

**GOVT. DEGREE COLLEGE FOR WOMEN ,BEGUMPET  
HYDERABAD**

**DEPARTMENT OF PHYSICAL SCIENCE**

**ACTIVITIES FOR THE ACADEMIC YEAR 2020-21**

**Faculty achievements**

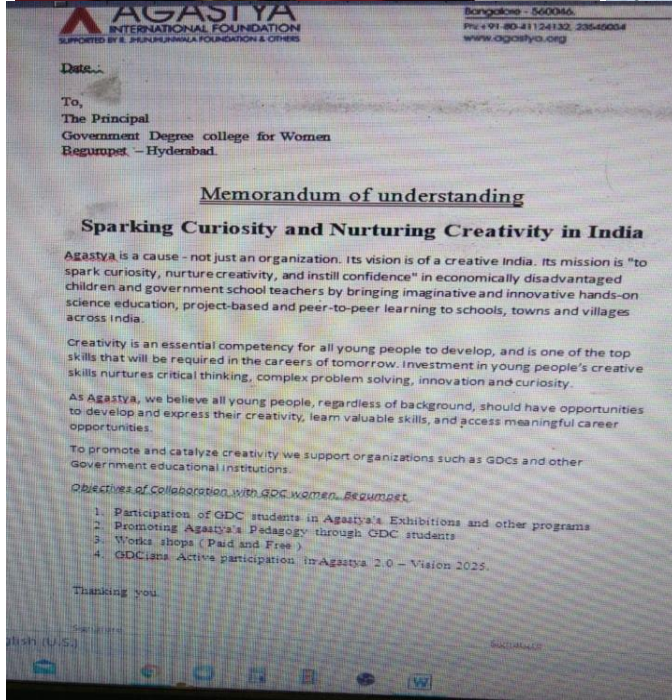
**Departmental and student achievements**

**NSS ACTIVITIES**

Sl. No.	DATE	Departmental Activities conducted
1	11-05-2020	<b>ORIENTATION PROGRAMME-COVID19*</b>
2	13-05-2020	<b>Introduction to Plasma Physics*</b>
3	21-06-2020	<b>International yoga day*</b>
4	20-07-2020	<b>FACULTY DEVELOPMENT PROGRAMME ,Member Organising committee,Assistant coordinator*</b>
5	8-08-2020	<b>3-Day National webinar skill enhancement to excel in life and academics*</b>
6	6-09-2020	<b>WHO IS HERO/HEROINE (WEBINAR PROGRAMME)*</b>
7	20-09-2020	<b>Gandhian Philosophy*</b>
8	24-09-2020	<b>NSS DAY WEBINAR BY NIRMALAMAM,VANITA MAHAVIDYALAYA*</b>
	14-09-2020	<b>FIT INDIA@ COLLEGE PREMISES AND @OU*</b>
9	30-09-2020	<b>VIRTUALISATION EFFECTS IN PHYSICS CONCEPTS*</b>
10	02-10-2020	<b>VISIT @ORPHANAGE HOME*</b>
11	03-10-2020	<b>Rally on DISHA INCIDENT by G.Sireesha@*</b>
12	15-10-2020	<b>TALK ON APJ ABDUL KALAM Sir*</b>
13		<b>Reviewer of Elsevier journal of IIT INDORE INTER NATIONAL CONFERENCE@</b>
14		<b>BRAOU TEXT BOOK AUTHOR@</b>
15		<b>PUBLISHED PAPERS acceptance IN MATERIALS TODAY JOURNAL (4no.)*</b>
16	JUNE -2020	<b>UPLOADED YOU TUBE VIDEOS*</b>
17	31-10-2020	<b>Resource person @Vignana darshini on Importance of</b>

		<b>women in Education*</b>
18	16-10-2020	<b>NSS SERVICE TO FLOOD EFFECTED PEOPLE*</b>
19	1-11-2020	<b>NSS WEBINAR FOR NATIONAL UNITY DAY*</b>
20	5 <sup>TH</sup> OCTOBER TO 7 <sup>TH</sup> NOV	<b>Attended panchatantra tales certificate course by RK MATH*</b>
21	11 <sup>th</sup> NOV 2020	<b>Resource person @ Govt city college on Maxwells eqns-Thermodynamic potentials</b>
22	10 <sup>th</sup> DEC 2020	<b>FIT INDIA THEME(CYCLING, PRABATHBHERI &amp;BOOKS DISTRIBUTION)</b>
23	19 <sup>th</sup> DEC 2020	<b>International webinar on 2D semiconductors*</b>
24	23 DEC 2020	<b>Rythu dinostvam participation*</b>
25	17 <sup>th</sup> DEC 2020	<b>Oral presentation @IIT INDORE</b>
25a	3 <sup>RD</sup> JAN	<b>MOU with PANTECH,AMEERPET</b>
26	10 <sup>TH</sup> Jan	<b>MOU with Dhanvantri charitable trust</b>
27	12 <sup>TH</sup> Jan	<b>Webinar on swami Vivekananda</b>
28	13 <sup>th</sup> Jan	<b>Webinar on virtualisation effects in concepts of physics (create WhatsApp group with students as "Lets Talk Physics")</b>
29	17 <sup>TH</sup> Jan	<b>Mou with STARS</b>
30	18 <sup>TH</sup> Jan	<b>PUBLICATION IN ELSEVIER JOURNAL</b>
31	28 <sup>th</sup> Jan	<b>BOS meeting of Physics @OU</b>
32	29 <sup>TH</sup> Jan	<b>BOS meeting of Electronics @OU</b>
32	31 <sup>st</sup> Jan	<b>Extension lecture on Feed back amplifiers</b>
33	6 <sup>th</sup> Feb	<b>MOU with Innovative technologies</b>
34	8 <sup>th</sup> Feb	<b>MOU with Innovative technologies(work shop on fabrication of Electronic devices)</b>
35	16 <sup>th</sup> Feb	<b>Webinar on EXP EYES17(LAB ON LAP)by Smt. B.Nagamani(GDC MYLAVARAM,AP)</b>
36	17 <sup>th</sup> Feb	<b>Extension lecture on Superconductivity by (B.Srinivas Goud,Asst. Professor Gdc Janagam)</b>
37	4 <sup>th</sup> Mar	<b>Extension lecture on Electricity &amp; Magnetism by (Smt.Shanmukhl Jyothi ,Asst.Professor,GDC Hussainialam,Hydearabad)</b>
38	26 <sup>th</sup> Feb	<b>MOU with Innovative technologies(work shop on Sanitiser sensor)</b>
39	1 <sup>st</sup> March	<b>MOU with TtHub,Awareness programme on Job</b>

		<b>Opportunities in Manufacturing companies</b>
40	1 <sup>st</sup> March	<b>MOU with Agastya foundation (Hands on Experience in science exhibits)</b>
41	2nd March	<b>MOU with Agastya foundation (Mega Science Exhibition on Basic concepts in Physics) Create WhatsApp group "Gdc Agastya "</b>
42	1 <sup>st</sup> April	<b>National Webinar on "Magnetic materials- Technological Advances" by Dr.J.Surya Narayana Prof of Physics,IITH</b>



On 10<sup>TH</sup> January, 2021 an Memorandum of Understanding was entered into with M/s Dhanvantari Charitable Trust for imparting knowledge on First Aid techniques and for providing Nursing Care to those students which are in demand and offering immediate employment opportunities to the students of our College.

On 17<sup>TH</sup> January 2021 Memorandum of Understanding (MoU) was entered into with M/s STARS which assists in arranging field visits to different Scientific

establishments in and around Hyderabad which aids in providing first hand knowledge and working of such establishments.

On 12<sup>th</sup> January, 2021 on the occasion of National Youth Day which commemorates the birth anniversary of Swami Vivekananda eminent Journalist Sri Raka Sudhakar Rao Garu was requested to deliver his speech to motivate the students on improving Personality Development Skills. He delivered his speech with full of live examples of successful and hardworking in different fields.

WEBINAR ON NATIONAL *Youth* FESTIVAL - 2021

GOVERNMENT DEGREE COLLEGE FOR WOMEN  
BEGUMPET, OSMANIA UNIVERSITY, HYDERABAD-16

**Talk On**  
**SWAMI VIVEKANANDA**  
by



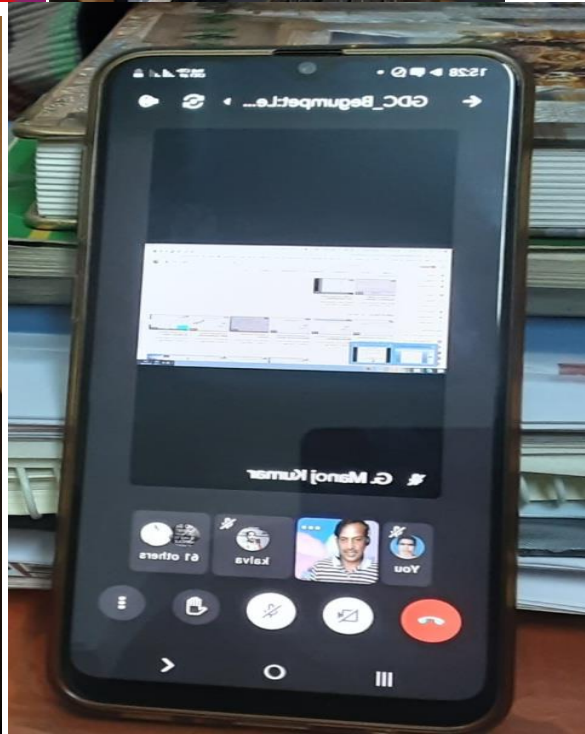
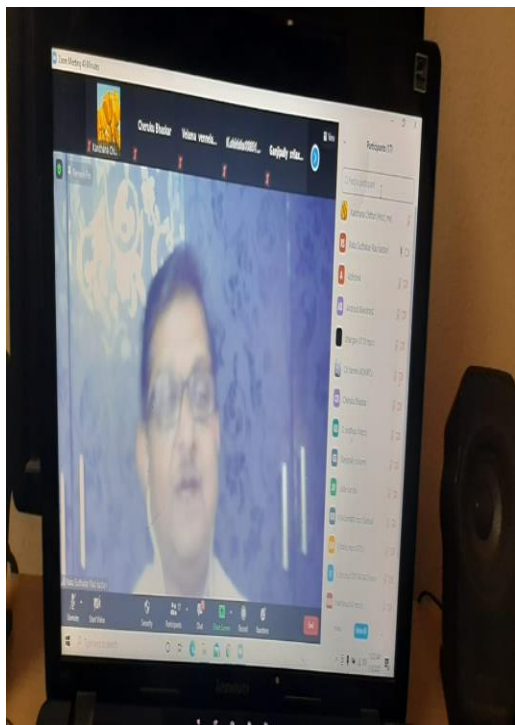
**K. Raka Sudhakar Rao,**  
Journalist,  
Sakshi School of Journalism,  
Hyderabad

On 12-01-2021 at 11:00am IST  
Meeting ID: 790 8720 8411  
Passcode: physics

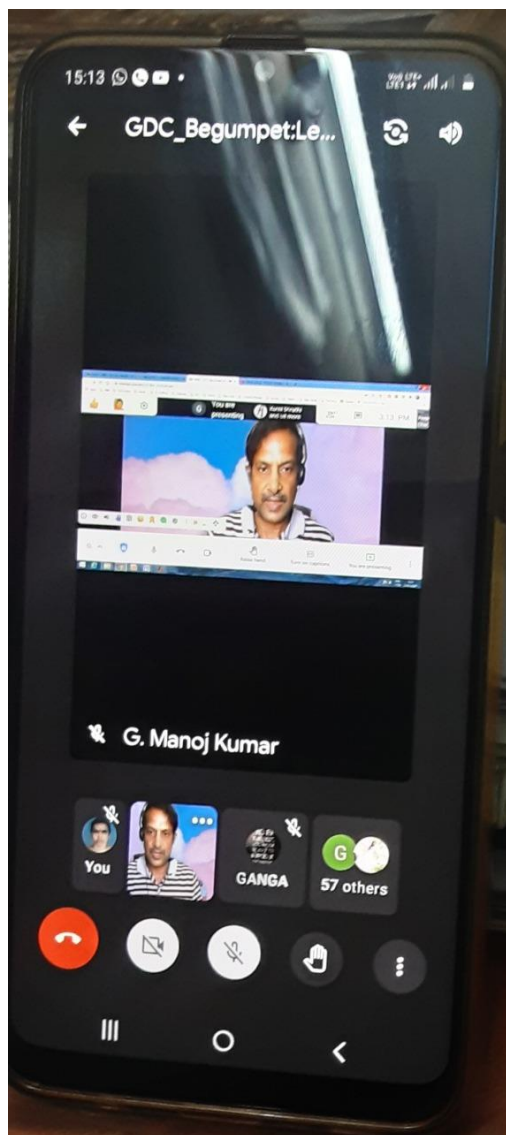
 zoom

**Organizers**  
Department of Physics

**Convenor**  
Dr. G. Yadagiri  
Principal



12 <sup>TH</sup> Jan	Webinar on swami Vivekananda
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ONLINE EXTENSION LECTURE ON

# “Effective Visualizations for Understanding Physics Concepts”

Resource Person

**Dr. G. Manoj Kumar**  
Associate Professor of Physics,  
and Physicist, Advanced Center for Research  
in High Energy Materials,  
University of Hyderabad, Hyderabad

13-01-2021 at 03:00pm - 04:00pm IST

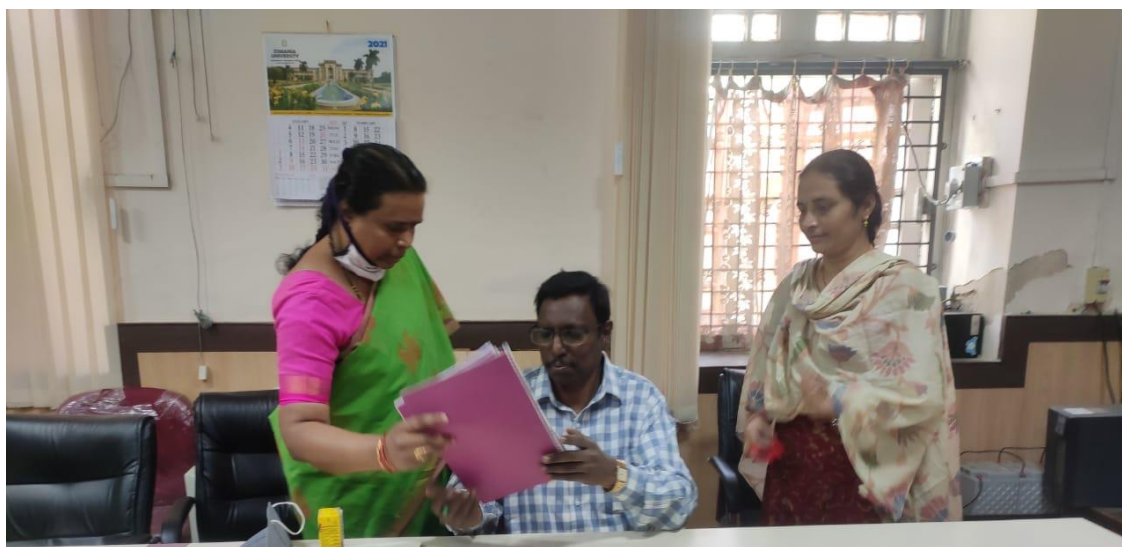
**Dr. G. Yadagiri**  
Principal

*Organized by*  
**Department of Physics**

13<sup>th</sup> January  
2021

**Webinar on virtualisation effects in concepts of physics (create WhatsApp group with students as “Lets Talk Physics”)**

**With a view to enable students understand the basic concepts in Physics a Webinar on Virtualisation effects in basic concepts of Physics was conducted for better understanding of our College students.**




28<sup>th</sup> Jan

**BOS meeting of Physics @OU**  
**Board of Studies Meeting was held at Osmania**  
**University, Department of Physics for approval and**  
**reapproval of Syllabus for the Academic Year 2020-21**



	for Physics.
29 <sup>TH</sup> Jan	BOS meeting of Electronics @OU Board of Studies Meeting was held at Osmania University, Department of Physics for approval and reapproval of Syllabus for the Academic Year 2020-21 for Electronics

12:37 Close Participants (7)

- PM Pravalika MECS (me) 🔇🔇
- S Shirisha Chinthala (Host) 🔇🔇
-  Divya MECS 4001 🔇🔇
- K K.shirisha4007MECS 🔇🔇
- MN M. Nema(mecs)4009 🔇🔇
- SM Soumya mecs 4004 🔇🔇
- S4 Susmitha 4006 MECS 🔇🔇

Invite

12:38 Zoom Leave

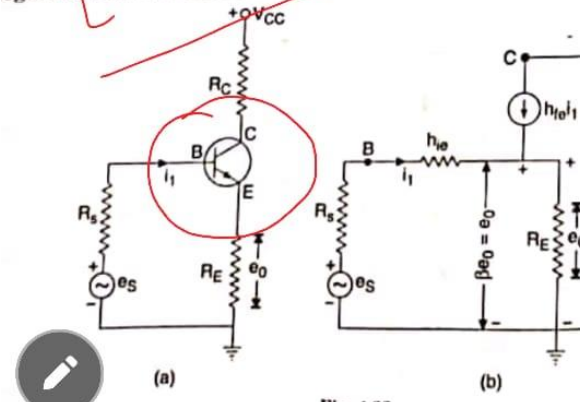
the input of the amplifier is proportional to the output voltage feedback. It reduces distortion and increases bandwidth. It is commonly used in electronic circuits. Its important applications are in address system, transistor radio receivers etc.

(ii) **Negative current feedback** : The method in which the input of the amplifier is proportional to the output current is called negative current feedback. It improves the high frequency response as well as it increases the input impedance and decreases the output impedance of the amplifier. Therefore, it is often employed for impedance matching.

**4.14 EMITTER FOLLOWER : AN EXAMPLE OF NEGATIVE CURRENT FEEDBACK**

Emitter follower is an important class of feedback amplifier used in electronic instruments. Fig. 4.22 (a) gives the circuit diagram of an emitter follower using a resistor  $R_C$  in the collector circuit. In this case, the output voltage is developed across emitter resistance  $R_E$ . When a signal  $e_s$  is applied to the input, it produces an a.c. emitter current  $i_e$ . This current produces an output voltage  $e_o$  across  $R_E$ . This voltage opposes the signal voltage as it is in opposite direction. This voltage is feedback at the input of the amplifier. Since the feedback voltage is proportional to the emitter current  $i_e$ , the output current, the

**Fig. 4.22.**



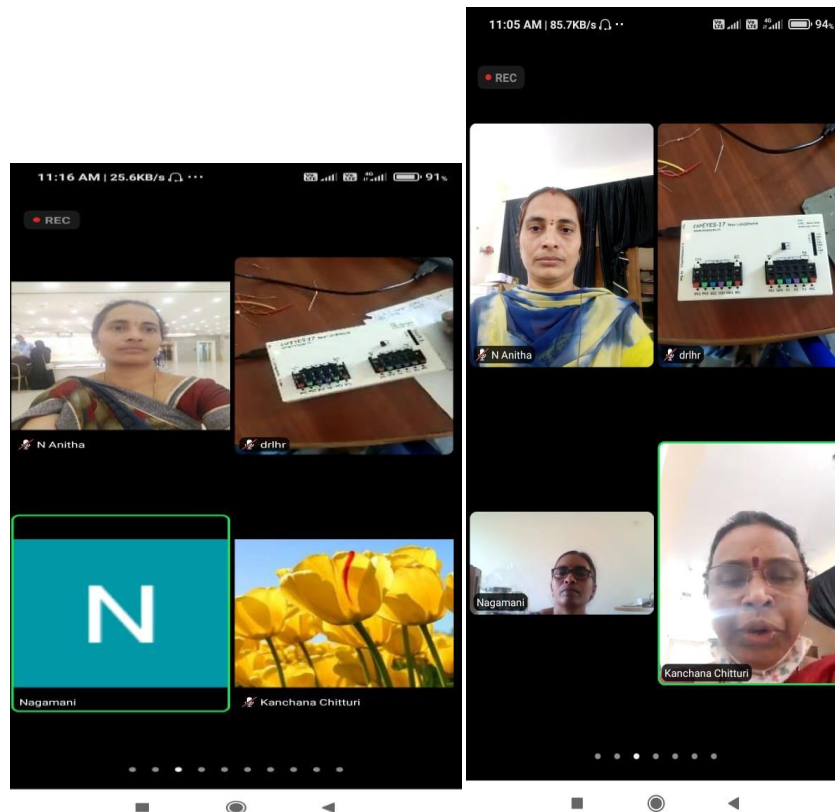
31 <sup>st</sup> Jan	Extension lecture on Feed back amplifiers was given
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to our College students by Smt.K.Sireesha, Faculty of Physics, New Science College, Koti, Hyderabad.





workshop on Basic concepts in physics by Agastya foundation On 16-2-2021




**GOVERNMENT DEGREE COLLEGE  
FOR WOMEN (A), BEGUMPET**


**NATIONAL LEVEL ONLINE WORKSHOP  
ON  
EXP EYE 17-LOW COST LAB ON LAP**

Resource Person  
*B. Nagamani*  
 Asst. Prof of Physics, GDC  
 Mylavaram (AP)

**ZOOM ID:1234567891**  
**PWD:**

**DATE: 16-02-2021**  
**TIME: 11 AM**

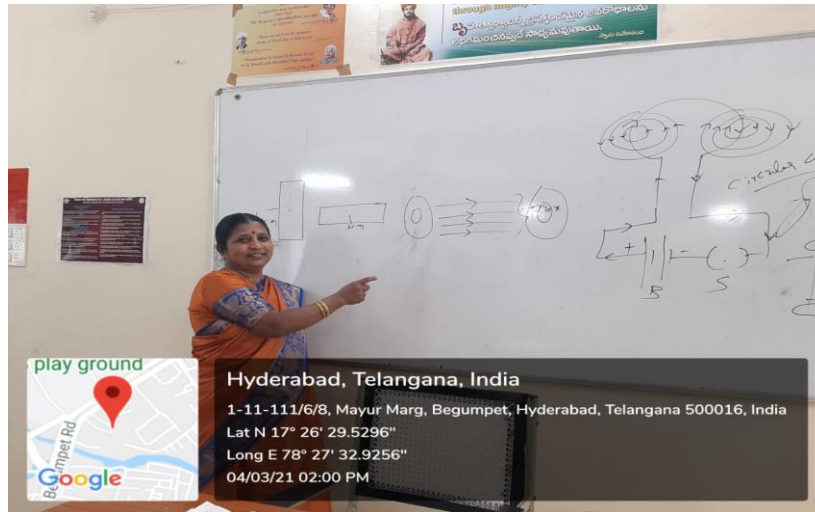
**CONVENOR**  
 Dr. Ch. Kancharlatha  
 HOD Physics

**Principal (FAC)**  
 Dr.G.Sunitha

**NATIONAL WEBINAR ON LAB ON JAP BY Smt.B.Nagamani on 17-2-21**



**EXTENSION LECTURE ON SUPER CONDUCTIVITY** was given by Sri SRINIVAS GOUD on 17-2-2021 which was well received by our College Students and expressed their desire to often organise such extension lectures, in future.



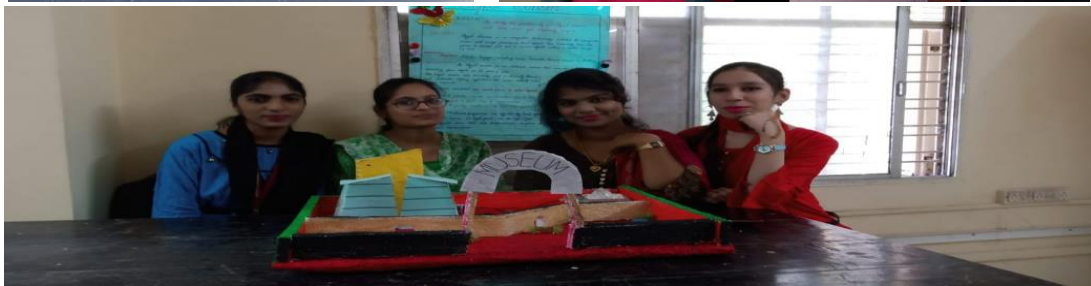
**Extension Lecture on Electro magnetism was given by Smt.Shanmukhi jyothi on 4-3-2021 who had explained the subject with diagrams and examples coupled with clarity.**



**As part of MoU, Work shop on Fabrication of Electronic devices was conducted in the College campus by Dr.Hameed, Director, Innovative technologies on 6-2-2021. Students participated in the workshop and gained hands on knowledge on different sensor based projects for Sustainable Development of Society.**



A Work shop on basic concepts in physics was conducted by AGASTYA FOUNDATION on 01<sup>st</sup> March, 2021 as part of MoU on the occasion of National Science Day.



**SCIENCE EXHIBITION ON Electronic Devices For Sustainable Development (2-3-21)**



### STUDENT SEMINARS AND LIBRARY VISIT





## Orientation programme on manufacturing companies in physics field by TTHUB (MOU)





Orientation programme on first aid techniques by Dhanvantri charitable trust on (6-3-21)



**GOVERNMENT DEGREE COLLEGE  
FOR WOMEN (A) , BEGUMPET**

**WEBINAR  
ON**

**"Magnetic materials - Technological Advances"**

Resource Person  
**Dr. J. Suryanarayana**  
Associate Professor  
Department of Physics  
IIT Hyderabad

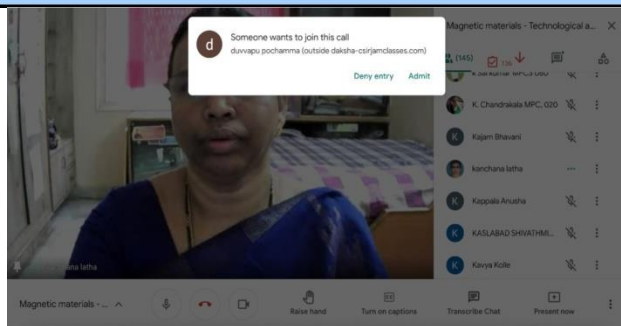


**GOOGLE MEET link:**  
<https://meet.google.com/mrs-yxiz-wwp>  
**PIN : 397 515 598#**

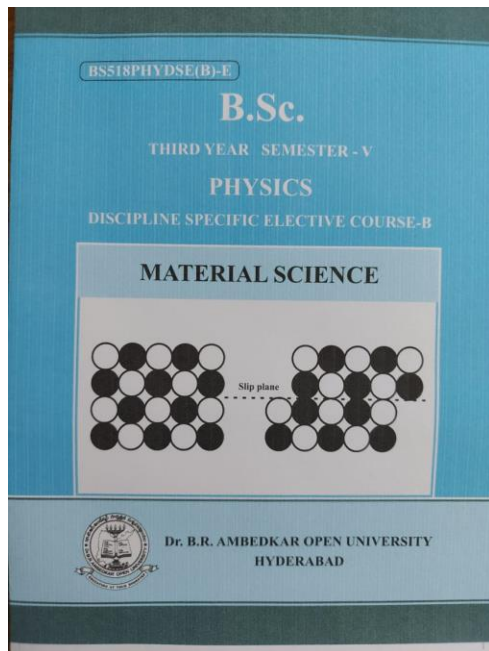
**Organized by**  
**Department of Physics**

**DATE: 01-04-2021**  
**TIME: 10.00 am**

**Principal (FAC)**  
**Dr.G.Sunitha**



1 <sup>st</sup> April	<p style="color: blue; text-align: center;"><b>National Webinar on "Magnetic materials- Technological Advances" by Dr.J.Surya Narayana Prof of Physics,IITH</b></p>
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**COURSE TEAM**

**COURSE DEVELOPMENT TEAM (CBCS)**

**Editor**  
Prof. G.Pushpa Chakrapani

**Writers**  
M.Purmanadham  
Dr. N.V.Prasad  
Dr. Abdul Hameed  
Dr. CH.Kanchana Latha

**Course Co-ordinator**  
Dr. U.Vijaya Usha Sree

**Graphic Designer**  
Venkatswamy

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Dr. B.R.Ambedkar Open University, Hyderabad  
First Edition 2020

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This text forms part of Dr. B.R.Ambedkar Open University Course. The complete syllabus for the course appears at the end of the text

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Materials Today: Proceedings xxx (xxxx) xxx

Contents lists available at ScienceDirect

**Materials Today: Proceedings**

journal homepage: [www.elsevier.com/locate/matpr](http://www.elsevier.com/locate/matpr)

**Bimetallic silver and copper nanoparticles synthesis, characterization and biological evaluation using aqueous leaf extracts of *Majorema hortensis***

Ramchander Merugu<sup>a,\*</sup>, Bishnupriya Nayak<sup>b</sup>, Kanchana Latha Chitturi<sup>c</sup>, Pramila Kumari Misra<sup>b,c</sup>

<sup>a</sup>University College of Science and Information, Mahatma Gandhi University, Hyderabad 500034, India  
<sup>b</sup>Center of Studies in Surface Science and Technology, School of Chemistry, Jawahar Institute of Post Graduate Studies, Hyderabad 500017, India  
<sup>c</sup>India Pratyaksha Centre, Engineer College (Women), Hanamarty, Hyderabad, Telangana 500001, India

**ARTICLE INFO**

**ABSTRACT**

The bimetallic nickel and bismuth nanoparticles were synthesized using toddy collected from the *Borassus flabellifer* tree. The green synthesized bimetallic nickel and bismuth nanoparticles were characterized through UV-visible spectroscopy, Fourier transform infrared spectroscopy, Scanning electron microscopy, and energy dispersive X-ray studies. The size of the nanoparticles was determined to be less than 100 nm. The nanoparticles were found to be spherical, and these particles exhibited antioxidant activity as revealed from DPPH and phenanthroline reduction assays. The antibacterial activity performed against five different bacteria envisaged that the synthesized bimetallic nanoparticles could perform as an excellent antibacterial agent.

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 Selection and peer-review under responsibility of the scientific committee of the International Conference on Materials Processing & Characterization.

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Materials Today: Proceedings xxx (xxxx) xxx

Contents lists available at ScienceDirect

**Materials Today: Proceedings**

journal homepage: [www.elsevier.com/locate/matpr](http://www.elsevier.com/locate/matpr)

**Biofabrication of nickel and bismuth bimetallic nanoparticles using aqueous toddy of *Borassus flabellifer*: Synthesis, characterization and elucidation of biological properties**

Ramchander Merugu<sup>a,\*</sup>, Bishnupriya Nayak<sup>b</sup>, Kanchana Latha Chitturi<sup>c</sup>, Pramila Kumari Misra<sup>b,c</sup>

<sup>a</sup>University College of Science and Information, Mahatma Gandhi University, Hyderabad 500034, India  
<sup>b</sup>Center of Studies in Surface Science and Technology, School of Chemistry, Jawahar Institute of Post Graduate Studies, Hyderabad 500017, India  
<sup>c</sup>India Pratyaksha Centre, Engineer College (Women), Hanamarty, Hyderabad, Telangana 500001, India

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 Selection and peer-review under responsibility of the scientific committee of the International Conference on Materials Processing & Characterization.

This certifies that

Dr. Ch. Kanchana Latha

acted as a Reviewer in 11<sup>th</sup> International Conference on Materials Processing and Characterization - 2020 (ICMPC 2020) organized by Department of Mechanical Engineering, Indian Institute of Technology Indore (IIT Indore) during 15-17 Dec 2020.

Convener  
Prof. Anand Parey  
IIT Indore

Convener  
Asst. Prof. K. Eswara Prasad  
IIT Indore

Convener  
Prof. Suresh Kumar Singh  
IIT Indore

PUBLISHED PAPERS AND REVIEWER @ICMPC, IIT INDORE



GDC HAYATHNAGAR, INDIRA PRIYADARSHINI GDC FOR WOMEN  
OSMANIA UNIVERSITY, TELANGANA, INDIA



## ONE DAY INTERNATIONAL WEBINAR

On "Recent trends in Optoelectronics in flatland: Emerging Device Application  
On 2D Semiconductors"

On 19<sup>th</sup> December, 2020  
at 9am IST  
Organized by Department  
of Physics



**Chief Patron**  
**Sri Naveen Mittal, IAS** Commissioner,  
Collegiate and Technical Education, Telangana



**Dr. Nihhaar Pradhan**  
Assistant Professor Jackson  
State University, Department  
of Physics and Chemistry,  
Jackson, USA



**Dr. Debalina Dutta**  
Faculty in school of  
Communication and  
Journalism, Massey University  
New Zealand



Guest of honour  
Dr. G. Padappi  
JD (FAC) O/o CCE TS



Guest of honour  
Dr. DSR. Rajender  
Singh  
RJD (FAC O/o CCE TS)



Guest of honour  
Dr. Ghanshyam  
AGO, CCE TS

Convenor  
**Dr. K. Parvathalu**  
Asst. Professor

Co-Convenor  
**Dr. Ch. Kanchanalatha**  
Asst. Professor

Chair persons  
**Dr. D. Varalaxmi** Principal  
**B. Sreenivas Reddy**  
Principal (FAC)

Co-ordinator  
**Dr. N. Thirumal Reddy**  
Asst. Professor

Zoom ID: 9440237082; Password: physics