

Golden Jubilee Celebrations From 15-09-2024



CSTS GOVT. KALASALAJANGAREDDIGUDEM ELURUDIST, ANDHRA PRADESH.

A PROMPTUARY

OF

ONE DAY NATIONAL CONFIANCE ON

NANO MATERAILS FOR NEXT GENERATION ON

5th January,2024



Organized by **Department of chemistry**

ABOUT THE COLLEGE

Chatrapati Sivaji Tri Satajayanthi (CSTS) Government Kalasala, situated at Jangareddigudem, in Eluru district, is a co-educational college, managed by Government of Andhra Pradesh. The college was established in the year 1974 to provide quality higher education to the people of Jangareddigudem and its nearby areas. The College embodies a rich tradition of excellence in teaching has infused dynamism and knowledge to numerous learners over several decades, with utmost commitment. The college boasts a capacious and well-appointed campus thatencompasses all contemporary facilities and amenities. The college houses all modern amenities within a nice and spacious campus.

The college provides education in traditional disciplines such as B.A., B.Com., and B.Sc. Recognizing the evolving landscape of higher education, the institution has also embraced restructured programs, including Computer Science. Subsequently, it introduced courses like B.A Special Telugu, B.A Special English, BZC, and BCH, catering to a wider range of academic interests. The college maintains an affiliation with Adikavi Nannaya University, Rajamahendravaram, and is proudly accredited by NAAC, reflecting its commitment to quality education and institutional excellence.

Annually, over 600 students enroll at this college, which boasts a sprawling 16-acre campus. The college is equipped with a spacious library, a well-appointed seminar hall, a state-of-the-art physics laboratory, not one but two chemistry laboratories, a combined botany and horticulture laboratory, a dedicated zoology laboratory, an advanced English language laboratory, a fully- equipped B.Sc Computer Science laboratory, a cutting-edge B.Com Computers laboratory, and even a fitness center.

The college was built with the help of founders Sri Chintalapati Sitaramachandra Varaprasada Murthy Raju, who were independent fighters and social activist. Chitrozu Suryanarayana is the donor of college land. On the occasion of the 300th birth anniversary of Chhatrapati Shivaji, the college was named Chhatrapati Shivaji Tri Satjayanti Government College. On the occasion of the 50th year of establishment of the college, we are conducting Golden Jubilee celebrations from 15-09-2023 to 15-09-2024

Since October 2021, this college has been granted the position of principal, and we are proud to have Dr. N. Prasad Babu serve in this capacity. Our college prides itself on maintaining a dedicated full-time teaching and non-teaching staff, all of whom are wholeheartedly committed to the college's advancement. Our teaching staff, in particular, consistently goes above and beyond to provide high-quality education, frequently organizing motivational programs for our students.

In line with our commitment to enhancing the learning experience, our college is equipped with four digital TVs. These modern tools are skillfully utilized by our lecturers to deliver classes in a manner that is not only informative but also highly accessible and engaging for our students.

The students enrolled in this college primarily hail from the neighboring regions of Jangareddigudem. Fortunately, the government has taken the initiative to establish three hostels for boys and three hostels for girls, ensuring that these students have convenient accommodation options. These hostels serve as a cornerstone for students seeking a quality education and actively participating in numerous college-sponsored events and competitions, often receiving well-deserved accolades and prizes. Moreover, our college's gymnasium is an invaluable resource for our students, promoting their physical well-being and fitness. It fosters a culture of health and vitality among our student body.

Furthermore, it is heartening to witness the remarkable achievements of our college students in the realm of sports. They not only participate but excel in various sports competitions, spanning from the district level to the university level, even reaching the state and national levels. All of this is made possible through our well-equipped college sports ground

Principal Permission Letter to Conduct Conference

CHATRAPATHISIVAJITRISATAJAYANTHI(CSTS) GOVT.KALASALA



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DEPARTMENT OF CHEMISTRY

02-01-2024

Request for permission Conduct one day National Conference on 05-01-2024.

Department of chemistry proposed to conduct one day National Conference 05-01-2024.On this day we decided to conduct one day National Conference on "NANO MATERIALS FOR NEXT GENERATION". Wethought to invite Resource Persons for this program. So please permit me for conducting this program.

Thank you sir

Signature of the Incharge

Were

CHATRAPATHISIVAJITRISATAJAYANTHI(CSTS) GOVT.KALASALA



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CIRCULAR

03-01-2024

Department of chemistry is going to conduct one day National conference on 05-01-2024. As the part of National conference day the topic is "NANO MATERIALSFOR NEXT GENERATION" So all of the staff mumbers are requested to attend the program. All the students are instructed to attend the program without fail and make it success.

Signature of department I/C.

Signature of the principal

Signature of the staff numbers

OBJECTIVES OF NATIONAL CONFIRANCE

The National Conference on "Nano Materials for Next Generation" hosted by CSTS Govt. Kalasala, Jangareddigudem, holds an immense importance in the context of various fields in present days. Nano materials for the next generation refer to materials engineered and manipulated at the nano scale, typically with dimensions ranging from 1 to 100 nanometers. This field of study encompasses various types of materials, including nano particles, nano composites, nano tubes, nano wires, and more. The unique properties exhibited by these materials at the nano scale make them highly attractive for a wide range of applications in diverse industries.

In an era dominated by digital transformation and connectivity, the conference focuses on the theme of "Nano Materials for Next Generation." The objective is to address critical issues and uncertainties surrounding the utilization of nano materials in various fields. Our primary aim is to facilitate in-depth discussions

that delve into the challenges ahead, including the dynamic landscape of nano material applications, the integration of cutting-edge technologies and the implications of evolving regulations.

Taking a comprehensive approach, the conference strives to offer a holistic perspective on the utilization of nano materials for the next generation. We seek to encourage collaboration among diverse stakeholders, bringing together experts from academia, industry, and government agencies. The goal is to develop and share best practices and innovative strategies that pave the way for the future of nano material applications. Additionally, we recognize the significance of education and awareness in the nano materials field. Therefore, the conference aims to promote education at all levels, emphasizing the multitude of career opportunities available in this rapidly evolving domain.

We invite you to join us at this pivotal juncture as we come together to unravel the complexities, harness the opportunities, and shape the future of nano material applications. Through collective efforts, we can strengthen the foundation of our technological landscape and embrace the limitless potential of a future powered byadvanced nano materials, ensuring security and sustainability in the next generation.

ABOUT CHEMISTRY DEPARTMENT:

ABOUT THE DEPARTMENT:

The department of chemistry has been established since inception of the college. The department is unique of its kind the distinct width a plinth area of 160 square yards which is consisting of spacious staff room along with well equipped two laboratories.

Evaluation: The department of chemistry is assessing the Students by conducting with regular intervals of slip tests, Mid Exams and pre-final exams.

Co Curricular activities: The department of chemistry is enriched the Students by Assignments, group discussions, Seminars, study projects and Quizzes etc.

Remedial classes: After making the students analysis and performances in their previous assessments, the department of chemistry conducts the Remedial classes to Students whoevercontainedbacklogs. And they are passed with good grade in main exams with help of Remedial classes.

Bridge course: A bridge course conducted for 7 days to the students who are not having fundamentals in chemistry.

Teaching methods: As we believe that education in a true sense is emergence of soul from the mirage of outer world to the universal truths and attained through dedication, meditation and inspiration are try to inculcate the quality of observation, experimentation and interpretation of natural laws which is nothing but Chemistry.

vision

The aim of the department is to provide quality education to the students, so that they can contribute in the development of the nation. The department of chemistry aims on theoretical knowledge but also provide the student, exposure to the development society, so that they can build their future in better way.

BROCHURE FOR ONE-DAY NATIONAL CONFERENCE





ABOUT THE COLLEGE

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ABOUT JANGAREDDIGUDEM

Jangareddigudem is a vibrant town located in the Eluru district of the Indian state of Andhra Pradesh. Nestled along the scenic banks of the mighty Godavari River, this town offers a rich blend of natural beauty and cultural heritage. The town is renowned for its lush greenery, with coconut and paddy fields stretching as far as the eye can see. Agriculture is a primary occupation, and the region is known for its rice production. The Godavari River, which flows gracefully through the town, not only adds to its picturesque charm but also supports irrigation and fishing activities. Jangareddigudem is a hub for education, with several schools and colleges catering to the educational needs of the local population. It is also well-connected by road, making it accessible to nearby cities and towns. Culturally, Jangareddigudem celebrates various festivals and traditions, including Sankranti and Ugadi, with great enthusiasm. The town's warm and hospitable people contribute to its inviting atmosphere.

ABOUT THE CONFERENCE

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CALL FOR PAPERS

Original research papers are invited in the following themes:

- Nano Material Synthesis and Fabrication
 Characterization and Analysis of Nano Materials
- Nano materials for Electronics and Photonics
 Nano materials in Medicine and Healthcare
- Energy Storage and Conversion with Nano Materials Environmental Applications of Nano Materials
- Nano materials for Advanced Materials and Composites Safety, Ethics, and Regulation in Nano materials
- 9. Emerging Trends and Future Directions
- 10. Education and Outreach in Nano materials

GUIDELINES AND PUBLICATION

The Paper must contain the title of the article, name of the author and co-author if any. The papers must be in MS-Word with Times New Roman font. The font size must be 12, with 1.5-linespacing. Abstract must contain a maximum of 250 words and full paper shall not exceed 8 pages. Send the soft copy to

cstschemistry@gmail.com on or before 30-12-2023. Conference Proceedings will be published with ISSN Number of charges Rs.750. The amount sent to Dr.M.Madhu (9490776592) either Phonepe or Google Pay.

REGISTRATION is Compulsory for all the Participants. Registration fee for faculty is Rs.300, for Scholars Rs.200 and Students Rs.100.

Flex/Banners of the confirance:



CSTS GOVT.KALASALA



JANGAREDDIGUDEM, ELURU DIST. ANDHRA PRADESH.

WELCOMES YOU

ONE DAY NATIONAL CONFERENCE

ON

NANO MATERIALS FOR NEXT GENERATION

Venue : Seminar Hall, CSTS Govt. Kalasala, Jangareddigudem

Date : 5th JANUARY 2024 (FRIDAY)

Time : 10:00 AM - 05:00 PM

Organized by

Department of Chemistry & Physics



CSTS GOVT.KALASALA





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NANO MATERIALS FOR NEXT GENERATION

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Committees Constituted to run the Program in smooth manner:

CHATRAPATHI SIVAJI TRI SATA JAYANTHI (CSTS) GOVT. KALASALA



Enter to Learn - Leave to Serve

Jangareddigudem, Eluru Dist

Phone: 08821-225310, Visit us at: www.cstsgk.ac.in E-Mail: jangareddigudem.manatv@gmail.com



COMMITTEES FOR ONE DAY NATIONAL CONFERENCE ON NANO MATERIALS FOR NEXT GENERATION ON 5TH JANUARY 2024

Stage Decoration Committee:

Sri. N. Vinay, Physical Director

Kum. Ch. Venkatalakshmi, Lecturer in Horticulture

Purchasing Committee:

Dr.Ch.Badari Narayana, Lecturer in Mathematics -

Sri. N. Vinay, Physical Director

Registration Committee:

Smt. Ch.Rama Devi, Lecturer in Commerce

Sri. P. Nageswara Rao, Lecturer in Telugu

Feedback Committee/Certificate Committee:

Sri.J.Raja Srikanth, Lecturer in Computer Science

Kum. K.V.V Sireesha, Lecturer in Commerce

Press committee:

Sri. M. Srinivasa Rao, Lecturer in Political Science

Technical Committee

Smt. R.Vijaya Deepika, Lecturer in Zoology -

Signature of the Principal

Programme Sheet for one day National confiance

CHATRAPATHI SIVAJI TRI SATA JAYANTHI (CSTS) **GOVT. KALASALA**



Enter to Learn - Leave to Serve





PROGRAMME SCHEDULE FOR ONE DAY NATIONAL CONFERENCE ON NANO MATERIALS FOR NEXT GENERATION - 5TH JANUARY 2024

9.30 am	Registration
10.00am-10.15am	Inviting Guests on to the Dias
10.15am-10.30am	Vandematharam & College Song by Students
10:30am-11.00am	Opening Remarks by DR. N. Prasad Babu, Principal &
	President of the Program
11.00am-12.15 pm	Technical Session I
12.15 pm -1.30pm	Technical Session II
1.30pm -2.15pm	LUNCH BREAK
2.15pm -3.30pm	Technical Session III
3.30pm -4.00pm	Paper Presentations and Feedback
4.00pm-4.15pm	TEA BREAK
4.15pm-4.30pm	Felicitations to the Guests
4.30pm-4.45pm	Vote of Thanks
4.45pm-5.00pm	National Anthem

Registrations:

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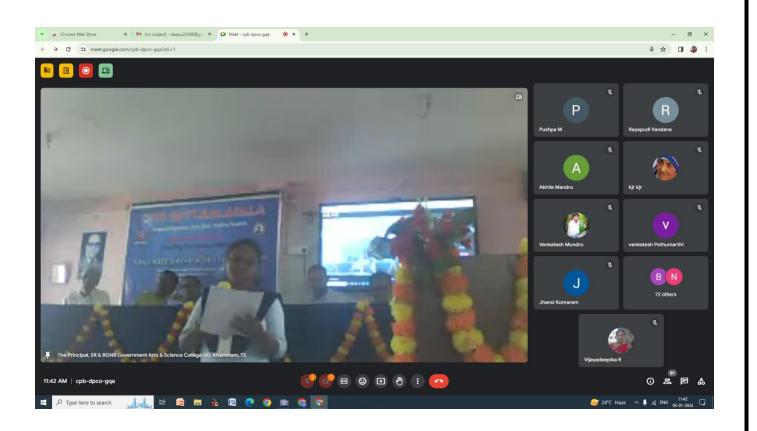
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	Student Student Student Student Student Lecturer in Zoology Associate Professor Student Student	Student Pb Siddartha college of arts and science MSc 1 St year Pb Siddartha arts and science college Student PB.Siddhartha College of Arts and sciences Student PB Siddhartha College of arts and science Student PARVATANENI BRAHMAYYA SIDDHARTHA COLLAGE OF ARTS & SCIENCE Lecturer in DRG Government Degree College Tadepalligudem Associate P.B.Siddhartha College of Arts & Science, Vijayawada Student PB SIDDHARTHA COLLEGE OF ARTS & SCIENCE Student PB Siddhartha college of arts and science Student PB Siddhartha college of ARTS & SCIENCE VIJAYAWADA PB Siddhartha college OF ARTS & SCIENCE VIJAYAWADA PB Siddhartha college OF ART & SCIENCE Vijayawada PB Siddhartha college	Student Pb Siddhartha college of arts and science sknassu24@gmail.com MSc 1 St year Pb Siddartha arts and science college upputhollaamrutha@gmail.com Student PB Siddharth College of Arts and sciences sarvanimarrivada@gmail.com Student PB Siddhartha college of arts and science nisithaykn@gmail.com Student PB Siddhartha College of arts and science nisithaykn@gmail.com Student PB Siddhartha College of arts and science sriyakongala84@gmail.com Student PB Siddhartha College of arts and science sriyakongala84@gmail.com Student PARVATANENI BRAHMAYYA SIDDHARTHA COLLAGE OF ARTS & SCIENCE Sai671555@gmail.com DRG Government Degree College Tadepalligudem gandhamvanipradeep@gmail.com Associate P.B. Siddhartha College of Arts & mdavidraju40@gmail.com PB SIDDHARTHA COLLEGE OF ARTS & SCIENCE sandeepmounlibattula99@gmail.com Student PB Siddhartha college of arts and science sravanik1405@gmail.com Student PB Siddhartha college of arts and science ravanik1405@gmail.com PB SIDDHARTHA COLLEGE OF ART & sandeepmounlibattula99@gmail.com PB SIDDHARTHA COLLEGE OF ART & ravanik1405@gmail.com PB SIDDHARTHA COLLEGE OF ART & rakeshnidikonda1234@gmail.com

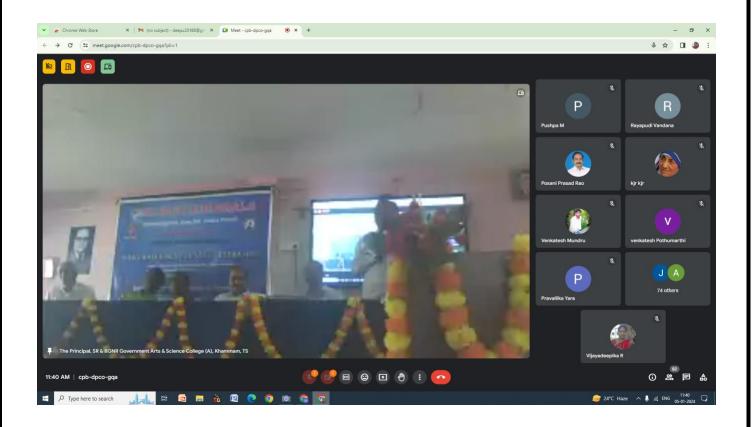
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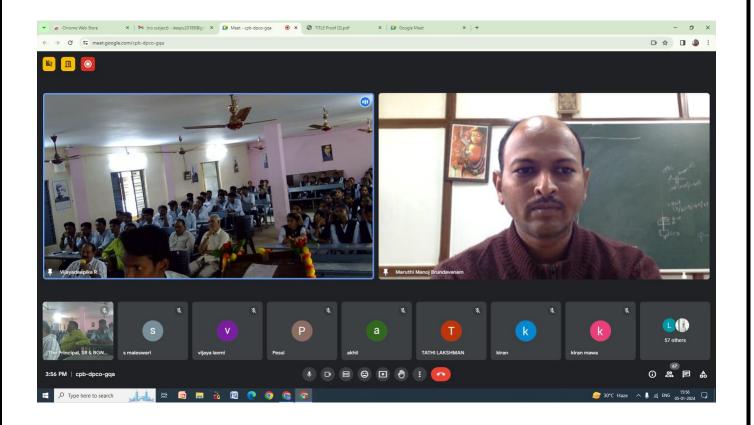
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	Student Research scholar Lecturer in Chemistry Student Research Scholar Student Student	Student Sriy.N college Student SriY.N college Student SriYN college SKR & SKR Government College for women (A) Kadapa Lecturer in Chemistry Seethanagaram, East Godavari (Dist.) Lecturer in Chemistry Sri DNR GDC (W), PALAKOL Student PBSIDDHARTHA college of Arts and science Research Scholar KRISHNA UNIVERSITY Student PB Siddharth college Student PB sidhartha college of arts and science	Student SriY.N college, narasapuram gubbalabhavana8@gmail.com Student SriY.N college, narasapuram gubbalabhavana8@gmail.com Student SriY.N college madhavibarremadhgmail.com SKR & SKR Government College for women (A) Kadapa nagarathna751@gmail.com Lecturer in Chemistry Seethanagaram, East Godavari (Dist.) madhav.jkc@gmail.com Lecturer in Chemistry Sri DNR GDC (W), PALAKOL vijayssgaddala@gmail.com Student PBSIDDHARTHA college of Arts and science gvsumithra2003@gmail.com Research Scholar KRISHNA UNIVERSITY sudabattulasudha@gmail.com Student PB Siddharth college angelalita689@gmail.com







Technical Sessions and Resource Persons Talks
RESOURCE PERSON-1
Profile of Dr.M.Ramakrishna



<u>Dr. M.</u> Ramakrishna Nanchara Rao

M.Sc.,

PGDCS., M.Phil., Ph.D.

Professor (On deputation), Department of Physics, Andhra University, Visakhapatnam, A.P., India State Best Teacher Awardee – 2012

Prof.mrnrao@andhrauniversity.edu.in

Dr. M. Ramakrishna Nanchara Rao have completed 30 years of P.G & U.G. Service in the teaching field. Besides this,he has done quality of Research in relation to Research publications and Guiding Research students. He was conferred the very prestigious State Best Teacher Award from Govt. of Andhra Pradesh in 2012 in recognition of his accomplishments in the fields of academic, research and social services. He served as Member -Executive Council (EC) and as Member – Finance committee to Krishna University, Machilipatnam from 2016 to 2019 appointed by the Govt. of A.P. He has been carrying out research in the field of Liquid Crystals and Nanotechnology till date. He awarded with a major research project (M.R.P) from U.G.C, New Delhi in 2013, Two of Research Students pursued with M. Phil. Degree and two Scholars with Ph.D., and two more are doing Ph.D work. Till now, he has published 70research articles in Scopus and UGC Indexed National/International reputed Journals and presented several research papers in National/International Conferences/Symposia. He invited to chair a session in International conference at university of Ponorogo, Indonesia in 2017 and presented research papers in International conferences held at China in 2011, Kumamoto University, Japan in 2015 and Andalas University, Padang, Indonesia in 2017. Recently he appointed as Chairman to U.G. Board of Studies to Krishna University in 2020, Internal research faculty member to Krishna University. He acted as NAAC Coordinator to The Hindu College, Machilipatnam in the period 2018-2019. His services are utilized for inclusive growth of Krishna University right from the inception of the University in various administrative positions such as U.G & P.G evaluation Supervisor, Teacher Associate, Squad Coordinator etc. and academic services such as member & University nominee -BOS committee to the affiliated colleges of the University. He acted as NSS Programme Officer in A.J.Kalasala, Machilipatnam in the period 2019-2012 and conducted many related programmes and got Best NSS Programme Officer award in 2010 from Acharya Nagarjuna University. He has been giving guest lectures at several schools and colleges and also delivered talks on various topics related to Physics & allied subjects in All India Radio (AIR) digital media.

2009	Academic Qualifications Ph.D (Liquid Crystals), Acharya Nagarjuna University, India.
2003	M.Phil.,(Liquid Crystals), Acharya Nagarjuna University, India
1990	M.Sc., (Physics), Nagarjuna University, Nagarjuna Nagar, Inida.
2012	PG Diploma in Communication Skills, GITAM Deemed University, Visakhapatnam, India.
	Academic Appointments
1990-	
	Lecturer, Siddhartha Residential College, Eluru,
93	W.G. District, India.
1993-	Part-time and Unaided Lecturer,
97	Andhra Jateeya Kalasala, Affiliated to Acharya
	Nagarjuna University India.
1997-	Lecturer (Aided), Andhra JateeyaKalasala,
2013	Machilipatnam, India
2012	H I D . CDI ' TI H' I
2013- 2021	Head, Dept. of Physics, The Hindu
2021	College, Machilipatnam, India
2021Se	pt Absorbed in to Government College
	(A),
	-2021 Nov Rajamahendravaram, West Godavari
Dt.,	4 D. T. II
	A.P., India.
Physics,	Since 13th Professor (onduty) Department of
1 11, 5105,	Nov.2021 Andhra University, Visakhapatnam,
A.P.,	Themas of the state of the stat

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India.

Best Teacher Award from Government of Andhra Pradesh in 2012. **Awards** Achieved Silver medal Award (as best researcher) from Indian Liquid Crystal Society (ILCS)in 2nd November 2023. Lifetime Achievement Award from VD GOOD International Scientist Awards 2021on Engineering, Science and Medicine, VDGOOD Professional Association, India. Distinguished Professor Award from ARUNAI, AIRF Awards-2019 (International Researchers Connect and Awards 2019) held at The Residency Towers, Chennai on 12th October 2019. Best Researcher Award (Certificate of Excellence)) from EET CRS, Research Wing for Excellence in Professional Education &Industry presented by Education Expo TV Research & Branding Company, Noida, on 18th March 2018. Best Paper presenter award in the 4th International Conference on Earth Sciences and Engineering (ICEE 2017) held in Andalas University, Padang, Indonesia on 29th - 31st August, 2017. Best Paper Award from International conference from Kumamoto University, Japan, 2015. Best NSS Unit award from Acharya Nagarjuna University, Nagarjuna Nagar: 522 510, India for the meritorious service rendered during the year 2010-2011. Best Teacher Award from TyagarayaGana Sabha &ChelimiSamskruthikaKalasamiti, Hyderabad in October 2010. State Best Citizen award from A.P. State Cultural Awareness Society on 11-01-2012 at Kalabarathi A/C Auditorium, Visakhapatnam. Distinctive Appointed as Executive Council Member in Krishna University, Machilipatnam in 2016 by **Appointments** the Govt. of Andhra Pradesh, India Appointed as Finance Committee Member in Krishna University, Machilipatnam, Andhra Pradesh, India in 2016. Appointed as Member of Vidyalaya Management Committee (Eminent Educationalist category) in Kendriya Vidyalayam, Machilipatnam, Andhra Pradesh, India. Research Projects Name of Grant **Funding** Title of the Project Amount of Grant Organization **University Grants** Major Research An investigation on liquid Project (MRP) Commission, New crystalline behavior of F.No.42784/2013 Delhi. Cyanobiphenylderivatives Rs. 15,13,300/-(SR)Dated 22protected metal 03-2013 nanoparticles. Research Guideship

	Sno	Name of the Scholar	Affilation	Status		
	1	P.Sivaram	M.Phil(Part-time), Krishna University Machilipatnam	Awarded and admitted for Ph.D		
	2	J. Sivasri	M.Phil(Part-time), Krishna University, Machilipatnam	Awarded		
	3	Smt. M. Tejaswi	JRF, UGC- MRP Ph.D(Full-time) Krishna University, Machilipatnam	Awarded		
	4	P.Jayaprada	Ph.D(Part-time) Krishna University, Machilipatnam	Awarded		
	5	Ch.Ravi	Ph.D (Part-time) KLUniversity, Vijayawada	Admitted in 2021 (under my external Supervisor ship		
	6.	Shravana Bhargavi	Ph.D, (Part –Time) Andhra University Visakhapatnam	Admitted in 2022		
	7. 8.	M.Diana	Ph.D (Full time) Andhra University, Visakhapatnam Ph.D (Full time)	Admitted in 2022		
	Ĩ	Thrisandya	Andhra University, Visakhapatnam	Admitted in 2023		
Editorial Board			al Board of "International Journal			
Member	Aquatic Sciences (IJCA)" An International Journal of KY Publications, India.					
Membership in Professional Bodies	 Indian Liquid Crystal Society (ILCS). The Indian National Science Congress Association (INSCA). Instrumental Society of India (ISOI). Indian Laser Association (ILA). Indian Crystal Growth Association (ICGA) Indian Association of Physics Teachers (IAPT). Indian National Trust for Art and Cultural Heritage (INTACH). 					
Research appointments	> > >	 Appointed as Member- Departmental Research Committee(DRC in Physics) for the research review meetings of Krishna University Appointed as internal research supervisor in physics Krishna university 2015-2019 				
Author of	 Junior Intermediate Physics Question Bank (Vol. I &II), Vikram Publishers, Vijayawada, Krishna Dt., A.P., India. III B.Sc, Modern Physics (P IV, T.M. & E.M) Centre for Distance Education- Acharya Nagarjuna University, Guntur, A.P., India. 					

BOOK Chapter - Microscopy G. Griridhar, RKNR 2017 61412	Book s/Book Chapters	S.No.	Book Title/ Book Chapter	Authors	Publisher and Year	ISBN-No.
Methods for Nanomaterials Characterization – Confocal Raman Spectroscopy BOOK Chapter – 3 Thermal and Rheological measurement techniques for Nanomaterials Characterization . BOOK Chapter 9 Thermal and Rheological measurement techniques for Nanomaterial Characterization . BOOK Chapter 9 Thermal and Rheological measurement techniques for Nanomaterial Characterization . BOOK Chapter 9 Thermal and Rheological measurement techniques for Nanomaterial Characterization . Administrative Appa Rao 1. Appointed as Co-ordinator . Advanced Analytical Laboratory (AAL) in 2022, Andhra University Visabiaparama. 2. Appointed as Research Supervisor in Physics to Andhra University, Visabiaparama, on 10-02-2022 Wirded as NAAC Coordinator to The Hinda College from 2018-2019 4. Acced as DRG meaterly (Research Activity) on Kishan University, visabiaparama, on 10-02-2022 The Appointed in Research Supervisor in Physics to Andhra University, Visabiaparama, on 10-02-2022 The Appointed in Research Supervisor in Physics to Andhra University, Visabiaparama, on 10-02-2022 Wirded as NAAC Coordinator for 18 Hinda College from 2018-2019 The Appointed in Research Supervisor of Risband University, on 29-07-2017. 5. The Appointed in Research Supervisor of Risband University, Machiliparama during the period of three year from 2016-2019 by Government of Analtra Parladab. 7. Appointed as Timance committee member of Risband University, Machiliparama during the period of three year from 2016-2019 by Government of Analtra Parladab. 7. Appointed as Timance committee member of Risband University, Machiliparama during the period of three year from 2016-2019 by Government of Analtra Parladab. 8. Acted as Coordinator for Phying Squads to the P.G. Is senseter end examinations of Krishan University on 02-04-2012 10. Acted as Coordinator for Phying Squads to the P.G. Is senseter end examinations of Krishan University from 15-08-2011 11. Acted as Coordinator for Phying Squads to the P.G. Is senseter end examinations of Krishan University from 16-08-2011 11.		1	Methods in Nanomaterials Characterization - X-ray Microanalysis and Electron	RKNR. Manepalli, Gudimalla.		
Rheological measurement techniques for Nanomaterials Characterization. BOOK Chapter — 9 Thermal and Rheological measurement techniques for Nanomaterial Characterization. BOOK Chapter — 9 Thermal and Rheological measurement techniques for Nanomaterial Characterization. Administrative Appointments 1. Appointed as Co-ordinator , Advanced Analytical Laboratory (AAL) in 2022, Andhra University Visakhapatnam, on 10-02-2022 3. Worked an NAAC Coordinator to The Hindu College from 2018-2019 4. Acted as DRAC Coordinator to The Hindu College from 2018-2019 5. As member in the meeting expert committee to finalize the tender and entrust the job of supplying manpower on 1749-2016. 6. Appointed an Executive Council member of Krishna University, Machilipatnam during the period of three year from 2018-2019 by Government of Andhra Pracled 7. Appointed an Finance committee nember of Krishna University, Machilipatnam during the period of three year from 2018-2019 by Government of Andhra Pracled 8. Appointed an Finance committee member of Krishna University, Machilipatnam during the period of three year from 2018-2019 by Government of Andhra Pracled 9. Appointed an Finance committee nember of Krishna University, Machilipatnam during the period of three year from 2018-2019 by Government of Andhra Pracled 9. Acted as a Conditionator for Plying Squads to the VI Semester (P.G) semester end examinations of Krishna University from 20-03-2011 9. Acted as a Conditionator for Plying Squads to the P.G II semester end examinations of Krishna University from 20-03-2011 10. Acted as Conditionator for Plying Squads to the P.G II semester end examinations of Krishna University from 20-03-2011 11. Acted as Coordinator for Plying Squads to the P.G II semester end examinations of Krishna University from 20-03-2011 12. Acted as Coordinator for Plying Squads to the P.G II semester end examinations of Krishna University from 20-03-2011 13. Acted as a Coordinator for Plying Squads to the P.G II semester end examinations of Krishna University from 20		2	Methods for Nanomaterials Characterization – Confocal	RKNR. Manepalli, Gudimalla.		
Rheological measurement techniques for Nanomaterial Characterization. RKNR Manepalli, Gudimalla. Appa Rao		3	Rheological measurement techniques for Nanomaterials	RKNR. Manepalli, Gudimalla.		
Appointments 1. Appointments 2. Appointed as Co-ordinator of The Hindu College from 2018-2019 4. Acted as DRC member (Research Activity) to Krishna University, Visiakhapatnam, on 10-02-2022 3. Worked as NAAC Coordinator to The Hindu College from 2018-2019 4. Acted as DRC member (Research Activity) to Krishna University, on 29-07-2017. 5. As member in the meeting expert committee to finalize the tender and entrust the job of supplying manpower on 17-09-2016. 6. Appointed as Executive Council member of Krishna University, Machilipatnam during the period of three year from 2016-2019 by Government of Andhra Pradesh 7. Appointed as Finance committee member of Krishna University, Machilipatnam during the period of three year from 2016-2019 8. Acted as Coordinator for Flying Squads to the VI Semester (P.G) semester end examinations of Krishna University on 02-04-2012 9. Acted as coordinator for Flying Squads to the B.Ed., examinations of Krishna University from 05-08-2011 to 13-08-2011 10. Acted as Coordinator for Flying Squads to the P.G II semester end examinations of Krishna University from 14-08-2011 11. Acted as Coordinator for Flying Squads to the P.G semester end examinations of Krishna University from 14-08-2011 12. Acted as Coordinator for Flying Squads to the P.G semester end examinations of Krishna University from 19-03-2011 to 15-03-2011 13. Acted as Coordinator for Flying Squads to the P.G semester end examinations of Krishna University from 19-03-2011 to 15-03-2011 14. Acted as Coordinator for Flying squads for Krishna University UG First year examinations from 01-03-2011 to 15-02-2012 15. Acted as coordinator for Flying Squads to the MBAMCA 1st semester end examinations of Krishna University from 18-01-2011 to 04-02-2011 16. Acted as Coordinator for Flying Squads to the MBAMCA 1st semester end examinations of Krishna University conducted in Siddartha college of arts and sciences, Vijayawada from 27-12-2010 to 03-01-2011 17. Appointed as Teacher Associate to conduct the spot valuation c		4	Rheological measurement techniques for Nanomaterial	RKNR. Manepalli, Gudimalla.		
rr		2. 3. 4. 5. 6. 7. 8. 9. 10.	Visakhapatnam. Appointed as Research Supervisor in Physics to A Worked as NAAC Coordinator to The Hindu Coll Acted as DRC member (Research Activity) to Kri As member in the meeting expert committee to fit 17-09-2016. Appointed as Executive Council member of Krish from 2016-2019 by Government of Andhra Prade Appointed as Finance committee member of Krish from 2016-2019 Acted as Coordinator for Flying Squads to the University on 02-04-2012 Acted as coordinator for the appointment of Praccourses from 03-02-2012 to 15-02-2012 Acted as Coordinator for Flying Squads to the B.E 08-2011 Acted as Coordinator for Flying Squads to the P.C.	andhra University, Visalege from 2018-2019 shna University, on 29-nalize the tender and entima University, Machilipsh and Univers	ckhapatnam, on 10-02-207-2017. Trust the job of supplying patnam during the peripetnam during the peripetnam during the peripetnam during the peripetnam during the first enterties for the first shna University from (ng manpower or od of three years od of three years tions of Krishna and second UC

Appointed as chairman UG Board of Studies in physics, Krishna University Machilipatnam in 2020 & Appointed as Member Board of studies of UG Physics, Krishna University since 2. Appointed as Internal research faculty member of physics to conduct research review meetings and free talks. Acted as University representative in Physics Board of Studies to KBN College, Vijayawada from 2012, 2014, 2017, 2018 and 2019 appointed by Krishna University. Appointed as University Nominee in Physics Board of Studies in Sri Durga MalleswaraSiddarthaMahilaKalasala (Autonomous), Vijayawada in 2011-12, 2013-2014, 2016-17, and 2017-18 appointed by Krishna University. Appointed as University Nominee in Physics Board of Studies in Sri Durga MalleswaraSiddarthaMahilaKalasala (Autonomous), Vijayawada in 2011-12, 2013-2014, 2016-17, and 2017-18 appointed by Krishna University. Appointed as University nominee to the Academic council of A.G and S.G Siddhartha Degree College of Arts & Science (Autonomous), Vuyyurufrom 2017-18 and University nominee - BOS - Physics in 2014-16, 2018-2020. Appointed as University Nominee in Physics Board of Studies to Andhra Loyola College (Autonomous), Vijayawada from 2011-14, 2016-18 appointed by Krishna University. Appointed as University nominee to the Board of Studies in Physics in MontessoriMahilaKalasala (Autonomous) Vijayawada from 2016-2019 **Extra-curricular** Worked as N.S.S (National Service Scheme) Programme Officer and conducted & Community Blood donation camps outreach Special camp at S.N.Gollapalem village near Machilipatnam, Jan. 31-feb.6th Activities District Level Youth Leadership Training programme (YLTP), March 27-29, 2010, Special camp at Seetharama Puram, Bandar mandalam, Oct.9-15, 2010, Special camp at S.N.Gollapalem (B.V.Thota), Bandar Mandalam, from Jan.11-17, 2011. Various service programmes like Clean & Green, World Aids Day, Gandhi Jayanthi, > World' Literacy day, World Peace day, World Food Day, Pingali Jayanthi, Seminars to volunteers by eminent persons etc in the Campus. Special camp at Chittipalem, Arisepalli gram panchayathi, Bandar Mandalam, Krishna Dt, from December 21-27, 2011. 2. Worked as Vice President to Audio Visual Education in A. J Kalasala, India. Appointed as Nodal Officer (2009-11) in Red Ribbon Club, conducted Orientation Programme about AIDS and conducted Aids Awareness rally. Acting as Secretary of the Alumni Association of the George Coronation Elementary & High School, Machilipatnam, Krishna Dt., A.P., India and successfully conducted the centenary celebrations in 2010 and provided infrastructure to the School (Lab.Equipment, Books Furniture in rooms etc.,). Conducting the Medical camps (Eye camps) in the School premises and providing Cataract operations with free of cost for the poor under the supervision of Sankara eye hospitals, Guntur, A.P., India regularly by the Alumni Association since 2011. Given Guest Lectures in 30 different reputed colleges in Andhra Pradesh, on the topics Guest like Quantum mechanics, X-ray diffraction in crystals, Liquid Crystals, Nano-Lectures technology, Electricity and Magnetism, Molecular Spectroscopy, Chemical bonding, Renewable and non- Renewable Energy sources. India Radio Talks Given a Talk on "NANO TECHNOLOGY LO NOOTANA PARISODHANALU" Broadcasted by ALL INDIA RADIO, Vijayawada, Krishna Dt., A.P., India on 16-12-2016. Given talk on "Cosmic Kiranalu" broad casted by ALL INDIA RADIO, Vijayawada, Krishna Dt., A.P., India on 09-08-2017. "ELECTRONIC Given talk on PARIKARALALO SENSARLA PRADDHANYATHA" broad casted by ALL INDIA RADIO, Vijayawada, Krishna Dt., A.P., India on 07-09-2018. **Orientation Course:** Participated in the U.G.C. – Sponsored Orientation Cource from 03-03-2004 to 27-03-2

Orientation and Refresher courses participated:

> Orientation Course (N.S.S):

Participated in the 92nd orientation course Organized from 21-10-2009 to 30-10-2010 by the N.S.S. Training and Orientation Centre, Andhra University, Visakhapatnam held at Acharya Nagarjuna University, Guntur, India.

> Refresher Course I

Participated in the U.G.C. sponsored Refresher Course in the subject Information Technology from 22-02-2010 to 13-03-2010(108 Contact Hours) and obtained A Grade at Academic Staff College, Sri Venkateswara University, Tirupati-517502, A.P, India

> Refresher Course II

Participated in the U.G.C. sponsored Refresher Course in the subject 'Physics' from 26-04-2010 to 15-05-2010 and obtained A Grade at Academic Staff College, Himachal Pradesh University, Shimla-171 005, India.

> Refresher Course III:

Participated in the U.G.C. sponsored Refresher Course (3rd) in the subject"Nano Science and Nanotechnology" from 08-12-2011 to 28-12-2011 and obtained A Grade at Academic Staff College, University of Madras, Chennai, India.

Publications

Scopus indexed:60

<u>UGC</u> indexed: 10(attached in the link google drive) Peer reviewed: 07(attached in the link google drive)

Total : 77

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- AR-ESIHE and ARS-ESIHE-based image enhancement methods on 9oba pure and nano dispersed liquid crystalline compound G.Srilekha, B.T.P.Madhav, M.Sujatha, P.Pardhasaradhi, <u>R.K.N.R.Manepalli</u> & M.C.Rao, Mol.Cryst.Liq.Cryst., Vol.702(1), 2020, P.No. 1-20,
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- Simultaneous characterization and dilatometric studies on liquid crystalline N- (p-n-decyloxyanddecyloxybenzylidene)-p-toluidenes, P. V. Datta Prasad, M. Ramakrishna Nanchara Rao, J.Lalitha Kumari and V. G. K. M. Pisipati, Physics and Chemistry of Liquids, Vol. 47(2), 2009, P.No.123-132...
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- 58. Studies of the Orientational Disorder at the Isotropic to Smectic-F interface, S.Padmaja, <u>M. Ramakrishna</u> <u>Nanchara Rao</u>, P. V. Datta Prasad, V. G. K. M. Pisipati, Z.Naturforsch, Vol.60a, 2005, P.No.296-300
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Papers published in International Conferences/seminars

- "Analysis of rainfall activity over Allahabad region during 2019", M.C. Rao1, Y. Dasaradhudu, B.T.P. Madhav, <u>RKNR Manepalli</u>, N.Umakanth, N. Ranga Babu and N. Krishna Mohan, AIP Conference Proceedings 2357, Vol. 030031, 2022; P.No: 1-5 https://doi.org/10.1063/5.0080518
- Factors influencing vegetation on Guwahati region during 2010-2015,M.C. Rao1, K. Lakshmi, M. Seshu Kumar, B.T.P. Madhav, <u>RKNR Manepalli</u>, N.Umakanth and N. Ranga Babu AIP Conference Proceedings 2357, Vol.040021, 2022; P.No.1-5 https://doi.org/10.1063/5.0080528
- Study of vegetation related parameters over Shillong region during winter and postmonsoon seasons, N. Ranga Babu, N.Umakanth, M.P.D. Parimala, K. Koteswara Rao, B.T.P. Madhav, <u>RKNR Manepalli</u> and M.C. Rao Cite as: AIP Conference Proceedings 2357, Vol.040022, 2022; P.No:1-6 https://doi.org/10.1063/5.0080527
- Analysis of convection related parameters on heavy rainfall event over Kerala during August, 2018, N. Ranga Babu , M.S. Shekhawat, R. Naveen , B.T.P. Madhav , <u>RKNR Manepalli</u> , N. Umakanth and M.C. Rao, AIP Conference Proceedings 2357, Vol.030023, 2022; P.No:1-5, https://doi.org/10.1063/5.0080524
- Convective system over Sami region on 2nd October, 2013, N.Umakanth1, M.S. Shekhawat, B.T.P. Madhav, <u>RKNR Manepalli4</u>, N. Ranga Babu, T. Satyanarayana and M.C. Rao, AIP Conference Proceedings 2357, Vol.030024 2022 P.No:1-5; https://doi.org/10.1063/5.0080520
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- Influence of ZnO nanoparticles dispersion in Liquid Crystalline compounds –Experimental studies, <u>RKNR Manepalli</u>*, G.Giridhar, P.Pardha saradhi, P.Jayaprada, Tejaswi, K.Sivaram, Ch.Mohana Kumar, VGKM Pisipati, Materials Today Proceedings, Vol.5(1), 2018, P.No. 2666- 2676,
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- Estimation of Anhormonic and Beyer's Non-Linearity Parameter, (B/A) for p-n-alkoxy benzoic acids— A
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 48-85, ISSN 2229 5216.
- Structural and Vibrational Studies on CO⁺² Doped SnO₂ Thin films, K.Ravindranadh, S.Shantkriti, M.RamakrishnaNanchararao*, G.Nagarjuna, HanumanthaRao, M.C.Rao, Journal of Chemical concepts, Vol.02, 2016, P.No. 24-27, ISSN 2395-4256.

- Characterization and Mesomorphic behavior of liquid crystal with dispersed Fe₃O₄ nanoparticles, <u>RKNRManepalli</u>*,G.Giridhar, M.C. Rao, P.Pardhasaradhi, K.Sivaram, VGKM Pisipati, Carmelight – A multidesciplinary National Journal, Vol. 12(1), 2016, P.No. 91-101, ISSN: 2319-7064.
- Synthesis, Characterization and HF Technique to Reduce Multiplicative Noise in Nano-dispersed LC Compounds, <u>RKNR Manepalli</u>*, P.Pardhasaradhi, K. Pandian, MC Rao, BTP Madhav and VGKM Pisipati, International Journal of Technochem Research, Vol. 2, 2016, P.No.152-157, ISSN: 2395-4248.
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- 14. Textural Analysis and noise multipicative noise reduction in 120ba Nano-dispersed Liquid Crystalline Compounds using homomorphic filtering technique, <u>RKNR Manepalli</u>*, P Pardha Saradhi, D.Madhavi Latha, D.T.P. Madhav, V.G.K.M.Pisipati, International Journal of Advanced Research in Chemical Sciences (IJARPS), Vol. 2(2A), 2015, P.No.108-112, ISSN 2349-7874.
- Physical and optical absorption studies on Li₂O-Al₂O₃-P₂O₅ doped with Sm₂O₃, M.C.Rao, T.Sri Kumar, M.V. Ramana, M.Rama krishna Nanchara Rao, K. Rama chandra Rao, International Journal of Science and Research (IJSR), Vol. 22014, 2014, P.No.57-60, ISSN (online):2319-7064.
- Synthesis, Characterization and Dilatometric Studies on N-(p-n- Tri/ tetra decyloxy benzylidene)-p-toluidine, S. Sreehari Sastry, K. Vijaya Lakshmi, <u>M.RamakrishnaNanchara Rao</u>, G.Sahaya Bhaskaran and C. Rama chandra Prabhu, Indian J.Phys. Vol. 80(2), 2006, P.No. 173 -176, UGC No. 20848.

National & International Conferences/ Seminars/ Workshops

- Invited talk on Influence of Metal nanoparticles on the optical properties of Liquid Crystals-in UGC recognized one day national Webinar on "Recent outcomes in Materials Chemistry (ROMC-2021) organised by PG Department of Chemistry KVR, KVR & MKR college, Khazipalem on 30th March, 2021.
 - 2. Invited as guest of honor to UGC sponsored National Seminar on "Basic Research and Analysis in Nanoscience (BRAIN-2021) organized by Department of Nanotechnology, Acharya Nagarjuna University, Guntur on 18th &19th March 2021 and given an invited talk on "Enhancement of display properties of Liquid crystals with dispersed Metal Nanoparticles in low weight concentrations".
 - Given anGuest Lecture on "impact of Metal nanoparticles on Liquid Crystalline compounds –
 Enhancement of Display properties" to the Research Scholars and M.Sc., (Physics) students in the
 Department of Physics, Andhra University, Visakhapatnam on 16th March, 2021.
 - Given an invited talk on paper entitled "Impact of Metal nanoparticles on Liquid Crystal displays An
 overview" in the In National Conference IASTLER-2020 on 28th & 29th February 2020 organised by
 Department of Biosciences & Biotechnology held in Krishna University Campus, Machilipatnam, A.P.,
 India
 - Acted as Chair Person and given invited talk on the paper entitled "Switchable Fractal Antenna on a Liquid Crystal polymer substrate for vehicular communication platform" in UGC sponsored National conference on Recent Trends in Nanoscience and Nanotechnology (NSRTN-2020) held in 30th & 31st January 2020 organized by Acharya Nagarjuna University, Guntur Dt., A.P., India.
 - 6. Given presentation on the paper entitled "Image segmentation methods to identify the phase transition studies on Liquid Crystalline p-n-Octyloxy cyanobiphenyl (8ocb) with the dispersion of ZnOnanoparticles" on UGC sponsored National Conference on Recent Trends in Advanced Materials &Characterisation (RTAMC-2020) held in January 29th-30th, 2020 organized by Dept. of Physics, V.S.M. College, Ramachandrapuram, East Godavari District, A.P., India.
 - Acted as Chair Person and given invited talk on the paper entitled "Optical studies of n-OctyloxyCyano biphenyl (8ocb) with dispersed ZnO nanoparticles for display device applications in International conference on Liquid crystalline polymers and nanosystems(ICLCPN-2019) held in 13thto 15th December 2019 at Mahatma Gandhi University, kottayam, Kerala, India.
 - Given presentation on the paper entitled "Spectroscopic studies on Liquid Crystalline p-n decyloxyBenzoicAcid (10oba) with the dispersion of citrate capped Gold nanoparticles s.in 26th National conference on Liquid crystals (NCLC-2019) organized by ChitkaraUniversity, Punjab on 21-23 October 2019.
 - 9. Given invited talk on the paper entitled "Optical studies of n-OctyloxyCyano biphenyl (8ocb) with dispersed ZnO nanoparticles for display device applications" in the International Conference held at Ch.S.D. St. Theresa's college for women (Autonomous) Eluru, Andhra Pradesh, India in collaboration with IMRF Institute of Higher Education & Research, India sponsored by Rashtriya Uchchtar Shiksha Abhiyan (RUSA) during September 27- 29, 2019.
 - 10. Chaired and presented paper entitled "enhancement of optical properties of liquid crystalline p-n-nonyloxy benzoic acid with dispersed Gold nanoparticles" in International conference on advances in minerals, metals, Materials, manufacturing and Modelling (ICAM5-2019), organized by the Department of Metallurgical and Material engineering, National Institute of Technology, Warangal during 25-27, September 2019.
 - Participated in the One day National Workshop on "MATERIAL CHARACTERIZATION TECHNIQUES" held on 18th April 2019 organized by Department of Physics, KL University, Vijayawada, Andhra Pradesh, India.

- 12. Participated in two day national seminar on 'A study on Interaction between Human Society and Natural Environment including Natural Resource Management' held on 24th and 25th Jan 2019 organized by the departments of chemistry, physics and Bio Sciences of Ideal College of Arts and Sciences(A), Kakinada.
- Participated and presented a paper titled 'Synthesis, Characterization and SPIE analysis in pure and Nano dispersed N-(p-n-hexyloxy benzylidene)-p-n-Nonyloxy aniline ' at NCLC 2018 organised by the University of Allahabad, Prayagraj, Uttarpradesh.
- 14. Invited as Chair Person in 2nd International conference on Nano Science & Engineering Applications 2018 held on 4th to 6th October 2018 (UnderTEQUIP) organized by Center for Nano Science and Technology, Institute of Science and Technology JNTUH, Hyderabad in collaboration with Center for Advanced Materials (CAM), Qatar University, Qatar.
- 15. Participated in Post Centenary Diamond Jubilee National Seminar on Recent Trends in Nanobiosensors organized by Department of Inorganic Chemistry, University of Madras, Guindy Campus, Chennai 600 025 during 22-23 February 2018 and Chaired a Technical Session in the National Seminar.
- 16. Delivered Invited talk on "Quantum World" during the One day seminar on "Advances in Quantum Mechanics and NMR Studies" organized by PG Departments of Physics and Chemistry, Andhra Loyola college, Vijayawada, Andhra Pradesh, India on 5th February 2018.
- 17. Participated Two day National Seminar on "Need and Role of Non-Conventional Energy Sourcesfor Sustainable Future" and presented the talk in influence of metal nanoparticles in Liquid Crystals held on 23rd and 24th January 2018, at the Department of Physics, ANR College, Gudivada. Andhra Pradesh, India
- 18. Participated Two day National conference on Signal processing and Communication Engineering Systems (APACES-2018) organized by Dept. of ECE (FIST sponsored) on 4-5 January, 2018 in KoneruLakshmaiah Education Foundation (KLEF), Andhra Pradesh, India.
- Participated in UGC sponsored two day National Seminar on "Physics and Chemistry of Non-Crystalline Materials (PCNCM-2017)" Organized by Department of Physics and Chemistry, Kakani Venkata Ratnam College, Nandigama, Andhra Pradesh, India, during 1st and 2nd December, 2017.
- 20. Participated in UGC sponsored two day National Seminar on "Recent Trends in Chemistry and Physics of Materials" Organized by Department of Chemistry, SRR & CVR Govt. Degree College (Autonomous), Vijayawada, Andhra Pradesh, India, during 15th and 16th September, 2017and presented the Invited Talk on the topic entitled "Enhancement of Birefringence Anisotropy and Order parameter studies".
- 21. Participated in two day National Seminar on "Recent advances in Material Science" Organized by Department of Physics, Andhra University, Visakhapatnam, Andhra Pradesh, India, during 30th, 31st May, 2017 and presented the topic entitled "Influence of ZnO nanoparticles on Liquid Crystals Birefringence and Order parameter studies".
- 22. Invited as Guest Speaker and gave presentation on Influence of metal nanoparticles in Liquid Crystals in three day national level "Nanotechnology Research Conclave-2017" (NRC-2017) during 29th to 31st March 2017 organized by Centre for Nanotechnology, AUCE (A), Andhra University, Visakhapatnam.
- 23. Participated in UGC –SAP sponsored two day National Seminar on "Recent trends in Chemical Speciation, Kinetics and Nanomaterials (RTCSKN- 2017) Organized by Department of Inorganic& Analytical Chemistry, Andhra University, Visakhapatnam, Andhra Pradesh, India, during 3rd and 4th March, 2017and presented the topic entitled "Influence of ZnO nanoparticles on Liquid Crystals Birefringence and Order parameter studies".
- 24. Participated in UGC Sponsored- Two Day International Conference on Emerging Trnds in Chemical, Pharmaceutical, Environmental Sciences & Technology Organized by Department of Chemistry, Pithapur Rajah's Govt. College(Autonomous), in Association with Anveshana Educational and Research Foundation Association if Chemistry Teachers(ACT), Mumbai held during 24th and 25th January 2017 at Pithapur Rajah's Govt. College(Autonomous), Kakinada, Andhra Pradesh, India.
- 25. Participated in National Workshop on Dissemination of Geospatial Technology for Development of Andhra Pradesh In Association with Andhra Pradesh Space Applications Centre(APSAC), Vijayawada on 19th January, 2017 at Zilla Praja Parishad Meeting Hall, Machilipatnam.
- Participated in UGC sponsored National Seminar on "Materials and Applications" (NSMA-2017)
 Organized by Department of Physics, AG&SG Siddhartha College of Arts & Sciences on 7th Jan 2017.
- Participated in International Seminar on Physics and Chemistry of Materials and Applications "ISPCMA-2017" on 4th, 5th, January 2017 at Shree Padmavathi MahilaKalasala, Machilipatnam, Andhra Pradesh, India
- 28. Participated in DST Sponsored National Conference on Recent Innovations in Chemistry for Environment (RICE-16) held on 9th & 10th December, 2016, Organized by Department of Chemistry, KL University, Green Fields, Vaddeswaram, Guntur Dist., A.P., India.
- Participated in the 23rd National Conference on Liquid Crystals (NCLC 2016) conducted during the period December 07-09 2016 in the Department of Applied Physics Indian Institute of Technology, (Indian School of Mines), Dhanbad, Jharkhand. In Association with Indian Liquid Crystal Society.
- Participated in the workshop on "Nano Characterization" on Deember 2, 2016 held at Central Manufacturing Technology Institute, Tumkur Road, Bangalore, India.
- 31. Participated and presented a paper entitled "Vibrational Studies on VO2 Doped SnO2 thin films by Spray Pyrolysis. In the UGC Sponsored National Seminar on "Smart Materials" organized by the Department of Physics during 30th Nov. and 1st Dec. 2016 at J.M.J. College for Women, Tenali, A.P.
- Participated in the National Seminar on Materials and Technology (Namaste-2016) on 19th November 2016, organized by Department of Physics, V.R.Siddhartha Engineering College, Vijavawada, Under TEQIP-II S.C.1.2.

- 33. Acted as Jury Member for district level exhibition and project competetions (DLEPC) from 27th -28th October, 2016, of INSPIRE 2016 held at St. Vincent Plloti English Medium High School, Pedana, Krishna Dt., Andhra Pradesh, India.
- 34. Participated in DBT-MHRD Government of India- New Delhi, Sponsored A two- day National Seminar on "Advances in the Synthesis of Nanomaterials and Their Milti Dimensional Applications in Chemical & Bio- Sciences" Organized by Department of Chemistry during 14th & 15th September, 2016 in Andhra Loyola College(Autonomous) Vijayawada-8. Presented a paper Titled-Effect of ZnO nanoparticles Dispersed in Liquid Crystalline Alkoxy Benzoic Acid- Optical Studies.
- 35. Participated in International conference on Science and Technology: Future Challenges & Solutions (STFCS-2016) conducted by University of Mysore, Mysuru, Karnataka, India during 8th 9th June, 2016 and gave presentation on the topic "Characterization and mesomorphic behavior of liquid crystals with dispersed PdCl2 nanoparticles".
- 36. Invited to one day sensitization programme on "Advanced materials- Research" on 27th July, 2016 at PG Seminar Hall, Andhra Loyola College, Center of excellence Vijayawada conducted by Dept., of Physics and given Lecture on "Influence of metal Nanoparticles on Liquid Crystals".
- 37. Participated in International conference on Advanced Materials and applications (ICAMA-2016) conducted by Center of excellence in advanced materials- Research and Dept. of Mechanical Engineering, BMS College of Engineering, Bengaluru, Karnataka, India during 15th 17th June, 2016 and presented on the topic "Influence of ZnO nanoparticles dispersion in Liquid Crystalline compounds Experimental Studies".
- 38. Participated in National conference on Nanoparticles and characterizationorganized by Department of Nanotechnology, Acharya Nangarjuna University, Nagarjuna Nagar, Guntur, A.P., India, during 28th & 29th March 2016 and given a paper presentation on the "Synthesis, Characterization and Textural Analysis to reduce the Multiplicative Noise in Nanodispersed Liquid Crystalline Compounds using HF Technique." in the conference.
- 39. Participated in International conference on Chemistry for Renewable Energy (ICCRE 2016) organized by PG and Research Department of chemistry(DST-FIST Sponsored) Bishop Heber(autonomous) ,Tiruchirappalli during 25-26 February 2016 and given a paper presentation on the "Mesomorphic behavior of Liquid Crystalline compound with dispersed Zno Nanoparticles –experimental studies" in the conference.
- 40. Participated in 2nd Andhra Pradesh Science Congress [APSC-2016] held at P.B.Siddhartha College of Arts &Sciences Vijayawada during 7-9 November 2016 Organized by A.P. Akademi of Sciences in association with Dr.NTR University of Health Science, Acharya Nagarjuna University & Krishna University...
- 41. Participated and given Oral presentation on the paper entitled "Synthesis, Characterization and Image Analysis technique to reduce the Multiplicative Noise in Nano dispersed Liquid Crystalline compounds" in 22nd National Conference on Liquid Crystals (NCLC -22) organized by Department of Physics, DIT University, Dehradun in association with Indian Liquid Crystal Society from December 21-23, 2015.
- 42. Participated, acted as Chair Person in one session and given invited talk on the paper entitled "Synthesis, Characterization and HF Technique to reduce the Multiplicative Noise in Nano dispersed Liquid Crystalline compounds" at the International conferenceon Nanomaterials and Nanotechnology (NANO-15) held at K.S.Rangaswamy College of Technology, Tiruchengode, India during 07-10, December, 2015.
- 43. Participated and given invited talk on the paper entitled "Effect of Nanoparticles on Liquid Crystals and to reduce the multiplicative noise in nano dispersed Liquid Crystalline compounds using filtering techniques" in the two day UGC sponsored National Conference on "Need and role of nanosciences in the present era" organized by Department of Physics (P.G.), ParvathaneniBrahmayya Siddhartha College of Arts and Science, Vijayawada, A.P. India on 7th and 8th October, 2015.
- 44. Participated and given invited talk on the paper entitled "Influence of Nanoparticles on Liquid Crystals and Image Processing Techniques" in the two day UGC sponsored national seminar of "Trends and Applications of Liquid Crystals" organized by Department of Physics, Andhra Christian College, Guntur Dt., A.P. India on 10th and 11th September, 2015.
- 45. Participated and given invited talk on the paper entitled "synthesis, characterization and Homomorphic Filtering technique to reduce multiplicative noise in nano dispersed LC compounds" in the two day DST sponsored national seminar of "Emerging Trends on emerging trends of advanced functional materials NCAFM-2015" organized by Department of Physics, K.L.University, Vaddeswaram, Guntur Dt., A.P. India during 3rd and 4th September, 2015.
- 46. Participated in "Workshop on standardizing Question paper setting under CBCS pattern" (under academic reforms of RashtriyaYcgcgatarUchchatar Shiksha Abhiyan) and contributed questions for the preparing the Question bank in Physics as per CBCS pattern for UG First Semester of Akkineni Nageswara Rao College, Gudivada, Krishna District., A. P., India, on 27-08-2015.
- 47. Participated and given invited talk on the paper entitled "synthesis, characterization in HF technique to reduce multiplicative noise in nano dispersed LC compounds" in the two day UGC sponsored national seminar of "Emerging Techniques in Physics tacking and Training (ETPTT 2015)" organized by

- Department of Physics, Sri Velagapudi Ramakrishna Memorial College, Nagaram-522 268, Guntur Dt., A.P. India on 7th and 8th August, 2015.
- 48. Participated in the National Workshop on recent trends X-ray diffraction techniques (NWRTXRD-2015) held during 29th-30th May, 2015 at the
- Participated and given invited talk on liquid crystals in the two day UGC sponsored national seminar on "Recent trends in Synthetic Organic & Natural Product Chemistry (RTSONPC-2015)" organized by Department of Chemistry, Noble College, Machilipatnam, India on 20th and 21th February- 2015.
- 50. Participated and given invited talk on liquid crystals in the two day UGC sponsored national seminar on "Multi Functional Materials Synthesis and Applications (MFMSA-2015)" organized by Department of Physics, The Hindu College, Machilipatnam, Andhra Pradesh, India on 23th and 24th January, 2015.
- 51. Participated the two day UGC sponsored national seminar on "Advanced Technology Oriented Materials, Atom-2014" organized by Department of Physics, Crystal Growth & Nano Science Research Center, Government College(A), Rajahmundry, Andhra Pradesh, India on 8th -9th December, 2014.
- 52. Participate and given oral presentation in the DST-New Delhi, CSIR-New Delhi & APSCHE., Hyderabad sponsored two day national seminar on "The role of Natural Product Chemistry in Drug Discovery (RNPCDD-2014) organized by Department of Chemistry Krishna University, Machilipatnam- 521 001, Krishna Dt, Andhra Pradesh, India held during 11-12th September 2014 at Siddartha Academy Auditorium, Vijayawada, India.
- 53. Participated the UGC sponsored national seminar on "Recent trends in Chemistry" held at K.R.K.Govt. Degree College, Addanki, A.P., India on 22nd, 23rd August- 2014.
- 54. Participated and presented poster presentation in the International Conference on advances in new materials conducted by Department of Inorganic Chemistry during 20th & 21st June 2014 at University of Madras, Chennai.
- 55. Participated and presented oral presentation on "Dispersive power in 50.m liquid crystals" in 20th National Conference on Liquid Crystals (NCLC-2013) on December 16-18, 2013, organized by Department of Chemistry, Manipal Institute of Technology, Manipal University, Manipal in association with Indian Liquid Crystal Society.
- 56. Participated in the AICTE sponsored two day national seminar on "Recent trends in Surface Science and Nanotechnology organized by the Department of Science and Humanities, PottisriramuluChalavadiMallikarjuna Rao College of Engineering & Technology- Vijayawada on 29th & 30th Novermber 2013.
- Participated National Seminar on "Multi Functional Materials" (NSMFM-2013) Organized by Department of Physics, Andhra Loyola College (Autonomous), Vijayawada, Sponsored by University Grants Commission, New Delhi, held on march 6th &7th 2013.
- 58. Participated as resource person in Indian Association of Physics Teachers (IAPT) Sponsored Two-day National workshop on "Effective Teaching of Physics" held at Sri S.V.R.M College Nagaram, Guntur Dt. India on 17th and 18th October- 2012, organized by Department of Physics and have given presentation on Quantum Mechanics-Origen of new technological revolutions.
- 59. Participated U.G.C. Sponsored One-day National seminar on "Extending the academic Library services to the Public" in collaboration with Prof.Kaula Endowment for Library and Information Science held at A.N.R. College, Gudivada, India on 29th September 2012.
- Participated the seminar and presented the guest lecture on "Nanotechnology for the career development of students" organized by Dr. S.R.K.Govt.Arts college, yanam, Govt. of Puducherry on 13th March 2012.
- 61. Participated U.G.C. Sponsored Two-day National workshop on "Soft Materials" held at J.M.J.College for Women, Tenali, Inida on 24th and 25th January- 2012, organized by Department of Physics.
- Participated National Seminar On Recent Trends in Information and Communication Technology Organized by Department of Computer Science, Krishna University, Machilipatnam held during January 7-8, 2012.
- 63. Participated APSCHE, Hyderabad, Andhra Pradesh & AP Pollution Control Board, Vijayawada sponsored national Conference on "Recent Trends in Pharmaceutical Chemistry (RTPC-2011)" organized by Department of Chemistry, Krishna University, Machilipatnam Andhra Pradesh, India from 30 31st January 2011.
- Participated DST, CSIR, DRDO sponsored International Conference on "Nanotechnology and Advanced materials" in Gitam University Visakhapatnam, Andhra Pradesh, India from 17 – 19 December 2010.
- 65. Participated the U.G.C, ISRO, GUJCOST, IUCAA, PRL & IPR sponsored 25th Annual Indian Association of Physics Teachers (IAPT) Convention & Symposium on 'Frontiers of Astronomy and Astrophysics & Space Science' organized by Department of Physics in association with Academic Staff College, Saurashtra University, Rajkot from 21-23 October, 2010.
- Participated AICTE sponsored National seminar on "Nano Materials in Engineering Chemistry" organized by Department of Chemistry, Velagapudi Ramakrishna Siddartha Engineering College, Vijayawada- 520 007, A.P. India, on 13-09-2010.

- 67. Participated National Conference on Insight in to Nano materials held at Andhra Loyola College on January 5th and 6th, 2010. Organized by Department of Chemistry, sponsored by the University Grants Commission. I have given the Oral presentation on "Advantages of Nano particles in real life".
- 68. Attended National Seminar on "Nano Technology" held at SRR & CVR Government Vijayawada, India on 11th December, 2009 organized by Department of Biochemistry.
- Attended U.G.C. Sponsored National Seminar on "NanoTechnology" held at J.M.J. College for Women, Tenali, Inida on 21st and 22nd August 2009, organized by Dept. of Chemistry.
- Attended U.G.C. Sponsored National Level Workshop on "Managing Self and Others" held on 13th and 14th August 2009 at The Hindu College Campus, Machilipatnam organized by Post Graduate Department of Commerce, The HinduCollege, Machilipatnam, India.
- Attended International Three day seminar on "Science and Technology of Glass Materials" organized by the Department of Physics, Acharya Nagarjuna University, and Nuzvid Campus, Andhra Pradesh, India during 16-19, March 2009 held at University Campus, Acharya Nagarjuna university, India.
- Attended U.G.C. Sponsored National Seminar on "Restructuring of Higher Education- Recommendations
 of the National Knowledge Commission held on 8th and 9th November 2008 at The Hindu College,
 Machilipatnam, India.
- 73. Participated National Symposium on Condensed Matter Physics" (sponsored by DST, CSIR, DIT, DRDO & DAE-BRNS) Or" organized by the Post Graduate Department of Physics, Andhra Loyola College, Vijayawada, India from 15th to 17th November 2007 and presented the oral presentation on "Dilatometric and Birefringence Studies on Liquid Crystalline Alkoxy Benzoic Acids".
- Attended State level Seminar on U.G.C. Sponsored Inter Disciplinary Workshop on Contemporary Issues and Developments-"Preparing for the future" held on 17th and 18th February 2007 at The Hindu College, Machilipatnam, India.
- 75. Participated in the CSIR sponsored National Syposium on Recent trends in Material Science" organized by the Post Graduate Department of Physics, Andhra Loyola College, Vijayawada, India from 9th to 11th February 2006 and I have given oral presentation on Synthesis, characterization and Phase Transition studies on "N(p-n Pentyl/pentyloxyBenzylidene)-p-nHexadecyl/ Hexadecyloxy anilines (5.016, 50.016 and 5.16)".
- 76. Attended International Three day seminar on "Recent Trends in Liquid Crystal Research" conducted by India-United Kingdom Science Networks, Department of Science and Technology, New Delhi and Royal Society, London at Raman Research Institute, Bangalore, India from November14-16,2006.
- Attended State level Seminar on "Recent Advances in Physics" Organized by Department of Physics, A.N.R. College, Gudiwada, India on 11th November 2005.
- 78. Attended National Seminar on "The Impact of Physics in modern civilization" held at J.M.J. College for Women, Tenali, India on 23rd and 24th June 2005 and presented a paper titled "Synthesis, characterization and Dilatometric studies on N-(p-n-tridecyloxy benzylidene)-p-toluidine, 13O.1.
- Participated 13th National Conference on Liquid Crystals held during 9th -11th October, 2006 organized by Department of Physics, Manasagangotri, Mysore, India and I have given oral presentation on "Dilatometric and Birefringence Studies on Liquid Crystalline Alkoxy Benzoic Acids".
- 80. Participated 14th National Conference on Liquid Crystals held during December 17th-19th 2007, organized by Department of Physics, North Bengal University, Siliguri, West Bengal, India and presented the oral presentation on "Density,Birefringence and Order Parameter Studies on Liquid Crystalline N-(p-nmethyloxy and ethyloxy benzylidene)-p-n dodecyl and tetra decyl anilines".
- 81. Participated and presented a poster on Liquid Crystals in 19th National Conference on Liquid Crystals (NCLC-19) held during November 21-23, 2012, organized by Thapar University, Patiala, India and Indian Liquid Crystal Society.
- 82. Participated the National Seminar on "Higher Education for the 21st Century" organized by Affiliated College Teachers Association, Andhra Pradesh from 28th to 30th December 1997, at Andhra Layola College, Vijayawada, India.

II. International Conferences attended in other countries.

- Participated in 2nd International Symposium on Liquid Crystals: Science and Technology from 17-19 July, 2011 at Changzhou University, Changzhou, CHINA and have given presentation on "Orientational order parameter and molecular polarizability studies in Benzylidene Anilines".
- Participated and delivered the presentation on the paper entitled "Synthesis, Characterization and Textural Analysis to reduce the multiplicative noise in nano dispersed liquid crystalline compounds" at the 4th World Conference on Applied Sciences Engineering and Technology 4th WCSET 2015) at Graduate School of Science and Technology, kumamoto University, JAPAN during 24th 26th October 2015 and got Best Paper Award in the conference.

Invited as Key note Speaker for Technical Session on Applied Sciences of 6 th World Conference on Applied Sciences, Engineering & Technology (WCSET-2017) during 26-27, August 2017 organized by Universitas Muhammadiyah Ponorogo, Ponorogo, INDONESIA and presented the on "Influence of metal nanoparticles dispersed in Liquid Crystals-Optical Studies".
> Invited to present the talk on the paper entitled "Synthesis and characterization of citrate capped silver nanoparticles dispersed in Liquid Crystals -Optical Studies" in 4th International conference on Earth Sciences and Engineering during 29th-31st August 2017 organized by Andalas University, Padang, West Sumatra, Padang, INDONESIA.Acted as Chair Person in one session of the Conference and also got Best Presenter Award in the Conference.

Achievements





Dr. M.Ramakrishna presenting the seminar in the second International Liquid Crystal Dr. M.Ramakrishna presenting the Poster in the second International Liquid Crystal Symposium in Changzhou University, China on 18th July, 2011. Symposium in Changzhou University, China on 19th July, 2011.





Dr. M.Ramakrishna Secretary, Alumni Association of G.C.H.School, Machilipatnam, Presenting Cheque of Two Lakh rupees to Sri S.Sailajanadh, Minister of Primary education on the eve of Centenary Celebrations of the school on 29th January, 2012.

Achievements



the eve convocation function, in the Dichmann Auditorium Hall, ANU in 2009.



Receiving Doctorate award from Prof. Haragopala Reddy, Vice Chancellor, on Sri Giridher Gomango, Former Chief Minister, Odissa and Former Minister of A.P. Sri Battam Sri rama moorthy presenting the Best Citizen award organized by A.P. State Cultural association. in Visakhapatnam on January, 12th, 2012.



Dr.M. Ramakrishna receiving best teacher award from Dr.C.Narayana Reddy, organized by Sri Thyagaraya Gana Sabha in Hyderabad on September $\mathbf{23}^{rd}$, 2010.



Receiving Best N.S.S.Unit Award from Prof. K.Viyyanna Rao, Vice Chancellor, ANU, in the Venugopala Reddy seminar halll, ANU for the academic year 2010-2011.

State Best Teacher Award-2012





Dr. M. Ramakrishna receiving Andhra Pradesh State best teacher award from Deputy Chief Minister Shri Damodara Raja Narasimha Education Minister Shri Kolusu Pardha Saradhi Garu in Ravinda Bharathi A/C Auditorium hall, Hyderabad on 05-08-2012.



Receiving Best Paper Presentation Award From Prof. Suchi Toril, Convener of the International Conference at Kumamoto University, Japan.on 25th October, 2015.

As Keynote Speaker in University of Ponorogo Ponorogo, Indonesia on 26th, August, 2017.



Best PresenterAward in Andalas University,

Best Researcher Award: EET CRS

Padang on 30th August, 2017.

Research Wing for Excellence in professional Education and Industry. TOP -25 LIST OF AWARDS -2018, 18-03-2018 in Hyderabad.

UGC Sponsored Research Laboratory in Department of Physics, for Major Research Project





Single Pan Balance (Dhona) \underline{D} igital balance- 0.1mg accuracy \underline{M} Magnetic stirrer & Ultrasonic bath



Synthesis of nanoparticles

Hot Plate

Centrifuge (Remi make)



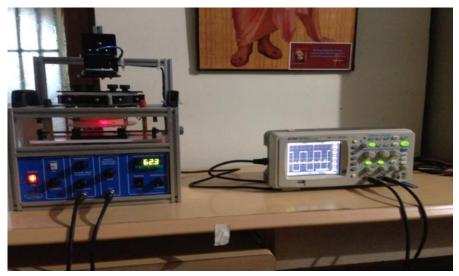
Synthesis of nanoparticles & Seperating funnel Hot air Oven with Digital setup



Polarizing optical microscope (SDTECHS make) The textural and phase transition temperatures



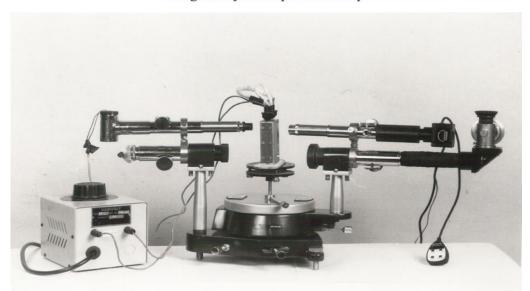
Modified Spectrometer – Determination of refractive indices ($n_e \&\ n_o$) of Liquid Crystals



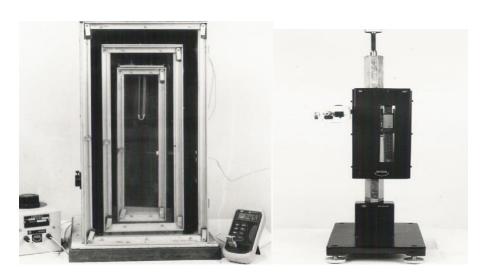
Indigenously designed and fabricated Digital Birefringence Spectrometer



Indigenously developed Microscope



Setup fabricated indigenously to observe textures and measure birefringence simultaneously



Dilatometer Setup

Digital Cathetometer with CCD

Session-1 Speech

Nano materials, which are materials with structures and properties at the nanoscale (typically with dimensions less than 100 nanometers), have become increasingly important in various aspects of daily life. Here are some ways in which nano materials play a crucial role:

Nano fabrics with properties like stain resistance, water repellency, and enhanced durability are used in clothing items. Nano-sized particles in sunscreens provide better UV protection without leaving a visible residue on the skin. Nanomaterials are used in the manufacturing of smaller and more efficient electronic devices, such as ultra-thin displays and faster processors. Nano materials enable targeted drug delivery, enhancing the efficacy of medications while minimizing side effects. Nanotechnology is employed in the development of highly sensitive diagnostic tools for detecting diseases at an early stage. Nano materials are used in water purification systems to remove contaminants and improve water quality.

Nano materials contribute to the development of advanced air filtration systems, capturing particles more effectively. Nanostructured materials enhance the efficiency of solar cells, making solar energy more viable and cost-effective. Nanotechnology is used to improve the performance and lifespan of batteries in various electronic devices. Nano materials are used in coatings for buildings and infrastructure to provide protection against weathering, corrosion, and microbial growth. Nano additives enhance the strength and durability of concrete, leading to more resilient structures. Nano materials are employed in food packaging to improve barrier properties, preventing spoilage and extending shelf life. Nanotechnology is explored for enhancing nutrient delivery in food products. Nanotechnology plays a crucial role in the development of high-capacity and compact data storage devices.

The impact of nano materials on daily life continues to grow as research and development in nanotechnology advance, leading to innovations in various fields and contributing to the improvement of products and processes.



RESOURCE PERSON-2

Profile of Maruthi Manoj Brundhavanam

Maruthi Manoj Brundavanam

Associate Professor Department of Physics

Indian Institute of Technology Kharagpur

India

Email: bmmanoj@phy.iitkgp.ac.in

Ph: +91-3222-283836

ORCID No: 0000-0003-0442-3599

Date of Birth: 9th May 1982

Educational Qualifications:

• **BSc**: Andhra Jateeya Kalasala (Under Acharya Nagarjuna University), Machilipatnam, A.P. (2002)

• MSc: University of Hyderabad, Hyderabad, Telangana (2004)

• **PhD**: University of Hyderabad, Hyderabad, Telangana (2010)

Current Research Interests:

- Singular Optics
- Speckle Imaging and Correlation Optics
- Optical interferometry and applied optics

No of PhD Students:

Awarded: 2 (Individual) (1 Joint)

On Going: 3 (Individual)

1 (Joint)

No of UG/PG projects supervised in Optics: 18

No of Sponsored Projects Completed: 4 (as PI) **No Projects on going**: 3 (1 as PI and 2 as Co-PI)

Awards:

- INSPIRE Faculty Award, DST (July, 2013)
- Young Scientist Award from Dr. K. V. Rao scientific society (April, 2009)
- CSIR-UGC Fellowship (June, 2004)
- Recipient of DVR Memorial Medal in Physics (B. Sc, 2002)

Memberships:

- Senior Member, Optica (Formerly OSA)
- Optical Society of India (OSI)
- Indian Laser Association (ILA)

Publications (Journals):

- 1. Tracking nanoscale perturbation in active disordered media, (Phy. Rev. A (Accepted)
- 2. Aberration insensitive twisted wavefront detection using polarization correlation J. Opt (IOP Publications) 24 125604 (2022).
- 3. Spectral switch anomalies in a Sagnac interferometer with respect to a Galilean frame, J. Opt. Soc. Am. A (Optica Publishing Group, Formerly OSA) 39 1976 (2022).
- 4. Probing Spin Dynamics of 2D Excitons with Twisted Light, ACS Photonics (ACS Publication) 9, 3351 (2022).
- 5. Measuring obscured OAM spectrum using Stokes fluctuations in a non-interferometric approach, Optics and Lasers in Engineering (Elsevier) 155 107065 (2022).
- 6. A Steady-State Approach for Studying Valley Relaxation Using an Optical Vortex Beam, Nano Letters (ACS Publication) 22 (12) 4712 (2022).
- 7. Measuring obscured OAM spectrum using Stokes fluctuations in a non-interferometric approach, Tushar Sarkar, Reajmina Parvin, Maruthi M Brundavanam, Rakesh Kumar Singh, Optics and Lasers in Engineering 155 107065 (2022)
- 8. Unscrambling OAM mode using digital phase-shifting in the Stokes fluctuations correlation, Tushar Sarkar, Reajmina Parvin, Maruthi M Brundavanam, Rakesh Kumar Singh, Optics Letters 46 5546-5549 (2021)
- 9. Polarization-based intensity correlation of a depolarized speckle pattern, Abhijit Roy, Maruthi M Brundavanam, Optics Letters 46 4896-4899 (2021)
- 10. Modulation of coherence-polarization property of speckles using a birefringent scatterer, Reajmina Parvin, Abhijit Roy, Shailendra K Varshney, Maruthi M Brundavanam, Applied Optics 60 7259-7267 (2021)
- 11. Higher-order Stokes-parameter correlation to restore the twisted wave front propagating through a scattering medium, Tushar Sarkar, Reajmina Parvin, Maruthi M Brundavanam, Rakesh Kumar Singh, Physical Review A, 104 013525 (2021)
- 12. Tracking the rotation of a birefringent crystal from speckle correlation, Kapil K Gangwar, Abhijit Roy, Maruthi M Brundavanam, Journal of Optics, 23 075605 (2021)
- 13. Non-invasive tracking of polarization rotation from speckle contrast using uncorrelated speckle patterns, Roy A., Singh R. K., Brundavanam M. M. Journal of Optics 22 125603- (2020)
- 14. Common-path generation of stable cylindrical perfect vector vortex beams of arbitrary order by Mandal A., Maji S., Brundavanam M. M. Optics Communications 469 125807- (2020)
- 15. Localized geometric phase analogue associated with Poincaré beams due to unfolding of fractional optical vortex beams through a birefringent crystal by Maji S., Pattanayak A. K., Brundavanam M. M. Journal of Optics 22 035401- (2020)
- 16. Effect of the average number of reference speckles in speckle imaging using off-axis speckle holography by Roy A., Brundavanam M. M. Applied Optics 58 (2019)

- 17. Geometric Phase and Intensity-Controlled Extrinsic Orbital Angular Momentum of Off-Axis Vortex Beams by Maji S., Jacob P., Brundavanam M. M. Physical Review Applied 12 054053- (2019)
- 18. Gouy phase assisted topological transformation of vortex beams from fractional fork holograms by Maji S., Mondal A., Brundavanam M. M. Optics Letters 44 2286-2289 (2019)
- 19. Topological transformation of fractional optical vortex beams using computer generated holograms by Maji S., Brundavanam M. M. Journal of Optics 20 045607-(2018)
- 20. Controlled modulation of depolarization in laser speckle by Roy A., BrundavanamM. M. Optics Letters 42 4343-4346 (2017)
- 21. Controlled noncanonical vortices from higher-order fractional screw dislocations by Maji S., Brundavanam M. M. Optics Letters 42 2322-2325 (2017)
- 22. Analysis of polarization speckle for imaging through random birefringent scattererby Roy A., Singh R. K., Brundavanam M. M. Applied Physics Letters 109 201108-(2016)
- 23. Vectorial van Cittert-Zernike theorem based on spatial averaging: Experimental demonstrations by Rakesh Kumar Singh, Dinesh N. Naik, Hitoshi Itou, Maruthi M. Brundabanam, Yoko Miyamoto, and Mitsuo Takeda Optics Letters 38 (2013)
- 24. Interferometer setup for the observation of polarization structure near the unfolding point of an optical vortex beam in a birefringent crystal by Maruthi M. Brundavanam, Y. Miyamoto, Rakesh K. Singh, Dinesh N. Naik, M. Takeda and K.Nakagawa Optics Express 20 (2012)
- 25. Single-shot full-field interferometric polarimeter with an integrated calibration scheme by Dinesh N Naik, Rakesh K. Singh, H. Itou, Maruthi M Brundavanam, Y.Miyamoto, M.Takeda Optics Letters 37 (2012)
- 26. Effect of input spectrum on the spectral switch characteristics in a white-light Michelson interferometer by Maruthi M. Brundavanam, Nirmal K. Viswanathan and D. Narayana Rao Journal of Optical Society of America A 26 (2009)
- 27. Nano displacement measurement using spectral shifts in a white light interferometer by Maruthi M. Brundavanam, Nirmal K. Viswanathan and D. Narayana Rao Applied Optics 47 (2008)
- 28. Spectral anomalies due to temporal correlations in a White-light interferometer by Maruthi M. Brundavanam, Nirmal K. Viswanathan and Narayana Rao Desai OpticsLetters 32 (2007)

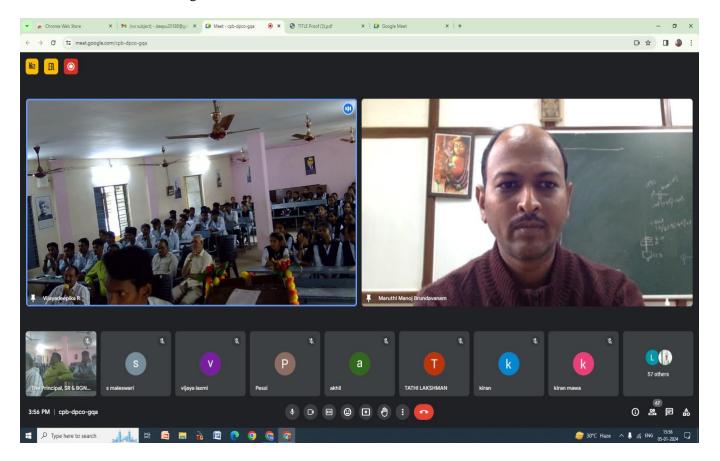
Book Chapter:

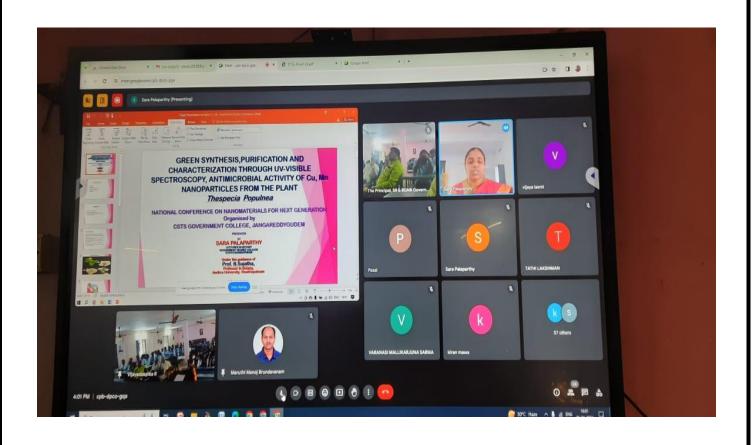
• Transverse Polarization Structure of an Optical Vortex Beam around the Unfolding Point in a Birefringent Crystal by Maruthi M Brundavanam, Y. Miyamoto, M. Takeda and K. Nakagawa Fringe 2013 - (2014)

Nanoparticles find diverse applications in physics, contributing to advancements in fundamental research, experimental techniques, and the development of new materials. Here are some notable uses of nanoparticles in physics

Quantum dots, semiconductor nanoparticles with unique quantum mechanical properties, find applications in quantum optics and quantum information processing. They contribute to the study and manipulation of single-electron and photon behavior, aiding the development of quantum technologies. Magnetic nanoparticles are employed in experiments related to magnetism and spintronics. They contribute to investigations into magnetic properties at the nanoscale and the development of high-density magnetic storage devices. In nanophotonics, nanoparticles contribute to the development of novel optical materials and devices. Plasmonic nanoparticles enhance light-matter interactions, enabling applications in sensors, imaging, and communication. Nanostructured materials, such as nanowires and nanotubes, are used to explore quantum mechanical phenomena at the nanoscale. They provide insights into quantum confinement effects and electron transport properties. In biophysics, nanoparticles serve as contrast agents in imaging techniques like magnetic resonance imaging (MRI) and fluorescence imaging. They function as probes for studying biological systems at the cellular and molecular levels. Used in experimental techniques like scanning tunneling microscopy (STM) and atomic force microscopy (AFM), nanoparticles enable the imaging and manipulation of matter at the atomic and molecular levels.

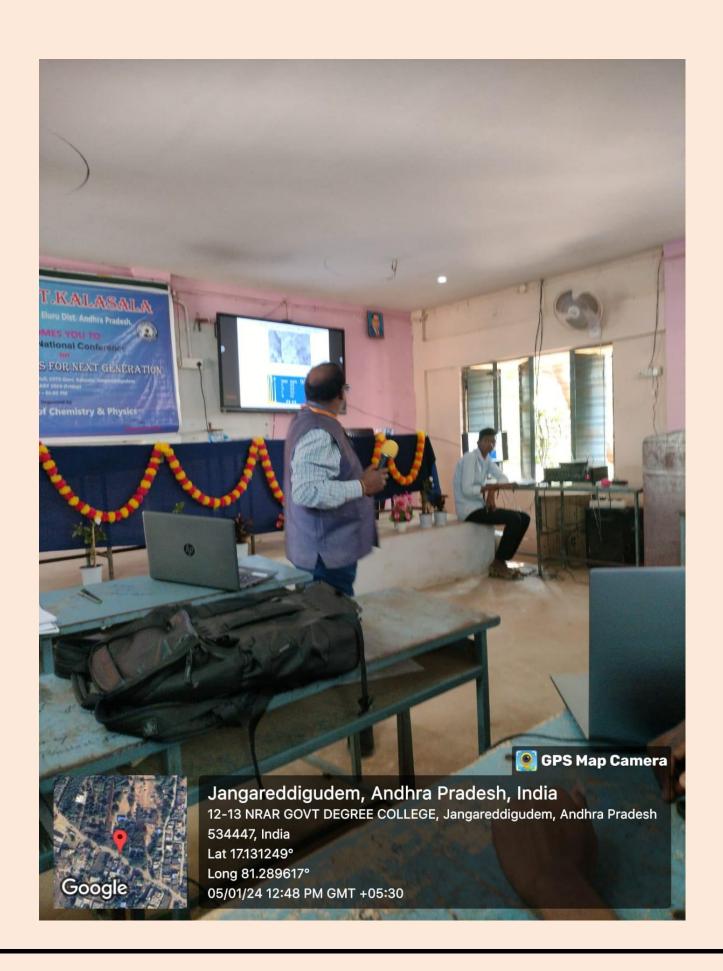
The use of nanoparticles in physics is a dynamic and expanding field, with ongoing research focusing on harnessing the unique properties of nanoscale materials for a wide range of applications and advancements in fundamental understanding.





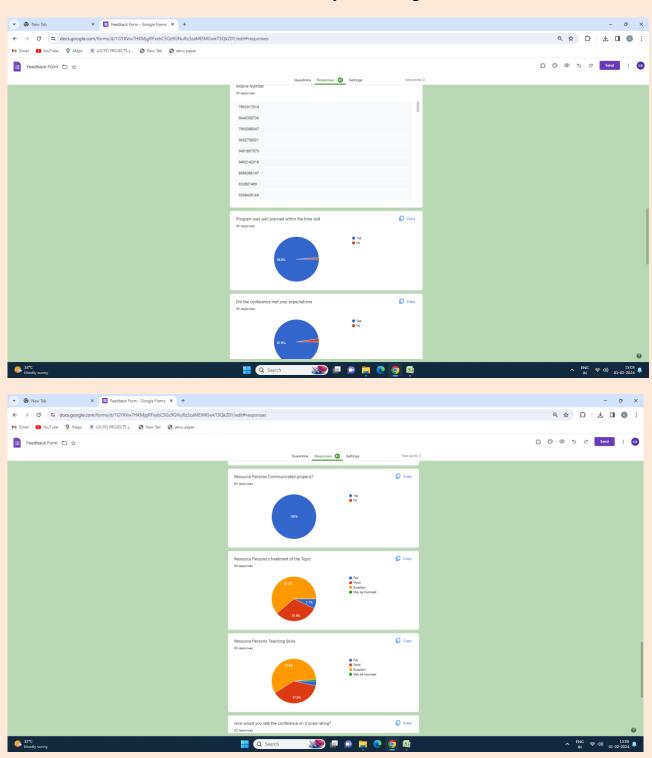


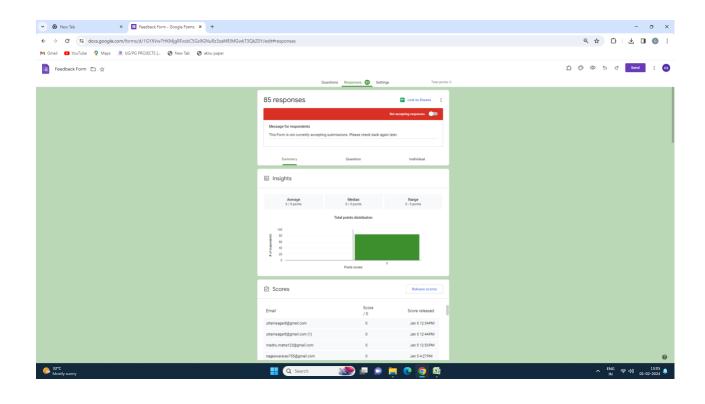


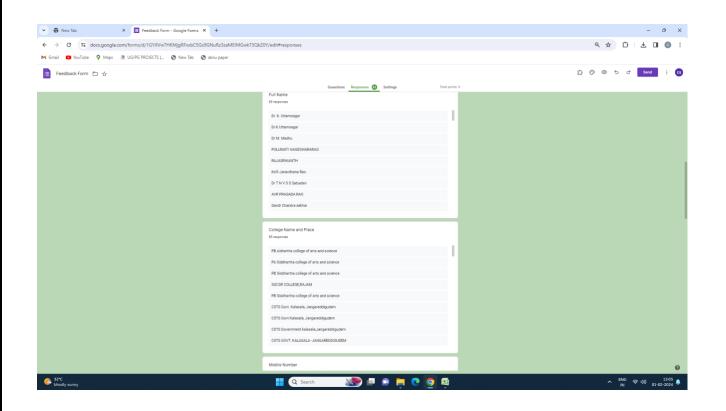


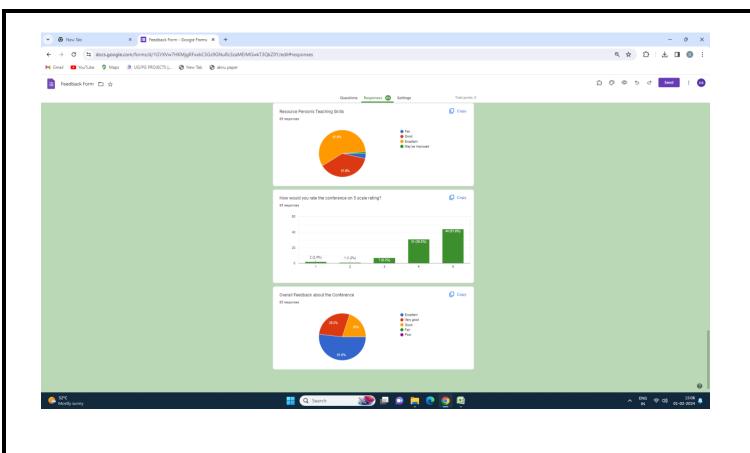
Online Feedback from Participants

Feedback Collected from all the Participants and analysed the feedback. About 90-95 percent of the participants remarked National Conference met the expectations and learnt so many new things.









Sample Certificate Distributed to Participants



CSTS GOVT. KALASALA

JANGAREDDIGUDEM, ELURU DISTRICT, AP.
(Affiliated to Adikavi Nannaya University)



CERTIFICATE

This is to certify that Mr./Mrs./Ms./Dr. PTSRK Prasad

Of PB Siddhar tha College of Astif Science, Vijayawada

in the National Conference on "NANO MATERIALS FOR NEXT GENERATION", organized by the

Department of Chemistry & Physics, CSTS Govt. Kalasala, Jangareddigudem on 05th January 2024.

Convener

Principal



REDMI NOTE 5 PRO MI DUAL CAMERA



CSTS GOYT. KALASALA

JANGAREDDIGUDEM, ELURU DISTRICT, AP.
(Affiliated to Adikavi Nannaya University)



CERTIFICATE

This is to certify that Mr./Mrs./Ms./Dr. N. USha Rani

Of PVP Siddhartha Shetitute of Technology, Kanury

has Presented a Paper titled Applications of Nanomatorials in Mediaine

in the National Conference on "NANO MATERIALS FOR NEXT GENERATION", organized by the Department of Chemistry & Physics, CSTS Govt. Kalasala, Jangareddigudem on 05th January 2024.

Convener

Principal



REDMI NOTE 5 PRO MI DUAL CAMERA

Valedictory Session





Vote of Thanks

Respected Principal, Esteemed Staff, Distinguished Resource Persons, and Valued Participants,

I stand before you with a heart full of gratitude as we bring the curtains down on a highly successful NATIONAL CONFERENCE on the "NANO MATARIALS FOR NEXT GENERATION." This event would not have been possible without the collaborative efforts of many, and it is my honor to extend heartfelt thanks to all who contributed to its success.

First and foremost, our sincere appreciation goes to our esteemed Principal for their unwavering support and encouragement. Your vision and commitment to fostering educational initiatives that extend beyond the classroom have been instrumental in making this National conference a reality. Your leadership continues to inspire us to explore new horizons in learning.

A special note of gratitude is extended to the dedicated staff members whose behind-the-scenes efforts ensured the seamless organization and execution of this conferance. Your attention to detail, logistical support, and commitment to the smooth flow of events have not gone unnoticed, and we are truly grateful for your invaluable contributions.



To our respected resource persons, we extend our deepest thanks for sharing expertise and insights on the crucial topic of the role of Nano Matarails for next genaration Your wealth of knowledge and engaging presentations haveleft an indelible mark on our participants, equipping them with a broader perspective onthe significance of their

to the participants who actively

profession.

Last but certainly not least, our heartfelt thanks go out

participated, engaged in discussions, and made the national conference a vibrant and enriching experience. Your enthusiasm and eagerness to learn were palpable, and we trust that the knowledge gained will resonate in your professional journeys.

In closing, this national conference has been a testament to the strength of collaboration and the power of shared knowledge. We look forward to future endeavors that continue to empower and educate our community.

Thank you once again to everyone involved, and we anticipate even more successful ventures in the future.

Signatures of the Participants

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38.	P. sandeep raju.	I B 3c (computer) P Source Project T BSc (Botary) E. Pavour
39	E. Pavan	I Bsc (Botany) E. Pavour
40.	K. Vijay	I Br (Bolany) & Vijay
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42	s. Siddu	I BSC[Extony] S. Siadu
43	P. Balaji	
44.		I BSC (Botany) P. Goldin
45.	J. Navasimha	IBSC (Botany) J Narasimha
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