

CURRICULUM VITAE

Dr. K. PONNUSAMY

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PROFESSIONAL OBJECTIVE

To apply the learned skills to realize the goals of the organization I work for and in the process build a career which is intellectually challenging and personally rewarding.

EDUCATION

| Degree | College/School/ University | Year of passing | Specialization | % of Marks/ Grade Obtained |
|--------|---|-----------------|----------------|----------------------------|
| Ph.D. | Indian Institute Technology Madras, Chennai | 2014 | Chemistry | 8.0 CGPA |
| M.Sc. | Madurai Kamaraj University, Madurai | 2008 | Chemistry | 74.3 |
| B.Sc. | Government Arts College, Dharmapuri | 2006 | Chemistry | 80.2 |
| HSC | A.G.B.Hr.Sec. School, Dharmapuri | 2002 | State Board | 76.5 |
| SSLC | Government High School, Adhagapadi | 2000 | State Board | 76.4 |

WORKING EXPERIENCE

- Assisted practical classes for UG and PG students as a part of teaching assistanceship during the Ph.D. program at Indian Institute of Technology Madras.
- Worked as “Research Associate” in the Department of Chemistry, IIT Madras with **Prof. R. Dhamodharn** for period of 2014-2015
- Worked as “Post-Doctoral Research Associate” in the Department of Chemical Engineering, Pohang University of Science and Technology (POSTECH), South Korea, with **Prof. Jin Kon Kim** for period of 2015-2016.
- Worked as “Assistant Professor” in Veltech Hightech Dr. Rangarajan and Dr. Sakunthala Engineering College, Avadi, Chennai, for period of 12.01.2017 to 28.02.2018.

Ph. D THESIS TITLE

“Synthesis and Characterization of Block Copolymers (AB, ABC) by SET-RAFT, Thermal RAFT and SET-LRP Polymerizations”. with **Prof. R. Dhamodharn**, IIT Madras, Chennai.

AWARDS AND ACHIEVEMENTS

- *Senior Research Fellowship* by Department of Science and Technology, India (August 2010-July 2011)
- *Junior Research Fellowship* by Department of Science and Technology, India (July 2008 - July 2010)
- Scored 94 percentile in Graduate Aptitude Test in Engineering (GATE-2008)
- Stood First in Bachelor of Science (B.Sc.) at College level

RESEARCH INTEREST

- Living and Controlled/Living Radical Polymerization methods (ATRP, NMP, RAFT, SET-LRP and SET-RAFT) and Development of new methodology in CLRP
- Synthesis of Fluorescent Polymers, Nano Materials, Nanocomposites and Biodegradable monomers with environment friendly.
- Design of biodegradable amphiphilic polymers and surface modification using polymers.

PROFESSIONAL SKILLS

- Multistep organic synthesis, Asymmetric synthesis [Experienced in Chiral pool synthesis, Resolution Techniques and Asymmetric catalysis] in my master degrees
- Experience in synthesis and characterization of all types of polymers and nano materials through various CLRP methods in my doctoral degrees
- Characterization of organic molecules and polymers using NMR (1D & 2D), UV-Vis, FT-IR TGA, DSC and MALDI-TOF-MS/ESI-MS Mass spectrometry.

TECHNICAL AND COMPUTER SKILLS

- Experienced in handling instruments such as FT-NMR Spectrometer (Bruker), UV-Vis Spectrophotometer (JASCO), FTIR (JASCO), Spectrofluorimeter (JASCO), Gel Permeation Chromatography (WATERS & SHIMADZU), Atomic Force Microscopy (PARK Systems X-100), Cyclic Voltammetry (CV) (CH Instruments) and Thermogravimetric Analyzer (TA Instruments)
- Proficient in MS Office 2010 and 2007, Adobe Photoshop, Chem Draw 12, Origin 8.0, Endnote, Math Type 6, Smart Draw 7, Sci-Finder and Corel Draw.
- Extremely familiar with operating systems like Ubuntu linux, Windows 2000, Windows XP, Windows 7 and 8.

REFEREED INTERNATIONAL JOURNALS

1. Controlled polymerization of methacrylates at ambient temperature using trithiocarbonate chain transfer agents *via* SET-RAFT - cyclohexyl methacrylate: A model study: N. Haridharan, **K. Ponnusamy** and R. Dhamodharan; *J. Polym. Sci. Part A: Polym. Chem.*, **2010**, *48*, 5329.
2. Synthesis of fluorescent, dansyl end-functionalized PMMA and poly(methyl methacrylate-*b*-phenanthren-1-yl-methacrylate) diblock copolymers, at ambient temperature: N. Haridharan, R. Bhandary, **K. Ponnusamy** and R. Dhamodharan; *J. Polym. Sci. Part A: Polym. Chem.*, **2012**, *50*, 1491.

3. Synthesis of block and graft copolymers of styrene by RAFT polymerization, using dodecyl-based trithiocarbonates as initiators and chain transfer agents: **K. Ponnusamy**, R. Prakash Babu and R. Dhamodharan; *J. Polym. Sci. Part A: Polym. Chem.*, **2013**, *51*, 1066.
4. Synthesis, characterization and kinetic studies of homo and amphiphilic block copolymers of CHMA, BnMA and NIPAM by SET-RAFT using monofunctional dodecyl based trithiocarbonates as chain transfer agents: **K. Ponnusamy**, R. Dhamodharan and Jin Kon Kim. (to be communicated to Macromolecules)
5. Synthesis and Characterization of Block Copolymers of BnMA, CHMA and NIPAM by M(0)-Mediated SET-LRP Method, at Ambient Temperature: **K. Ponnusamy**, R. Dhamodharan and Jin Kon Kim. (to be communicated to Polymer Chemistry)
6. Synthesis, characterization and 2D NMR studies of multiblock amphiphilic copolymers Cu(0)-Mediated SET-LRP Method, at Ambient Temperature: **K. Ponnusamy**, and R. Dhamodharan and Jin Kon Kim. (to be communicated to Polymer Chemistry)

CONFERENCES AND WORKSHOP

1. **K. Ponnusamy, Aluri Ester Rani and R. Dhamodharan** (2010) “*SET-RAFT Polymerization of methyl methacrylate derivatives at ambient temperature using typical RAFT agents as initiators*”. PSE-2010, November 26-27, 2010, Punjab University, Chandigarh, India.
2. **K. Ponnusamy and R. Dhamodharan** (2011) “*SET-RAFT Polymerization of benzyl methacrylate and isobornyl methacrylate, at ambient temperature*”. Soft Matter Chemistry-2011, November 9-11, 2011, Raman Research Institute, Bangalore, India.
3. Workshop on “Advanced Analytical Techniques-2012” March 26-29, 2012, SAIF, IIT Bombay, Mumbai, India.
4. Participated in the national seminar on “Frontiers in Natural Products Chemistry - 2008” (FNPC-08) held at the Department of Natural Products Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai - 625 021.

PERSONAL DETAILS

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|-----------------|------------------------------|
| Name | : Dr. K. PONNUSAMY |
| Date of Birth | : 30 th May 1985 |
| Sex | : Male |
| Marital Status | : Married |
| Nationality | : Indian |
| Languages Known | : Tamil, Kannada and English |

DECLARATION

I hereby declare that the information given above is true to the best of my knowledge

ABOUT MYSELF: I am an energetic person with very high optimistic outlook towards life. I enjoy team work and easily socialize with people. I am always passionate about learning new things which keep my days exciting and meaningful.

Date:

Signature

Place:

(Dr. K. Ponnusamy)