్.రాజ్యలక్ష్మి కోకనూరు డా.వై.సుబ్బయ్య, బి.రాజశేఖర్, స్పృహ అలుమ్ని అసోసియేషన్ సుంకర నాగేంద్ర కిషోర్, వెబ్ మాస్టర్ మంచెం శ్రీనివాస్ తదితరులు పాల్గొన్నారు.