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### ***Present status***

Assistant Professor, Department of Chemistry, Nehru Arts and Science College Kanhangad, Kasaragod (DIST), Kerala, 671314, since 22<sup>nd</sup> November 2013.

### ***Achievements***

- Appointed as a research supervisor in Chemistry at Department of Chemistry, Govt. College Kasaragod, under Kannur University.
- Successfully completed FLAIR- National Internship during - 12/05/2017 to 09/06/2017 Under the Mentorship of Dr M R Prathapachandra Kurup, Professor and Head, Central University Kerala, sponsored by ***FLAIR-National Internship 2016-17 (DCE, Govt. of Kerala)***.
- Successfully completed an online course on ***“Introduction to Molecular Spectroscopy”*** authorised by University of Manchester and offered through Coursera on 8th October 2020.

### ***Orientation Programmes/Refresher Courses/FDP courses***

- Two weeks **Faculty Development Programme** organized by Ramanujan College, from 1-14 February 2022.
- ***“One-Day Workshop on Institutional Preparedness for NEP 2020: A perspective from Assessment and Accreditation”***, under the UGC-PARAMARSH Scheme organised by the Internal Quality Assurance Cell of Nehru Arts and Science College Kanhangad on 26-11-2022.
- Five Days Training for College Teachers on ***“Recent Advances in Inorganic Chemistry”*** organized by Department of Chemistry, School of Physical Sciences, & Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT), School of Education, Central University of Kerala (CUK), Kasaragod 671320, from 05.03.2021 to 09.03.2021.
- ***“ National Level Online Workshop on Virtual Chemistry learning for Higher Education”*** held on 18-01-2021 to 19-01-2021 jointly organized by Department of Chemistry, School of Physical

Sciences, & Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PM-MMNMTT), School of Education, Central University of Kerala (CUK), Kasaragod 671320, Kerala.

- **SWAYAM**- Online Refresher Course in Chemistry for higher education (16 weeks from 01st September 2019 to 31 st December 2019) Sponsored by MHRD, Govt. of India
- **SWAYAM**- Online Refresher Course in Chemistry for Higher education faculty (16 weeks from 01st November 2018 to 28th February 2019) Sponsored by MHRD, Govt. of India
- **FLAIR Orientation programme** - 05/09/2016
- **FLAIR Induction Training Programme** (31-10-2016 to 02-11-2016) organised by DCE, Govt. of Kerala.
- **ORIENTATION COURSE** - Orientation course 13/01/2016 to 10/02/2016 UGC-HRDC, Kannur University
- **REFRESHER COURSE**- Refresher Course UGC-HRDC, Kannur University 12/07/2017 to 01/08/2017 (21 days).

### ***Details of Seminars/Conferences organised***

1. Convenor of Webinar series ***“FRONTIERS IN CHEMISTRY”*** (include 6 invited lectures) by Department of Chemistry, Nehru Arts and Science College Kanhangad
2. Convenor of One day Seminar on ***“Advances in Chemistry”*** 06-02-2020 by Department of Chemistry, Nehru Arts and Science College Kanhangad.
3. Convenor of National Seminar on ***“Modern Trends in Chemistry”*** organised by Dept. of Chemistry, NAS College, KHD on 23<sup>rd</sup> June 2017.
4. National Seminar on ***“Polymers Plural thoughts Over the: Boons and Bans”*** during 05 & 06-02-2014 at Nehru Arts and Science College Kanhangad, Sponsored by KSCSTE.
5. Regional Seminar on ***“Solid Waste Management- A Sustainable Perspective”*** on 10-10-2014 at Nehru Arts and Science College Kanhangad, Sponsored by KSCSTE.

### ***Invited Lectures and Chairmanships at national or international conference/seminar etc.***

1. Invited Lecture on ***“Frontiers in Chemistry Research”***, **Sasthra Padam 2020** (01/02/20)
2. Invited Lecture on ***“Applications of Chemistry”***, **Sasthra Jaalakam 2019** (08/11/19)
3. **Chaired** a session (Conducting polymers -Polymers) during National Seminar on ***“Polymers Plural thoughts Over the: Boons and Bans”*** during 05 & 06-02-2014 at Nehru Arts and Science College Kanhangad, Sponsored by KSCSTE.

## ***Administrative/Institute Support Work***

### **Academic year 2022-23**

- Women cell- KSWDC- Coordinator
- Centre for Women Studies- Coordinator
- Science Club - Member
- III BSc. Polymer Chemistry - Tutor
- “Craft Camp”- A hands on training in handicraft- Coordinator
- Seminar on “MANAGING YOUR PERIODS HOLISTICALLY”- Health Awareness Class- Coordinator
- Seminar on “Menstrual Cup: Best solution for Periods”- Health Awareness Class- Coordinator

### **Academic year 2021-22**

- Women cell- KSWDC- Coordinator
- Centre for Women Studies- Coordinator
- Science Club - Member
- II BSc. Polymer Chemistry - Tutor
- A one day visit organised to “**Thanal-Snehavedu**” Ambalathara- Kanhangad, Kasaragod- Co-ordinator
- “Craft Camp”- A hands on training in handicraft- Co-ordinator
- Seminar on “Mastering life skills” (KSWDC Ltd)- Co-ordinator
- 181 Help-line awareness class (KSWDC Ltd)- Co-ordinator
- Seminar on “Gender Issues in Contemporary times- problems and solutions” International Women’s day celebration. (KSWDC Ltd)- Co-ordinator

### **Academic year 2020-21**

- Women cell- KSWDC- Coordinator
- Centre for Women Studies- Coordinator
- Internal Complaint Committee - member
- Science Club - Member
- I BSc. Polymer Chemistry - Tutor
- Online Webinar Series “Frontiers in Chemistry”- Co-ordinator
- “Kalalaya Jyothi” (Kerala Women’s Commission)- Co-ordinator
- Webinar on “Premarital Counselling” (Kerala Women’s Commission)- Co-ordinator

### **Academic year 2019-20**

- Women cell- KSWDC- Coordinator
- Centre for Women Studies- Coordinator
- WWS - Internal mentor
- Internal Complaint Committee - member

- Science Club - Member
- Sasthrajalakam (Talent Hunt) - Resource person & Organising Committee Member
- Sastrapadham - Organising Committee Member
- Gifted Students Programme - Resource person & Organising Committee Member
- Seminar on “Advances in Chemistry”- Co-ordinator
- One week “ Teakwondo Training”(KSWDC Ltd)- Co-ordinator
- “Sthree Suraksha” Training on self defence (Women Cell- Kerala Police)- College Co-ordinator
- Seminar on “Healthy Attitude: Relationships make life” (KSWDC Ltd)- Co-ordinator

### **Academic year 2018-19**

- Centre for Women Studies - Coordinator
- WWS - Internal mentor
- Women Cell- Member
- Science Club- Member
- Internal Complaint Committee - member
- Tutor- III BSc Polymer Chemistry
- Sasthrajalakam (Talent Hunt) - Resource person & Organising Committee Member
- Sastrapadham - Organising Committee Member
- Seminar on “Women Empowerment” International Women’s Day celebration- Co-ordinator

### **Academic year 2017-18**

- Book Bank - Coordinator
- WWS - Internal mentor
- Centre for Women Studies- member
- Science Club - Member
- Prospectives in Chemistry- Organising Committee Member
- Tutor- II BSc Polymer Chemistry
- **Appointed as NTA- Observer- NEET 2019**
- Appointed as Presiding Officer- Kerala Panchayath election- 2015

### **Coordinator of various committees of NASC**

1. Women Cell- Kerala State Women Development Corporation Ltd (KSWDC) (2019-20, 2021-22, 2022-23)

2. Centre for Women Studies (2018-19)

3. Book bank (2016-17, 2017-18)

### **Member of various committees of NASC**

1. Internal complaint committee (2019-2020)

2. Science club

3. Women Cell (2015-2016, 2018-2019)

4. Hostel committee (2016-2017)

## ***Details of Academic Outreach Activities***

- ***During COVID -19 outbreak, NAS College conducted various examinations, Dept. of Chemistry prepared Hand Sanitiser for free of cost to all the students and staff.***
- **Published an article about periodic table (One Day One Element- IYPT Poster 44) in LUCA- Malayalam Science Portal by Kerala Sasthra Sahithya Parishad (30-12-2019).**
- **On request from a local farmer, carried out analysis of water for various quality parameters.**

## **Research Publications**

### ***Journal papers***

1. Kunniyur Mangala, Krishnapillai Sreekumar, “*Study of polycarbosilane-supported copper(II) as a heterogeneous catalyst*” *Polym. Bull.* **2020**, 77, 153-163.
2. Fruit Peel Extract Mediated Green Synthesis of Copper Nanoparticles, *Academia- A multidisciplinary research journal*, 2395-7050.
3. Chemical Analysis for Evaluating Soil Health and Quality- A Study at Nileshtar, India- *International Journal of Research and Analytical Reviews*.
4. Kunniyur Mangala, Krishnapillai Sreekumar, “*Polycarbosilane: Synthesis and Characterization*”, *Academia - A Multidisciplinary Journal* 2017, 49 (ISSN: 2395-7050).
5. Kunniyur Mangala, P.S. Sinija, Krishnapillai Sreekumar, “*Palladium(II) supported on polycarbosilane: Application as reusable catalyst for Heck reaction*” *J. Mol. Catal. A: Chemical*, 2015, 407, 87–92.
6. Kunniyur Mangala, Krishnapillai Sreekumar, “*Polycarbosilane Supported Titanium Catalyst For Mannich Reaction*” *Academia - A Multidisciplinary Journal* **2015**, 1, 4 (ISSN: 2395-7050).
7. Kunniyur Mangala, Krishnapillai Sreekumar, “*Dendrimer Functionalized Polysilane: An Efficient and Recyclable Organocatalyst*” *J. Appl. Polym. Sci.* **2015**, 132, 41593.
8. Kunniyur Mangala, Krishnapillai Sreekumar, “*Polycarbosilane Supported titanium(IV) catalyst for Knoevenagel Condensation Reaction*”, *Appl. Organometal. Chem.* 2013, 27, 73 –78.
9. Kunniyur Mangala, Krishnapillai Sreekumar, “*Synthesis and Application of Polycarbosilane Supported Manganese ions as Catalyst in Mannich Reaction*”, *J. Appl. Polym. Sci.* **2013**, 127, 717–723.

## Conference/seminar Papers

1. “*Application of Dendrimer as an Efficient Organocatalyst for Knoevenagel Condensation Reaction*” Kunniyur Mangala, Krishnapillai Sreekumar, Presented at **National Seminar on Recent Advances in Chemistry**, Krishna Menon Memorial Govt. College, Kannur [2015].
2. “*Synthesis of Polycarbosilane Supported Manganese Ions: Application as catalyst in Mannich reaction*” K. Mangala, K. Sreekumar, Presented at a National Seminar on “**Polymers Plural thoughts Over the: Boons and Bans**”, Nehru Arts and Science College Kanhangad [2014].
3. “*Palladium(II) Supported Polycarbosilane: Application as Reusable Catalyst*”, K. Mangala, K. Sreekumar (Payyanur college)
4. “*Polycarbosilane; Novel support for heterogeneous catalysis*”, K. Mangala, K. Sreekumar, presented at **MACRO 2010** at Delhi, India, December [2010].
5. “*Metal-incorporated Polycarbosilane as a heterogenous catalyst in Biginelli reaction*”, K. Mangala and K. Sreekumar, Presented at **MATCON 2010**, January [2010].
6. “*Application of Metal Incorporated Polycarbosilane in Heterogeneous Catalysis*”, K. Mangala and K. Sreekumar, Presented at **International Conference POLYCHAR-16** at Lucknow, U. P. India, [2008].
7. “*Synthesis and Characterization of Metal Containing Polycarbosilane*”, K. Mangala and K. Sreekumar, Presented at **International Conference on Chemistry; MatCon-2007** at Cochin University of Science and Technology, Kerala, India, March [2007].

## Seminars/Workshops Attended

1. “**MATCON 2021**” March 15-19th, Dept of Applied Chemistry, Cochin University of Science and Technology, Kochi, Kerala.
2. “**Harvesting the Solar energy using TiO<sub>2</sub>**” Webinar organised by Gurudev Arts and Science College, Mathil. on 24/07/2020.
3. “**Cyber Crime & Redressal and Responsible Online Behaviour**” Webinar organised by WeThinkDigital on 09-07-2020.
4. “**International Multidisciplinary Webinar Series - CONVERGENCE 2020**” organised by SES College, Sreekandapuram, Kannur, Kerala. on 07-06-2020.
5. National Seminar on “**Techniques and Advances in Material Sciences**” (Nov 2019) at Govt. Brennen College, Thalassery, Kannur, Kerala.

6. Workshop on “**Research Methodology**” (17th Oct 2014) at Central University Kerala, organised by Swadeshi Science Movement, Kerala.
7. National Workshop on “**Data Analysis using Statistical Software**” (16<sup>th</sup> Oct 2014) at Nehru Arts and Science College Kanhangad. Kerala
8. National Seminar on “**Techniques and Advances in Material Sciences**” (24<sup>th</sup> Nov 2014) at Govt. Brennen College, Thalassery, Kannur, Kerala.
9. Regional seminar on “**Solid Waste 2 Management- A Sustainable Perspective**” (10<sup>th</sup> Oct 2014) at Nehru Arts and Science College Kanhangad. Kerala.
10. National seminar on “Climate Change- Challenges & Solutions” Organized by Dept. of Botany Nehru Arts and Science College, Kanhangad.
11. National Seminar “**CTriC 2012**” (20-21<sup>st</sup> Jan 2012) at the Department of Applied Chemistry, Cochin University of Science and Technology, Cochin, Kerala.
12. “**One-Day User’s Meeting**” (9<sup>th</sup> March 2010) conducted by NMR Research Centre, IISc, Bangalore.
13. “**Orientation Programme in Catalysis Research**” (3<sup>rd</sup>-21<sup>st</sup> December 2007) held at National Centre for Catalysis Research, Indian Institute of Technology, Madras.
14. National Seminar on “**Frontiers In Chemistry (FIC-06)**” (24-25 March 2006) at the Department of Applied Chemistry, Cochin University of Science and Technology, Cochin, Kerala.

### ***Book chapter Published***

- **Upshots of Pesticides and Heavy Metals on Nature**; Mangala K, **MULTITUDE**, UGC-HRDC, Kannur University, 112-123, **2016. ISBN:9788191070615.**

### ***SOCIAL WORK***

- Election duty- Appointed as Presiding Officer, 02/11/2015- Kerala Panchayath election

### ***Academic profile***

- Completed **Ph. D. in Chemistry** (Thesis entitled **Functionalized Silicon Polymers: Novel Materials for Catalysis**) Cochin University of Science and Technology, Cochin-22, Kerala, India. Under the guidance of **Dr. K. Sreekumar**, Professor, Department of Applied Chemistry, **Cochin University of Science and Technology**, Cochin-22, Kerala, India. E-mail: [ksk@cusat.ac.in](mailto:ksk@cusat.ac.in)
- Six years of research experience from July 2005 to September 2011 working as a CSIR- research fellow in the area of polymer synthesis and heterogeneous catalysis

- Qualified Joint CSIR-UGC test for the award of **Junior Research Fellowship** (JRF) and the **National Eligibility Test for Lectureship** (NET), June 2005.
- Qualified **GATE 2004** Examination in Chemistry with a percentile Score of 84.00.
- Completed a full semester project work at the Research Laboratories of Zydu Research Centre at Ahmedabad under Medicinal Chemistry Division, on “*Synthesis of Chemotherapeutic Agents for Microbial Infections*”
- Working experience in common laboratory methods used in organic and polymer synthesis and on analytical instruments like UV- Visible spectrometer, FT-IR spectrometer, fluorescence spectrometer, HPLC, GPC, GC, TG- DTA, XRD, SEM, AAS, AES, surface area analyzer, polarimeter. Skill to interpret data from analytical techniques like LC-MS, NMR spectrometer, GC-MS.
- Application of various spectral and chromatographic methods in organic chemistry and Basic knowledge of computational chemistry.
- Worked as a co-guide for five M.Sc. projects
- **M. Sc. in Applied Chemistry** (2002-2004), Department of Applied Chemistry, Cochin University of Science and Technology, Cochin-22, Kerala, India. First Class (CGPA: 7.89/10)
- Completed the graduation with **Third Rank** in the University level. **B. Sc. in Polymer Chemistry** (1998-2001), Nehru Arts and Science College, Kanhangad, Kasaragod, Kannur University, Kerala, India. First Class.
- **Pre-Degree** (Physics, Chemistry, Biology) (1996-1998), Payyannur College, Payyannur, Kannur, Calicut University, Kerala, India. First Class.
- **SSLC** (Secondary School Leaving Certificate) (1996), Board of Public Examinations, Kerala state, India. Govt. High School South Trikarapur, Kasaragod. First Class.