Dr. K. KRISHNADEVI

Assistant Professor

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OBJECTIVE

To continuously strive for higher achievement in life and establish myself as a perfect and accept challenging work and contribute forward the success of esteem organization by hard work and acquired skills.

AREA OF EXPERTISE

- ✓ Synthesis of amine terminated cyclotriphosphazene used for flame resistance and low dielectric application.
- ✓ Development of thermally stable resins for flame resistance application.
- ✓ Development of biobased polybenzoxazine for self-healing applications.
- ✓ Development of nanocomposite for antibacterial and corrosion resistant application.
- ✓ Functionalization of naturally abundant rice husk ash contain silica material.

RESEARCH INTERESTS

- ✓ Synthesis of cyclophosphazene (ATCP) based polymers for high performance application.
- ✓ Synthesis sustainable biobased polybenzoxazines.
- ✓ Synthesis of epoxy, benzoxazine based monomers are nanohybrids with inorganic materials for high performance application.
- ✓ Development of new class of materials for energy harvesting and energy storage.

RESEARCH EXPERIENCE

Doctor of Philosophy (Ph.D.,)

Degree and Period	:	Ph.D; 01st July 2011– 12th August 2015
Department	:	Chemistry
University	:	Anna University, Chennai, Tam Nadu, India
Research Supervisor	:	Dr. V. Selvaraj
Research Title	:	**Synthesis and characterization of amine terminated cyclophosphazene incorporated hybrid nanocomposites for high performance applications**
Experience	:	5.5 years

EDUCATION

Post-Graduation

Degree and Period	:	**M.Phil. Chemistry (2011) (85 %)**
Class	:	Distinction
Title of Dissertation	:	Antioxidant assay and study of electronic and vibrational properties of carvacrol a major component of coleus aromatics.
Degree and Period	:	**M.Sc. Chemistry (2010) (70 %)**
University	:	Thiruvalluvar University
Class	:	First

Under-Graduation

Degree and Period	:	**B.Sc. Chemistry; (2007) (65 %)**
University	:	Thiruvalluvar University
Class	:	First

OTHER EDUCATION

Degree and Period	:	**B.Ed., Science; (2010) (77 %)**
University	:	Pondicherry University
Class	:	First

PERSONAL VITAE

Father's Name	:	P. Krishnamoorthy
Sex	:	Female
Date of Birth	:	05/12/1986
Marital Status	:	Married
Nationality	:	Indian
Languages Known	:	Tamil, Telugu and English
Permanent Address	:	No. 14, Govinda Pillai Street, Kannan Nagar, Puducherry, India, 605013.

WORKING EXPERIENCE

- ✓ Worked one year as an assistant professor at Annai Teresa College of Engineering, Thirunavalur, Ulundurpet, Villupuram Dt. From 02.05.2016 to 30.04.2017.
- ✓ Working as an assistant professor at Vignan's Foundation for Science, Technology & Research, (Deemed to be University) Guntur, Andhra Pradesh, India. From 17.05.2017- Till now.

PATENT FILED

- ✓ "Process for the Production of Novel Latent curative for epoxy resins" India Pat. 201841010307, March. 21, 2018.

MEMBERSHIP

Life Members of **Indian Society for Radiation and Photochemical Sciences (ISRAPS),** C/O Radiation & Photochemistry Division Bhabha Atomic Research Centre, Trombay, Mumbai 400 085, INDIA. https://www.israps.org.in/executive-council-israps.php

BOOKS CHAPTER

- ✓ S. Devaraju, **K. Krishnadevi**, M. Alagar, "Name of the book-Development of Halogen Free Sustainable Polybenzoxazine Matrices and Composites for Flame Retardant Applications" Title of the chapter-Flame Retardant and Thermally Insulating Polymers, **2021**, ISBN- 978-1-83968-715-0. DOI: 10.5772/intechopen.98470.

ONLINE COURSES

- ✓ NPTEL Online Certification course completed and entitled as "**Nature and Properties of Materials**" by the **Prof. Bishakh Bhattacharya,** Department of Mechanical Engineering, IIT- Kanpur. **8 weeks course,** form 15-Feb-2021 to 09-Apr-2021. The number of credits recommended by NPTEL was 2. It was an AICTE approved FDP course.
- ✓ NPTEL Online Certification course completed and entitled as "**Electronic Waste Management**" by the **Prof. Brajesh Kumar Dubey,** Department of Civil Engineering, IIT Kharagpur. **8 weeks course,** form 24-Jan-2022 to 18-Feb-

2022. The number of credits recommended by NPTEL was 1. It was an AICTE approved FDP course.

REFRESHER COURSES

1. Faculty Orientation Program, "**Academy for Faculty Development**" attended on **16th to 24th June, 2017** (9 Days), Department of Science & Humanities at Vignan's Foundation for Science, Technology & Research, (Deemed to be University), Guntur, Andhra Pradesh, India.
2. Indian Academy of Sciences, Bengaluru, Indian National Science Academy, New Delhi and The National Academy of Sciences India, Allahabad Science Sponsored, Academies' Refresher Course on "**Upskilling Chemistry Teachers on Latest Pedagogical tools For Impactful Teaching**" 15 days program from **27.11.2018 to 11.12.2018** in Department of Science & Humanities at Vignan's Foundation for Science, Technology & Research, (Deemed to be University), Guntur, Andhra Pradesh, India.
3. "**Faculty Orientation Program on Outcome based education-A-21st century pedagogical model**" organized by the Directorate of Academy for Faculty Development, IQAC, Vignan's Foundation for Science, Technology & Research, (Deemed to be University), Guntur, Andhra Pradesh, India from **21.o6.2021 to 30.06.2021** (10 days).
4. Faculty Development Program on **"Inculcating Universal Human Values in Technical Education"** organized by the **All-India Council for Technical Education (AICTE)** from 26 July, 2021 to 30 July, 2021, virtually at AICTE, Nelson Mandela Marg, Vasant Kunj, New Delhi.
5. Faculty Development Program on **"Polymer Matrix based Nanostructures for Targeted Drug Delivery Application**" organized by **AICTE Training and Learning (ATAL) Academy** from 2nd August 2021 to 6th August 2021, virtually at Central Institute of Petrochemicals Engineering and Technology (CIPET): CSTS Guwahati (ATAL/2021/1626077800).
6. Faculty Development Program on "**Sustainable Green Composites: Design, Manufacturing and Characterization**" organized by **AICTE Training and Learning (ATAL) Academy** from 9th August 2021 to 13th August 2021, virtually at NIT Meghalaya (ATAL/2021/1628139849).
7. Faculty Development Program on **"AICTE Training and Learning (ATAL) Academy Faculty Development Program (FDP) on fundamentals of Novel Materials**" organized by **AICTE Training and Learning (ATAL) Academy** from 24th August 2021 to 28th August 2021, virtually at Tripura University (ATAL/2021/1626348087).
8. Two-week International Faculty Development Programs on "**Advanced Computational and Experimental Research**

in Physics-2021 organized by Department of Physics, SRM, Ramapuram campus, Chennai on 13th September to 25th September 2021".

PUBLICATIONS

1. **Krishnadevi K,** Alagar M, Selvaraj V "Development of hexa(aminophenyl)cyclotriphosphazene (CPA) modified Cyanate ester composites for high temperature applications" **High Performance Polymers**, **2014**; vol. 26, 1: pp. 89-96.
2. **Krishnadevi K,** Selvaraj V and Dakishnamoorthy Prasanna, "Thermal, mechanical and antibacterial properties of cyclophosphazene incorporated benzoxazine blended bismaleimide composites", **RSC Advances, 2015**, vol. 5, no. 1, pp. 913-921.
3. **Krishnadevi K** and Selvaraj V "Development of halogen free flame retardant phosphazene and rice husk ash incorporated benzoxazine blended epoxy composites for microelectronic applications" **New Journal of Chemistry, 2015**, vol. 39, no. 5, pp. 6555-6567.
4. **Krishnadevi K** and Selvaraj V "Cyclotriphosphazene and TiO2 reinforced nanocomposite coated on mild steel plates for antibacterial and corrosion resistance applications" **Applied Surface Science, 2015,** vol. 366, no. 5, pp. 148-157.
5. **Krishnadevi K** and Selvaraj V "Biowaste material reinforced cyanate ester-based epoxy composites for flame retardant applications" **High Performance Polymers, 2016**, vol. 28, no. 8, pp. 881-894.
6. **Krishnadevi K** and Selvaraj V "Development of cyclophosphazene and rice husk ash incorporated epoxy composites for high performance applications" **Polymer bulletin, 2017**, vol.74, no.5, pp.1791-1815.
7. **Krishnadevi K** and Selvaraj V "Fabrication of Bioactive Material Reinforced Caprolactam Based Cyanate Ester Composite for Coating Applications" **Polymer-Plastics Technology and Engineering, 2017**, vol. 56, no. 14, pp. 1586-1597.
8. Selvaraj V, Rhagavarshini T R and **Krishnadevi K** "An escalation of anticorrosion and microelectrical properties of polyurethane nanocomposites from green Brassica nigra oil" **Polymer Bulletin, 2019,** vol. 76, no. 1, pp. 469-494.
9. Devaraju S, **Krishnadevi K**, Sriharshitha S and Alagar M "Design and Development of Environmentally Friendly Polybenzoxazine–Silica Hybrid from Renewable Bio-resource" **Journal of Polymer and the Environment 2019**, vol.27, no.1, pp.141-147.
10. **Krishnadevi K**, Devaraju S, Naveena E and Alagar M" Development and characterization of fully bio-based polybenzoxazine-silica hybrid composites for low-k and

flame-retardant applications" **Polymers for Advanced Technologies, 2019,** vol.30, no.1, pp. 1856-1864.

11. Devaraju S, **Krishnadevi K**, Naveena E and Alagar M "Design and development of polybenzoxazine-POSS hybrid materials from renewable starting materials for low k and low surface free energy applications" **Materials Research Express, 2019**, vol.6, no.10, pp. 104007.
12. **Krishnadevi K**, Devaraju S, Sriharshitha S, Alagar M and Keerthi Priya Y "Environmentally sustainable rice husk ash reinforced cardanol based polybenzoxazine bio-composites for insulation applications" **Polymer Bulletin, 2020**, vol. 77, pp. 2501–2520.
13. Sriharshitha S, **Krishnadevi K**, Devaraju S, Srinivasadesikan V and Shyi-Long Lee "Eco-Friendly Sustainable Poly(benzoxazine-co-urethane) with Room-Temperature-Assisted Self-Healing Based on Supramolecular Interactions". **ACS Omega, 2020,** vol. 5, pp. 33178−33185.
14. Devaraju, S., **Krishnadevi, K.**, Naveena, E and Alagar M "Eco-friendly fully bio-based polybenzoxazine-silica hybrid materials by sol–gel approach". **Polymer Bulletin, 2021,** vol. 78, pp.4251-4260.
15. Devaraju S, **Krishnadevi K**, Naveena E, Sriharshitha S & Ashok Kumar A, Development of highly flexible sustainable bio-silica reinforced cardanol based poly (benzoxazine-co-epoxy) hybrid composites, **Journal of Macromolecular Science, Part A, 2021,** DOI: 10.1080/10601325.2021.1981764.
16. **K. Krishnadevi**, S. Ratna Kumari, D. Prasanna, H. Bhavani Naga Prasanna, V. Anuradha "Non-covalent functionalization of triazine framework decorated over reduced graphene oxide as a novel anode catalyst support for glycerol oxidation" **Journal of Colloid and Interface Science**, **2022**, vol. 607, pp. 1776-1785.

INTERNATIONAL/ NATIONAL CONFERENCE /WORKSHOP PAPERS PRESENTED

1. **Krishnadevi K** and Selvaraj V "**flame retardant and electrical properties of cyanate ester/ Capron incorporate cyclophosphazene for high performance applications**", National Conference on Advancement in Materials Science (AMS 2014), **26-27th September 2014**, Coimbatore institute of technology (CIT), Coimbatore, India.
2. **Krishnadevi** K and Selvaraj V "**Synthesis and characterization of cyclotriphosphazene modified cyanate ester polymer composites for corrosion resistance applications**", Third International Conference on Polymer Processing and Characterization (ICPPC 2014), **11-13th Oct. 2014**, Kottayam, Kerala, India.

3. **Krishnadevi K** and Selvaraj V "**Benzoxazine based epoxy composite coatings for corrosion protection on mild steel**" International Conference on Advances in Mechanical Engineering (ICAME 2015), University College of Engineering Villupuram, Anna University, **15th & 16th October, 2015**, Tamilnadu, India.
4. **Krishnadevi K** and Selvaraj V "**Synthesis and characterization of DOPO based cyanate ester functional benzoxazine composites for flame retardant applications**" National workshop on recent advances in engineering materials & chemical sciences (NWRAEMCS 2016), University College of Engineering Villupuram, **Anna University, 15th & 26th February, 2016, Tamilnadu, India.**
5. **K. Krishnadevi**, **National Conference on Frontier Areas in Chemistry** (NCFAC 2011), Department of Chemistry, Pondicherry University, **22nd December 2011**, Puducherry, India.
6. **K.Krishnadevi**, "**Advanced Chemical Materials and Processes for Technological Applications in Life Sciences, Pharmacy and Healthcare**" DSR Sponsored National Conference, on **18th & 19th August, 2017**. Department of Science & Humanities at Vignan's Foundation for Science, Technology & Research, (Deemed to be University), Guntur, Andhra Pradesh, India.
7. **K.Krishnadevi**, D.Prasanna and V.Selvaraj "**Environmental friendly flexible polyurethane nanocomposites for flame retardant applications**" International conference on engineering materials and renewable energy (ICEMRE-2018), Department of chemistry, University College of Engineering Villupuram, Anna University, **4th & 5th January 2018**, Tamilnadu, India.
8. **K.Krishnadevi**, National Workshop "**Atomic Simulation for the Application of Material Science**" on 6th **February, 2020** in Department of Science & Humanities at Vignan's Foundation for Science, Technology & Research, (Deemed to be University), Guntur, Andhra Pradesh, India.
9. **K.Krishnadevi**, ISCA, CSIR, DST and Springer Nature Sponsored "**6th International Conference on Nanoscience and Nanotechnology (virtual conference)**" and the title of the presentation was "**Cardanol based halogen free flame retardant polybenzoxazine nano composites for high performance applications**" on February 01 – 03, 2021, at Department of Physics and Nanotechnology, SRM Institute of Science & Technology, Kattankulathur, Chennai, Tamilnadu, India.

10. **K.Krishnadevi**, AICT Sponsored Short Time Training Program entitled "**Nano Bio Translational Research and its Application in Health Sciences**" on **February 08 – 13th (6 days)**, 2021 at Department of Pharmaceutics, Vignan Pharmacy College, Vadlamudi, Guntur, Andhra Pradesh, India.
11. **K.Krishnadevi**, "**Recent Trends in Organo-catalysis**" A one-day webinar on **May 29th , 2021** at Division of Chemistry, Department of Sciences and Humanities of VFSTR (Deemed to be University) Vadlamudi, Guntur, Andhra Pradesh, India.
12. **K.Krishnadevi**, "**Recent Advances in Materials Chemistry**" A one-day webinar on **June 3rd, 2021** at Division of Chemistry, Department of Sciences and Humanities of VFSTR (Deemed to be University) Vadlamudi, Guntur, Andhra Pradesh, India.

WEBINAR ORGANISED

1. **Krishnadevi K,** Co-Convenors for the entitle of "**Emerging Techniques in Polymers**" A one-day webinar on **June 12th, 2021** at Division of Chemistry, Department of Sciences and Humanities of VFSTR (Deemed to be University) Vadlamudi, Guntur, Andhra Pradesh, India.

REFERENCES

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I hereby declare that the above given details are true to the best of my Knowledge.

sincerely
(**K.Krishnadevi**)