

CURRICULUM VITAE

Dr. Nagamalleswari Katragadda

PhD

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Nagamalleswari_k@srmap.edu.in



Profile

Seeking and maintaining a full-time position offers professional challenges, utilizing interpersonal skills, excellent time management, and problem-solving skills.

❖ Work experience

✚ **Lecturer (2017-2019) in Vignan Degree College, Palakaluru Road, Guntur, AP**

➤ Used a variety of learning modalities and support materials to facilitate the learning process and accentuate presentations.

➤ Developed and implemented innovative teaching strategies to engage students in lectures and coursework.

➤ Used PowerPoint to give presentations to student classrooms.

➤ **Courses Taught:** Mechanics & Properties of Matter, optics, Basic Electronics, Renewable Energy.

✚ **Assistant Professor (2024 - Present) at DRK Institute of Science And Technology, Bowrampet, Hyderabad**

➤ **Courses Taught:** Applied Physics

❖ Education & Qualifications

S.No	Qualification	% of Marks	Year	University/ College
1.	PhD	83	2019-2024	SRM University, Guntur, AP
2.	MSc (Physics)	84	2015-2017	TJPS College, Guntur, AP
3.	BSc (MPC)	86	2012-2015	JKC College, Guntur, AP
4.	Inter (MPC)	73	2010-2012	JKC College, Guntur, AP
5.	SSC	82	2009-2010	AGH School, Guntur, AP

➤ **PhD Thesis Title:** Design of Pb-free Perovskite Oxides for Multiferroics and Flexible Hybrid Nanogenerators

❖ Publications

1. **KN Malleswari**, P. Tulasirao, and P. Mandal “A measurement set-up for characterization of temperature dependence of impedance dielectric permittivity, and pyroelectric current under controlled environment” *J. Electron. Mater.* **52**, 1625 (2022). **IF = 2.04** <https://doi.org/10.1007/s11664-022-09875-2>.
2. **KN Malleswari**, P. Mandal, P. Yanda, A. Sundaresan, S. D. Kaushik, W. Zhang, P. Shiv Halasyamani, A. M. Manjón-Sanz “Room temperature Polar and Weak-ferromagnetic Oxide with Low Dielectric Loss” *Mater. Sci. Eng. B.* **298**, 116869 (2023). **IF = 3.407** <https://doi.org/10.1016/j.mseb.2023.116869>
3. **KN Malleswari**, Soham Kumar, and P. Mandal "Carbon Nanotube Assisted Improved Device Performance in a Piezoceramic–Polymer Flexible Hybrid Nanogenerator." *ACS Appl. Electron. Mater.* (2023). **IF = 4.49** <https://doi.org/10.1021/acsaelm.3c01341>
4. **KN Malleswari**, Soham Kumar, P. Tulasirao, and P. Mandal "The Structural and Electrical Properties of $\text{BiFeO}_3 - \text{Bi}_{0.5}\text{K}_{0.5}\text{TiO}_3 - \text{BaTiO}_3$ based Solid Solutions at the Morphotropic Phase Boundary." *Mater. Today Commun.* **45**, 113030 (2025). **IF = 4.5** <https://doi.org/10.1016/j.mtcomm.2025.113030>

❖ Other Publications

1. Shahnaz Kossar, R. Amiruddin, Asif Rasool, M.C. Santhosh Kumar, **KN Malleswari**, Pranab Mandal, and Nafis Ahmed, “Study on ferroelectric polarization induced resistive switching characteristics of neodymium-doped bismuth ferrite thin films for random access memory applications.” *Curr. Appl. Phys.*, **39**, 221 (2022). **IF = 2.85** <https://doi.org/10.1016/j.cap.2022.04.013>
2. P. Tulasirao, **KN Malleswari**, and Pranab Mandal “Probing oxide ion conductivity in $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3\text{-BiFeO}_3\text{-BaTiO}_3$ -based ferroelectric materials.” *ACS Appl. Energy Mater.* **6**, **9**, 5009 (2023). **IF = 6.95** <https://doi.org/10.1021/acsaem.3c00594>
3. Achal Brigade; **KN Malleswari**; Pranab Mandal; R V K Mangalam “Improved pyroelectric effect in PVDF/ BaTiO_3 composite flexible films mediated by enhanced β – PVDF phase formation.” *J. Polym. Res.* **288**, (2023). **IF = 3.06** <https://doi.org/10.1007/s10965-023-03669-8>
4. Achal Brigade; **KN Malleswari**; Pranab Mandal; R V K Mangalam “Studies on PVDF/Ferrite composite films on flexible substrate for pyroelectric energy conversion.” *New J. Chem.* **09**, **28**, (2023). **IF = 3.92** <https://doi.org/10.1039/D3NJ02649C>
5. Achal Brigade; **KN Malleswari**; Pranab Mandal; R V K Mangalam “Flexible multiferroic PVDF/ CoFe_2O_4 composite films for pyroelectric energy conversion.” *J. Mater. Sci.* **1** (2023). **IF = 4.5** <https://doi.org/10.1007/s10853-023-09149-0>

6. Thara Prasannan, **KN Malleswari** Achal Bhiogade, Pranab Mandal, Vengadesh Kumara Mangalam Ramakrishnan “Revealing Pyroelectric Capabilities: Filler-Enhanced PVDF/PbTiO₃ Films for Improved Flexibility and Energy Conversion.” *Polym. Adv. Technol.* (2025). **IF = 3.69** <https://doi.org/10.1002/pat.70345>
7. P. Tulasirao, **KN Malleswari**, and Pranab Mandal “Influence of Mg²⁺ doping on the oxide ion conductivity of layered ferroelectric SrBi₂Ta₂O₉” *Ceram. Int.* **50, 24 (2025).** **IF = 5.6** <https://doi.org/10.1016/j.ceramint.2024.10.233>

❖ Under Communication

1. P. Prasad V, **KN Malleswari** Non-Invasive In-Vivo Detection of Random Blood Glucose using Photoacoustic Spectroscopy" has been sent back for the following reasons (Under Review).
2. P. Prasad V, **KN Malleswari** “Design of a Lead-Free Transducer for Non-Invasive Continuous Glucose Monitoring using Photoacoustic Spectroscopy.” (Under preparation).

❖ Patents

1. P. Mandal, P. Tulasirao, **KN Malleswari**, “A method and set-up for characterization of temperature dependence of impedance, relative dielectric permittivity, piezoelectric coefficients and pyrocurrent under controlled gas environment” Application no: **202141051103, 2021** (Published, granted).
2. P. Prasad V, **KN Malleswari** et. al. “Piezoelectric sensor and a method for its preparation” Application no: **202241034906, 2022** (Published, Examination pending)

❖ Prototype

- **KN Malleswari**, P. Tulasi Rao, and Pranab Mandal “A Low-cost set-up for temperature dependence measurement of impedance, relative dielectric permittivity, piezoelectric coefficients, and pyrocurrent under a controlled gas environment up to 1000 °C.” (**Built and operational**).

❖ Conferences

1. **KN Malleswari**, P. Mandal. “Room temperature multiferroics.” International Conference on Advances in Chemical and Materials Sciences (ACMS), Indian Institute of Chemical Engineers, Kolkata (Virtual), 14-16th 2022.
2. **KN Malleswari**, P. Mandal “Design of flexible hybrid nanogenerators” International Conference on Electronic & photonic Integration Circuits (EPIC-2022), SRM University AP, December 15- 17, 2022.
3. **KN Malleswari**, P. Mandal. “ A Polar and weak ferromagnetic oxide with low dielectric loss” National conference on Status and Opportunities in Functional Energy and Electronic Materials (SOFEEEM), SRM University, AP, March 2-3rd 2024.

❖ Research Experience

1. Expertise in synthesizing Pb-free Piezoelectric ceramic Oxides using solid-state reaction (SSR) and Molten Salt Synthesis (MSS) techniques.
2. Specialize in making pellets for measuring Dielectric and Piezoelectric properties in Pb-free Piezoelectric ceramic oxide materials for sensor applications.
3. I specialize in the preparation of nanomaterials for flexible hybrid nanogenerators.
4. During my Ph.D. tenure, I had the opportunity to be the student in charge of operating the PANalytical Empyrean X-ray Diffractometer (XRD).
5. I specialize in making custom-made furnaces and measuring probes.

❖ Guest Lecturer – Introduction to Data Analytics

TJPS college | January 2025

- Delivered a 1-hour lecture on “Material science.”

❖ Awards

- A silver award for presenting "Design Pb-free flexible hybrid nanogenerators" during Research Day. 2022, September.

❖ Technical Skills

- MS Office
- Origin
- WinPLOTR

❖ Skills

- Problem solving
- Effective Communication
- Self-motivation and teamwork

❖ Languages

- English Fluent
- Telugu Fluent
- Hindi Basic

Board of Secondary Education ANDHRA PRADESH

KP 0966263

DUPLICATE



SECONDARY SCHOOL CERTIFICATE

CERTIFIED THAT KATRAGADDA NAGAMALLESWARI
D/o KATRAGADDA NARASIMHA RAO bearing Roll No 1015101988
belongs to AUXILIUM (6) HIGH SCHOOL, GUNTUR
has appeared and PASSED SSC EXAMINATION held in MARCH 2010 in **A2 GRADE**
with **TELGU** as medium of instruction.

DATE OF BIRTH	DAY	MONTH	YEAR
30-08-1995	THREE ZERO	AUGUST	ONE NINE NINE FIVE

THE CANDIDATE SECURED THE FOLLOWING PERCENTAGE OF MARKS

SUBJECT	Marks Secured (In figures)	Marks Secured (In words)	Positional Grade
FIRST LANGUAGE : (TELUGU SANSKRIT)	75	SEVEN FIVE	B1
THIRD LANGUAGE : ENGLISH	84	EIGHT FOUR	A1
MATHEMATICS :	84	EIGHT FOUR	A2
GENERAL SCIENCE :	95	NINE FIVE	A1
SOCIAL STUDIES :	89	EIGHT NINE	A1
TOTAL :	427	FOUR TWO SEVEN	
SECOND LANGUAGE : (HINDI)	71	SEVEN ONE	A2
GRAND TOTAL :	498	FOUR NINE EIGHT	A2

Life Skills Education : **GRADE SECURED : A1**

Marks of Identification 1. A Mole on the neck
2. A Mole on the right hand.

Head of the Institution
with St. Colours

Date of issue : 23-05-2010

Adl. Joint Secretary,
to the Director for Government

Examinations, Andhra Pradesh, Hyd

Sd/-xxxx

SECRETARY

BOARD OF SECONDARY EDUCATION
A P, HYDERABAD

1. Life skills Education : The Grade shall be incorporated before delivery of the certificates to the candidates.
2. Any corrections in the certificate will not be entertained after one year from the date of issue.
3. Any unauthorised correction in the certificate will result in cancellation of certificate.
4. The Marks with asterisk indicate the old marks secured in previous examinations.

2010

Sl.No. **L620129**

06/06044/L620129



Board of Intermediate Education, A. P.

Vidya Bhavan, Nampally, Hyderabad - 500 001



INTERMEDIATE PASS CERTIFICATE CUM MEMORANDUM OF MARKS

This is to certify that **KATRAGADDA NAGAMALLESWARI** Daughter
of **KATRAGADDA NARASIMHA RAO** bearing
Registered No. **1206215268** has appeared at the Intermediate Public
Examination held in **MAY-2012** and passed in **B GRADE**
with **ENGLISH** as the Medium of Instruction.

The subjects in which **she** was examined and the marks awarded are as follows :

Subject	I Year		II Year	
	Maximum Marks	Marks Secured	Maximum Marks	Marks Secured
Part - 1 : ENGLISH	100	050	100	080
Part - 2 : SANSKRIT	100	095	100	095
Part - 3 : Optional Subjects				
MATHEMATICS - A	075	063	075	071
MATHEMATICS - B	075	041	075	046
PHYSICS	060	029	060	046
CHEMISTRY	060	027	060	040
PHYSICS PRACTICAL			030	026
CHEMISTRY PRACTICAL			030	028
ENVIRONMENTAL EDUCATION	Q U A L I F I E D			
Total Marks in Figures	737 ➡			
In words	*SEVEN*THREE***SEVEN*			
Date	16-06-2012			

KUNB X...

PRINCIPAL

Signature of the Principal and College Seal

**JAGADAMBI KUPPUSWAMY CHAUDARY COLLEGE
GUNTUR-8.**

M. S. R.

Controller of Examinations

1206215268

Reg No: 1220079

ACHARYA NAGARJUNA UNIVERSITY
ఆచార్య నాగార్జున విశ్వవిద్యాలయము



FACULTY OF PHYSICAL SCIENCES

ఫాకల్టీ ఆఫ్ ఫిజిక్స్ సైన్స్

This is to certify that
ప్రతిపక్షం

Mr./Ms. Kanthagadda Nageswaraiah
శ్రీ/శ్రీమతి/కుమారి

Son/Daughter of Kanthagadda Nageswaraiah
కుమారుడు/కుమార్తె

has been duly admitted to the Degree of **Bachelor of Science**
బ్యాచులర్ ఆఫ్ సైన్స్ పట్టాప్రదానానికి అర్హతపొందినందున

from J.K.C. College (Autonomous) Guntur

of this University he/she having been declared to have passed the examination prescribed therefor as follows:

Subjects అభ్యసించిన అంశాలు	Month & Year of Passing ఉత్తీర్ణత పొందిన నెల, సంవత్సరం	Class Awarded పొందిన గ్రేడ్
part - I (i) English (ii) Telugu (iii) <u>తెలుగు భాష</u>	April 2014	First
part - II Mathematics Physics Chemistry	April 2015	First

Given under the Seal of the University
విశ్వవిద్యాలయ అధికార ముద్రతో జారీచేయబడినది.

Nagarjuna Nagar-522 510, A.P, India
నాగార్జున నగరం-522 510, ఆంధ్రప్రదేశ్, భారతదేశము.

Date
తేది **11 5 MAR 2018**



Ch. Anjaneya Reddy
Addl. Controller of Examinations
అదనపు పరీక్షల నిర్వహణాధికారి

Regd. No. : Y16PH03016



PH/0993/A17

ACHARYA NAGARJUNA UNIVERSITY
ఆచార్య నాగార్జున విశ్వవిద్యాలయము



FACULTY OF PHYSICAL SCIENCES

ఫాకల్టీ ఆఫ్ ఫిజిక్స్ సైన్సెస్

This is to certify that

ధృవీకరణ

Katragadda Nagamalleswari

Mr./Ms.

శ్రీ/శ్రీమతి/కుమారి

Son/Daughter of

కుమారుడు/కుమార్తె

Katragadda Narasimha Rao

has been duly admitted to the Degree of **Master of Science**

మాస్టర్ ఆఫ్ సైన్స్ పట్టాభివృద్ధికి అర్హుడైనందున

of this University he/she having been declared to have passed the examination prescribed therefor as follows :

ఈ విశ్వవిద్యాలయం నుంచి కింద పేర్కొనబడిన విధంగా అభివృద్ధి పట్టాకు నిర్దేశించిన పరీక్షలో ఉత్తీర్ణత పొందినట్లు ప్రకటించబడింది :

Subjects అభ్యసించిన అంశాలు	Month & Year of Passing ఉత్తీర్ణత పొందిన నెల, సంవత్సరం	Class Awarded పొందిన గ్రేడ్
Physics	April 2017	First Class with Distinction (Cgpa: 8.46, Grade: A)

Given under the Seal of the University

విశ్వవిద్యాలయం అధికార ముద్రలో జారీ చేయబడినది.

Nagarjuna Nagar-522 510, A.P. India

నాగార్జున నగరము-522 510, ఆంధ్రప్రదేశ్, భారతదేశము.

Date

తేది

13 AUG 2023



Registrar
రిజిస్ట్రార్



PROVISIONAL CERTIFICATE

This is to certify that Ms. KATRAGADDA NAGAMALLESWARI
D/o Mr. KATRAGADDA NARASIMHA RAO bearing Registration No. AP18235080002,
Research Scholar in the Department of PHYSICS from SCHOOL OF ENGINEERING AND
SCIENCES of SRM UNIVERSITY -AP, Andhra Pradesh, has successfully completed the Ph.D.
Programme with the thesis entitled "Design of Pb-free Perovskite Oxides for Multiferroics
and Flexible Hybrid Nanogenerators".

The student has completed the course work as per the programme requirements
prescribed for the award of the degree. Her thesis Viva-Voce examination was held on
02nd May 2025 and the thesis evaluation was done by a pool of examiners including external
examiners from India and Abroad.

Date: 22.05.2025



This certificate bears no correction(s)

Sheela Singh
CONTROLLER OF EXAMINATIONS