

**ST. THOMAS COLLEGE, KOZHENCHERRY**  
**DEPARTMENT OF CHEMISTRY**

**FACULTY BIOSKETCH**



**Name** : **Dr. LEKHA P. K.**

**Designation** : **ASSISTANT PROFESSOR**

**Address** : **SANKARAMANGALATHU VARAMANNIL,  
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**Date of Joining** : **01/06/20145**

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**Qualification** : **M.Sc., PhD**

**RESEARCH EXPERIENCE**

**Postdoctoral Research Fellow (Oct 2012 – Aug 2014)**

- *Project Title:* Diagnosis of lung cancer from exhaled breath with silicon based biophotonic device.
- *Adviser:* A/Prof. Suresh Valiyaveetil, Department of Chemistry, National University of Singapore (NUS), Singapore

**Doctor of Philosophy (2008-2012)**

- *Thesis Title:* Design, synthesis and photophysical study of tunable light emitting systems based on peripherally modified PAMAM dendrimer.
- *Adviser:* Dr. E. Prasad, Department of Chemistry, Indian Institute of Technology Madras (IITM), India

**Master of Chemistry (2005)**

- *Project Title:* Functional modification of hyperbranched polymers by photo responsive

multichromophoric systems

- *Adviser:* Dr. Sunny Kuriakose, Department of Chemistry, St. Thomas College, India

#### AWARDS AND HONOURS

- Senior Research Fellowship (SRF-CSIR), India (May 2010-April 2012)
- Junior Research Fellowship (JRF-CSIR), India (Aug 2007-April 2010)
- National Eligibility Test for Lectureship (NET), December 2007
- GATE-07, India (2007) with percentile score of 92.7

#### RESEARCH INTERESTS

- Design and synthesis of novel luminescent hyperbranched polymers
- Synthesis of silicon based novel organic-inorganic hybrid materials for the removal of nanoparticles from nano waste
- Design and Synthesis of silicon based fluorescent soft materials
- Aggregation of macromolecules and the impact of aggregation on fluorescence properties of the system

#### PUBLICATIONS

1. **P. K. Lekha** and E. Prasad (2010) Aggregation controlled excimer emission from anthracene modified PAMAM dendrimers. *Chem. -Eur. J.*, **16**, 3699-3706.
2. **P. K. Lekha** and E. Prasad (2011) Tunable Emission of Static Excimer in a Pyrene-Modified Polyamidoamine Dendrimer Aggregate through Positive Solvatochromism. *Chem. -Eur. J.*, **17**, 8609-8617.
3. **P. K. Lekha**, T. Ghosh, E. Prasad (2011) Utilising Dendritic Scaffold for Feasible Formation of Naphthalene Excimer, *J. Chem. Sci.*, **123**, 919-926. (**Invited Article**)

#### CONFERENCES ATTENDED

1. **P. K. Lekha** and E. Prasad. "pH and Solvent Driven Morphology Changes in Anthracene Substituted Lower Generation PAMAM Dendrimers and Its Effect on the Emission Properties " *Nanotechnology and Advanced Functional Materials*, July 09-11, National Chemical Laboratory , Pune, **2009**.
2. **P. K. Lekha** and E. Prasad. "Luminescence Properties of Lower Generation PAMAM Dendrimers Peripherally Substituted by Polycyclic Aromatic Hydrocarbons" *3<sup>rd</sup> Asia Pacific Symposium on Radiation Chemistry and DAE-BRNS 10th Biennial Trombay symposium on Radiation & Photochemistry*, September 14-17, Treasure Island Resorts, Lonavala, **2011**.