

FACULTY PROFILE

Telangana Tribal Welfare Residential Degree College (M) Kamareddy

Department of Chemistry

Name: Jangam Naveen

**Academic Qualifications: M.Sc. (Physico Organic Chemistry), AP & TS SET – 2015,
GATE -2015**

Experience:

***Teaching:* 3 years**

- Worked as a Lecturer in VIF Engineering College, Hyderabad.
- Worked as a lecturer at TTWRDC(M), Kamareddy (Sept 2017 – July 2019).

Dr. M. Hima Bindu
Degree Lecturer
Kamareddy, India-503111

Citizenship: Indian
DOB: August 31st, 1987
Marital status: married
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Summary

An enthusiastic, adaptive and fast-learning person with a broad and acute interest in the discovery of new polymer and oligomer synthetic methodologies. I particularly enjoy collaborating with scientists from different disciplines to develop new skills and solve new challenges.

Education

Ph.D. in Polymer Chemistry <i>CSIR-Indian Institute of Chemical Technology, Hyderabad, Telangana, India.</i>	2013-2020
B.Ed. in Physical Science <i>Osmania University, Hyderabad, Telangana, India.</i>	2011-2012
M.Sc. in Organic Chemistry <i>Osmania University, Hyderabad, Telangana, India.</i>	2007-2009
Bachelor of Science (Chemistry & Mathematics) <i>Osmania University, Hyderabad, Telangana, India.</i>	2004-2007

Accomplishments

APSET Lectureship	2012
CSIR-UGC Research Fellowship	2013-2018

Research Interest

- Thermoreversible Hydrogels and Organogels
- Emulsion gels, Pheromones
- Vegetable oil-based thermal insulating PU materials (Foams)
- Drug delivery and Ion sensing
- Shape memory and self-healing polymers

Technical Skills

- Proficient in polymers/gels/Foams/composites characterization and use of analytical instrumentation including FT-IR, UV, DSC, DMTA, TGA, UTM, Malvern particle size analyzer, Rheometer, TLC, Thermal Conductivity, Moisture Content, and Purification techniques etc.
- Expertise in synthesis of Thermoreversible gels and Emulsion gels by adopting sustainable approaches
- Formulations of Foams obtained from Vegetable oil based polyols

Doctoral Research Experience

**Polymers and Functional Materials Department,
CSIR-Indian Institute Chemical Technology, 2013-2020**

Dissertation title: "Supramolecular Thermoreversible Hydrogels and

Organogels Structure-Property Relationships and Applications”

Research advisor: Dr. Aruna Palanisamy

- Investigated various synthetic methodologies including aminolysis, ring opening, Trans amidation, and rearrangement chemistry for the conversion of synthetic polymers and naturally available vegetable oils into gels.
- Synthesized biscarbamate, amide and bisurea type of gels using Polyethylene glycol and various bio based compounds.
- Developed thermoreversible low molecular weight and oligomer organogels and hydrogelsthrough various strategies different reagents.
- Developed NIPU based hydrogels by adopting non isocyanate route using PEG for controlled release of drug molecules for various biomedical applications.
- Developed organogels by one pot synthesis using renewable resources i.e. castor oil for ion responsive behavior.
- Formulated emulsion gels using lecithin, soybean oil and water and utilized for sustained release of pheromones for integrated pest control.
- Tutored postgraduates in dissertation project works and also guided project assistants for industrial projects.
- Assisted two major industrial projects
 1. Sweetech-2013(Development of polyols through transesterification of Castor oil for foam applications)
 2. GAP- MOef funded project on Clean Technology-2014 to 17 (Development of polyols from renewable non-edible oils for polyurethane rigid foam applications)

Academic Experience

Telangana Tribal Welfare Residential Degree college(m) Kamareddy Hyderabad, India.

Role: **Degree lecturer in Chemistry** (October 2019 to current)

- Possess about 3 years (2010-2013) Teaching Experience in**Chemistry subject for Undergraduate** students (both education and Administration). Takshasheela Degree College, Vikarabad, Telangana.

Publications

Research articles

1. Ultrasound-and temperature Induced gelation of Glucanosemicarbazide gelator in DMSO and Water mixtures. **Hima Bindu** and Aruna Palanisamy*. *Gels*, 3,12, (2017). DOI: 10.3390/gels3020012
2. Polyethylene-Glycol-Based Thermoreversible Biscarbamate Hydrogels and Metallogels Synthesized through Non-Isocyanate Route. **Hima Bindu**and Aruna Palanisamy*. *ChemistrySelect* 4, 37, 11052-11060 (2019). DOI: 10.1002/slct.201903108
3. Bio-based castor oil organogels and investigations on their anion-tuning properties. **HimaBindu**and ArunaPalanisamy*. *Colloid and Polymer Science*, 297,11-12 (2019). DOI: org/10.1007/s00396-019-04575-6
4. Karanja oil polyol and rigid polyurethanebio foams for thermal insulation. **Hima Bindu**,

Kamalakar, M. S. L. Karuna, and Aruna Palanisamy*. *Journal of Renewable Materials*, 5, 2, 124-131 (2017). DOI:org/10.7569/JRM.2016.634137

5. Why hydrazides and their derivatives are so special in making ideal gels for functional applications. **Hima Bindu** and Sravan Baddi*. (Review under preparation)
6. Investigations on Thermoreversible gelation on Self-Assembling Amphiphilic Organogelators with PEG core. **Hima Bindu** and Aruna Palanisamy*. (Manuscript yet to publish).
7. Rigid polyurethane bio foams from various non-edible oils for thermal insulation applications. **Hima Bindu** and Aruna Palanisamy*. (Review article under preparation)

References

1. **Dr. P. Aruna**, Principal Scientist
Polymers & Functional Materials Department
CSIR-IICT, Tarnaka, Hyderabad-500007, Telangana, India.
Ph. No: +919948575136; E.mail: aruna@iict.res.in
2. **Dr. Ramanuj Narayan** Senior Principal scientist
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CSIR-IICT, Tarnaka, Hyderabad-500007, Telangana, India.
Ph. No: + 919490410154; E.mail: ramanuj@iict.res.in
3. **Dr. Ch. Ramakishan rao** Senior Principal Scientist
Polymers & Functional Materials Department
CSIR-IICT, Tarnaka, Hyderabad-500007, Telangana, India.
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I hereby declare that, all the information presented above is true to the best of my knowledge.

Dr. M. Hima Bindu

FACULTY PROFILE

Telangana Tribal Welfare Residential Degree College (M) Kamareddy

Department of Chemistry

Name: D. Ramya Laxmi

Academic Qualifications: M.Sc., B. Ed., SET, GATE

Experience:

***Teaching:* 5 years**

- Worked as Junior Lecturer at TTWRJC Boys Utnoor, Adilabad (2019-2022).
- Worked as Principal (FAC) at TTWURJC Girls, Asifabad (2022-2023).
- Worked as Junior Lecturer at TTWRJC Boys Utnoor, Adilabad- (2023-2024)
- Working as a lecturer at TTWRDC(M), Kamareddy (July 2024 to present).

Research Interest:

Robotic Science

FACULTY PROFILE

Telangana Tribal Welfare Residential Degree College (M) Kamareddy

Department of Chemistry

Name: P. Jyoshna

Academic Qualifications: M.Sc., B. Ed., SET

Experience:

***Teaching:* 5 years**

- Worked as Junior Lecturer at TTWRJC Boys Gandhari, Kamareddy (2019-2024).
- Working as a lecturer at TTWRDC (M), Kamareddy (July 2024 to present).

Research Interest:

Nanoscience