

DR. USHAMANI.M

**Department of Chemistry and Centre for Research
St.Teresa's College(Autonomous), Ernakulam, Kerala, India
(Accredited with A++ Grade by NAAC)**

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Education

Master of Science

M.Sc. (Pure chemistry) with First class from Mahatma Gandhi University, Kottayam, Kerala, India (1992) (**RANK HOLDER**)

Bachelor of Education

B.Ed (Physical Science) with First class from Mahatma Gandhi University, Kottayam, Kerala, India. (1993)

Doctorate in Philosophy, 2003

Ph.D,

Department of Polymer Science and Rubber Technology,
Cochin University of Science and Technology, Kochi- 682022, Kerala, India

The title of the thesis is “**STUDIES ON PHOTSENSITIVE POLYMERS FOR OPTICAL RECORDING**”

under the joint guidance of Dr.Rani Joseph, Department of Polymer Science and Rubber Technology, Dr.C.Sudha Kartha, Department of Physics and Dr.K.Sreekumar, Department of Applied Chemistry, Cochin University of Science and Technology

Post-doctoral fellow(2003-2005)

In a DRDO funded project, Govt. of India on the Development of Photosensitized Polymers for Optical Recording. Department of Polymer Science and Rubber Technology, Cochin University of Science and Technology, Kochi, Kerala, India.

Technology Transfer Agreement

An agreement has been signed by the Department of Physics, Cochin University of Science and Technology, with Light Logics Holography and Optics private limited, an ISO 9001-2000, Company for transferring the know-how of developing photopolymer film and its coating process for holographic applications on Thursday 10th January 2008. The technology was a joint initiative of faculty members C.Sudha Kartha, Department of Physics, Dr.Rani Joseph, Department of Polymer Science and Rubber Technology, Dr.K.Sreekumar, Department of Applied Chemistry, **Dr.Ushamani.M**, Department of Chemistry St.Teresa's College, and Ms Beena Mary John, Department of Physics CUSAT.

Publications: BOOKS

- **“Text book of Engineering chemistry”** Educational Publishers and Distributors, India. By Dr K.E.George, Dr.Rani Joseph and Ushamani.M. year 2001

ISBN : 81-87198-04-4

- **“ Chemistry for Engineers” based on Mahatma Gandhi University , Calicut University and Kerala University Syllabus** - Educational Publishers and Distributors, India. By Dr K.E.George, Dr.Rani Joseph and Ushamani.M.

ISBN No: 81-87198-19-2 year 2009

- **II Edition of “Text book of Engineering chemistry” for revised Cochin University Syllabus** -- Educational Publishers and Distributors, India. By Dr K.E.George, Dr.Rani Joseph and Ushamani.M.

ISBN No: 81-87198-18-4 year 2009

- **International Book by Dr.Ushamani M**, on Photosensitive Polymers for Optical Recording. Published by LAP, Lambert Publishing, Germany in the year 2013.

ISBN No: 978-3-659-38428-8

- Co-Author **“Engineering Chemistry: Theory and Practice”, text book and lab manual based on A.P.J Abdul Kalam Technological University (the syllabus of KTU-Kerala Technical University) 2015** First edition - Educational Publishers and Distributors, India.

ISBN No: 81-87198-23-0 and ISBN No: 81-87198-25-7

- **Co-author, “Advanced Inorganic, Organic and Environmental Chemistry”** for the Complimentary Chemistry courses of Semester II for B.Sc. Botany, Zoology and Home Science was published under the banner of Teresian Publishing House.

ISBN No: 978-81-7255-091-2

- **Co-author, A book on “Environmental Studies”** based on the UGC syllabus for undergraduate courses of all branches of higher education was published under the Teresian Publishing House

ISBN No:978-81-7255-093-6

- **Co-author, A book on “ A booklet on First Aid and Safety Measures in Laboratory”** for Laboratory staff in science stream was published under the Teresian Publishing House
- **Co-author, A book on “Environmental Studies and Human Rights”** based on the autonomous syllabus for UG Sem V courses of all branches of Science, Arts, Coommerce and Management studies to be published under the Teresian Publishing House (In Press)

Award/Honours

- **DEWANG MEHTA NATIONAL EDUCATION AWARD- BEST PROFESSOR IN CHEMISTRY- 2019**

The Dewang Mehta National Education Awards is India's largest Education Awards Contest and is held as a part of World Marketing Congress. The Dewang Mehta National Education Awards has Citations & Certificate of Merit Judged by an independent jury. The DEWANG MEHTA EDUCATION LEADERSHIP AWARDS is intensely researched. It is an iconic job of the research cell to produce a shortlist of Individuals who are doing extraordinary work and track the record of their achievements. The shortlist is then reviewed by a Jury comprising of senior professionals from across the globe.

- **Listed in the book ‘WOMEN ACHIEVERS IN SCIENCE’** published by Kerala State Council for Science, Technology & Environment, Department of Science and Technology, Kerala State with **IIST affiliation (2012)**.

- **SPSI-BEST THESIS GOLD MEDAL AWARD : 2005**

Society of polymer science India Thiruvananthapuram chapter is a distinguished body of eminent scientist from Kerala.

- **INAE BEST PHD THESIS OF THE YEAR 2004 (NATIONAL AWARD)**

Indian National Academy of Engineering (INAE), established in 1987 is a ‘peer’ body of most distinguished engineers, engineering scientists and technologists covering the entire spectrum of engineering profession. It aims to promote and advance the practice of engineering and technology and related science and disciplines

- **YOUNG SCIENTIST AWARD- 2003**

Recipient, **Young Scientist Award for the year 2003** of the State Committee on Science, Technology and Environment, Government of Kerala for the best paper presented on Engineering and Technology at 15th Kerala Science Congress at Thiruvananthapuram, Kerala, January 29-31, 2003.

- **ILA (INDIAN LASER ASSOCIATION) BEST POSTER AWARD - 2002**

A new methylene blue doped polymer blend for holographic applications, DAE-BRNS National laser Symposium- 2002, Nov 14-16, 2002.

- **SISTER MARIE CECIL PRIZE, 2006, 2007**

The prize is awarded to the Teresaian faculty for publications in National/International Journals

- **Certificate of completion – self learning online course on “Understanding Open Educational Resources” offered by Common wealth of Learning, Canada on February 12th 2019**

Memberships and Other Professional Affiliations

- SPIE member- The International Society for Optical Engineering
- Optical Society of America (OSA)
- Optical Society of India (OSI)
- Life Member Indian National LASER Association
- Society for Polymer Technologists
- MRSI life membership
- SPSI life member
- Indian Society of Analytical Scientist , Kerala Chapter – Life membership

Teaching Experience

- 1998-2001 Guest lecturer, School of Engineering, Cochin University of Science and Technology, Kochi, Kerala, India.
- 2003-2005- post doctoral research work at Polymer Science and Rubber Technology, CUSAT
- March 2005- till date, Assistant Professor at St.Teresa's College, Ernakulam.

Extra Curricular Activities

- M.G.University, NSS Programme Officer
- Interuniversity Kho-Kho Player
- Scholarship winner of Kerala Sangeetha Nataka Acadamy for Bharathanatyan and Mohiniyatam

Projects Undertaken

- Worked as Research Associate in a DRDO funded project on “Studies on Photosensitize Polymers for Hologram Recording” (Rs 25 lakhs)
- A University grants Commission funded Minor project entitled “ A Reusable Polymer Blend for Holographic Applications” worth 0.8 lakhs in the year 2007-2009.
- A University grants Commission funded Minor project entitled “Investigation on the electrical and optical properties of spin coated polymer nano composite Thin Films” for 0.85 lakhs in the year 2012 [PI –Dr.Kala M.S, Co-guide- Dr.Ushamani M]

List of publications in International /National Journals

Refereed journal papers

1. **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Complexed Methylene blue sensitized Poly(vinyl chloride)-A polymer matrix for hologram recording”, *Applied Optics*. Vol 41, No:10, April (2002) 1984-1988.
2. **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Methylene blue doped Polymers: Efficient media for Optical Recording” *Journal of Modern Optics*, vol 51, no:5, (2004),743-755.
3. **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph,” Fabrication and Characterization of methylene blue doped polyvinyl alcohol-polyacrylic acid for holographic recording” *Applied Optics* , vol43,no18,20 June 2004.
4. **Ushamani.M**, N.G.Leena Deenja, K.Sreekumar, C.Sudha Kartha, Rani Joseph Optimization of pH and direct imaging on complexed methylene blue sensitized poly (vinyl chloride), *Bull. Mater. Sci*, Vol 26, No.3,343-348, April 2003.
5. Beena Mary John, **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph “A reusable recording medium based on MBPVA and vinyl acetate. *J.of Modern Optics*, vol 53, no:3, (2006),343-355.
6. Beena Mary John, **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph” Enhancement of diffraction efficiency and storage life of PVC based optical recording medium with the incorporation of electron donor”. *Applied optics*.2007; 46(3):346-350.
7. **Dr.Ushamani.M**, *Polymers for Holography*, Science India- The national magazine published by Swadesi Science Movement. Vol.10, No.4, 2007 April.
8. **Ushamani M, Renuka M.R**; “Green synthesis, Characterization and Antibacterial property of Silver Nanoparticles using *Ocimum tenuiflorum*, *Azadirachta indica* and *Plectranthus amboinicus* leaf extracts”, **International Journal of Scientific and Research Publications** Volume 7, Issue 10, pp - 551-555, October 2017, ISSN 2250-3153.
9. Archana Elizabeth, Safna Subair, Kala M.S, **Ushamani M**. Preparation, Characterization and Antibacterial Study on Silver and Copper Oxide Nanoparticles and Conductivity Study on PVC-Silver Nanocomposite Thin Films. *Aquinas Journal of Multidisciplinary Research Studies* ; Volume I Issue I, 2014 August. ISBN Number: 978-93-5212-202-8.
10. **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, Methylene Blue sensitized Poly Vinyl Chloride: A Holographic Data Storage Medium, *Journal of Chemistry*,

published by post graduate department of Chemistry, NSS Hindu College Changanassery, Vol-3, 1-10, 2005.

11. *Sandra Antony, Devika V. S., Joice Ann Joseph, Ushamani M., Mary Lincy K. A., “ Synthesis and Characterisation of Metallic and Bimetallic Nanoparticles Based on Silver and Copper by Chemical and Bio-Reduction Methods”. Albertian Journal of Multidisciplinary studies. ISBN: 978-93-5351-066-4.*

International Conference/ Symposium

1. **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Studies on eosin doped polyvinyl alcohol for optical recording” International Seminar On Advances In Polymer Technology, CUSAT, Cochin,Kerala, Dec 12-14, 2002. Jointly organized by Dept.of Polymer Science and Rubber Technology Technical University of Eindhoven, Netherlands
2. N.G.Leena Deenja, **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph Fabrication and characterization of methylene blue doped poly (vinyl alcohol) for holographic recording.” International Seminar On Advances In Polymer Technology, Dec 12-14, 2002.Jointly organized by Dept.of Polymer Science and Rubber Technology &Technical University of Eindhoven, Netherlands
3. **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Novel Methylene Blue Sensitized Photopolymers For Holographic Recording : A Comparison”, international seminar on Electronic Imaging San Jose, California ,Jan 17-21, 2004.
4. **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Methylene blue sensitized Poly (vinyl chloride): A New Optical Recording Medium”, 2nd international conf on material science for advanced technologies, ICMAT 2003,Singapore, Dec 7-12, 2003
5. Beena Mary John, **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, “ Effect of electron donors on diffraction efficiency of MBPVA/PAA blend”. International Seminar On Advances In Polymer Technology, CUSAT, Cochin,Kerala, Jan 16-17, 2004. Jointly organized by Dept.of Polymer Science and Rubber Technology Technical University of Eindhoven, Netherlands.
6. Nisha. V.S, **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Characterization of Eosin dye doped PVA medium for holographic recording using Ar⁺ ion laser beam”. International Seminar On Advances In Polymer Technology, CUSAT, Cochin,Kerala, Jan 16-17, 2004. Jointly organized by Dept.of Polymer Science and Rubber Technology Technical University of Eindhoven, Netherlands.
7. **Ushamani.M**, Beena Mary John, K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Preparation and characterization of a new photopolymerizable holographic material based on Poly vinyl alcohol and vinyl acetate”; International Conference on Polymers for advanced technologies, Macro 2004 December 14-17, 2004, Thiruvananthapuram.

8. B M John, C.Sudha Kartha, **Ushamani.M**, K.Sreekumar, R Joseph“Effect of methacrylic acid on the storage life of MBPVA-VAc recording medium” International conference on “Three-Dimensional TV, Video, and Display IV” SPIE Optics East Symposium which will be held on 23-26 October 2005 at the Boston Marriott Copley Place, Boston, Massachusetts USA
9. **M. Ushamani**, B. M. John, C. Sudha Kartha, K. Sreekumar, R. Joseph, “Studies on methylene blue doped poly (vinyl chloride): butyl acrylate films for holographic recording”, International conference on Laser-Based Materials Processing on SPIE’s OPTO-Ireland 2005 [5827-59], 4 – 6th April , Dublin, Ireland.
10. B M John, **Ushamani.M**, Nisha V.S, R Joseph, K.Sreekumar C.Sudha Kartha, “MBPVA- Vinyl Acetate: A New Reusable Medium For Holographic Recording”, International Conference on “Practical Holography XIX: Materials and Applications,” on SPIE Optoelectronics-Photonics West 2005 [5742-47], 22-27th January 2005, San Jose, USA.
11. Polymer Matrices for Holographic Recording: An Overview. **M.Ushamani M.LaP**”10. International Conference on latest in Polymers at Rubber Park organized by J.J.Murphy Research Center, Irapuram, Perumbavoor, Kerala, 2010; 12-13. August.
12. Attended MUGC sponsored international conference on Nutritional medicine, health and wellness (NUWELL) 7th -8th June 2012 organized by Dept of Botany St.Teresa’s College.
- 13.**Poster Presentation**- International Conference on Photonics and solar water splitting [PSWS-2015]- Paper entitled “Electrical conductivity studies on PVA – Ag spin coated nano-composite films”, Benazeer K., Veena Vijayan, Ushamani M. and Kala M. S, organised by Department of Physics, St.Teresa’s College Ernakulam, March 2015.
14. **Poster Presentation** -International Conference on Advances in Applied Mathematics, Material Science and Nanotechnology, for Engineering and Industrial Applications on Jan 7th to 9th 2016 on “Studies on the structural and electrical properties of silver nanoparticles doped Poly vinyl alcohol thin films” by Sreekutty. C. S., Midhu Vincent, **Ushamani. M.** and Kala. M. S. organized by Dept. of Science and Humanities, FISAT, Angamaly, Kerala.
15. **Paper Presentation**- Remya Suresh, Ameetha K D, Sreekutty V S,Ushamani M, Rani Joseph; “Mechanical, Thermal and Dielectric Properties of Unsaturated Polyester-Carbon Nanotube Composite”. International Seminar on Recent Trends in Solar Energy Applications” RASE-2016- Organised by the Department of Chemistry, St.Teresa’s College, Ernakulam on 15th December 2016, in association with the golden jubilee celebrations of the department.[Abstract of the paper was published]
16. **Paper Presentation**- *T.P. Nisha, Santhosh Rose, Antony Anett, M. Ushamani, John Honey,* “Preparation and characterization of ZnO/rGO and ZnO/PANI nanohybrids.” International Seminar on Recent Trends in Solar Energy Applications” RASE-2016- Organised by the Department of Chemistry, St.Teresa’s College, Ernakulam on 15th December 2016, in association with the golden jubilee celebrations of the department. .[Abstract of the paper was published]

17. **Paper presentation:** Akshaya A.S, Sneha Jose, B.Ushakumari, Josemin and Ushamani M. “Physico-Chemical Analysis of Well Water Samples from Five Districts in Kerala”. Published in the book of abstracts of *International Conference on Sustainable Innovations in Green Chemistry & New Technological Developments (ICSIG-2018)* 11th and 12th December 2018 organized by Post Graduate and Research Department of Chemistry Maharaja’s College, Ernakulam In collaboration with Advanced Centre of Environmental Studies & Sustainable Development An inter University Centre (ACESSD) Mahatma Gandhi University, Kottayam Sponsored By: Govt. of Kerala. Page 17.
18. **Poster Presentation** -*Sandra Antony, Devika V. S., Joice Ann Joseph, Ushamani M., Mary Lincy K. A,* “ Synthesis and Characterisation of Metallic and Bimetallic Nanoparticles Based on Silver and Copper by Chemical and Bio-Reduction Methods”. International Seminar on “Material Science and Organic Synthesis” held on 4th and 5th January 2019 at St. Albert’s College Ernakulam.
19. **Poster presentation:** Lia Rolland, Liya Johnson, Ushamani M, K.Kavitha, M.K.Jayaraj, Honey John. “Fabrication of reduced GO-TiO₂ Hybrid films by vacuum filtration for self cleaning Applications”. International Seminar on “Material Science and Organic Synthesis” held on 4th and 5th January 2019 at St. Albert’s College Ernakulam.

National Conference/symposium

1. **Ushamani.M,** C.Sudha Kartha, Rani Joseph, “ Photobleaching in Brilliant Green sensitized Polystyrene” Kerala state Science congress, Kerala, India Jan 29-31, 2001.
2. **Ushamani.M,** C.Sudha Kartha, Rani Joseph, “A Novel polymer matrix for holographic applications”, Kerala state Science congress, Kerala, India Jan 29-31, 2002.
3. **Ushamani.M,** N.G.Leena Deenja,K.Sreekumar, C.Sudha Kartha, Rani Joseph, ‘A new methylene blue doped polymer blend for holographic applications” DAE-BRNS National laser Symposium, Nov 14-16, 2002. (**best poster award**)
4. **Ushamani.M,** K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Novel methylene blue sensitized polymer films for optical recording: a comparison” Kerala state Science congress, Kerala, India Jan 29-31, 2003 (**recipient of Young Scientist Award**).
5. **Ushamani.M,** K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Effect Of pH and direct imaging on complexed methylene blue sensitized polyvinyl chloride films” National Seminar on Recent Trends in Optoelectronic Materials and Devices, Sri Venkateswara University, Thirupathi, 21-22 November 2002.
6. **Ushamani.M,** K.Sreekumar, C.Sudha Kartha, Rani Joseph, “Methylene blue sensitized polymers: efficient media for optical recording”14th Annual General Meeting MRSI Bombay, Feb 11-13, 2003.
7. Reena Simon, **M.Ushamani,** C.Sudha Kartha “Studies on chromium doped poly (vinyl alcohol) films for holographic recording”. M.G.University, Kottayam. CTIMS-2001, March 23-24, SPAP

8. **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, "A new polymer matrix for optical recording, 13 th Annual General Meeting MRSI Hyderabad, feb 7-9, 2002.
9. Beena Mary John, **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, 'MBPVA/acrylamide system for holographic recording using red, green and blue lasers.15th AGM-MRSI , Banaras Hindu University, Varanasi 22105, India, Feb 8-11 2004.
10. Nisha. V.S, **Ushamani.M**, K.Sreekumar, C.Sudha Kartha, Rani Joseph, Diffraction efficiency measurements on Eosin doped Polyvinyl alcohol using 488 nm line of Ar+ laser. 15th AGM-MRSI , Banaras Hindu University, Varanasi 22105, India, Feb 8-11 2004.
11. **Ushamani.M**, Ph.D thesis presentation " Studies on Photosensitive Polymers for Optical Recording" at Indian national academy of engineering, Dec 11 , New Delhi 2004.
12. **Ushamani.M**, Ph.D thesis presentation " Studies on Photosensitive Polymers for Optical Recording" at DAE-BRNS National laser Symposium, Bombay Jan 10-13, 2005.
13. Beena Mary John, **Ushamani.M**, Rani Joseph, K.Sreekumar C.Sudha Kartha "Role of Vinyl Acetate Monomer in the Diffraction Efficiency of Poly (Vinyl Alcohol) Film", proceedings of 16th AGM MRSI, NCL, Pune (10-12 Feb 2005)
14. **Ushamani.M** "Polymers in Holography".National Seminar on Novel Trends in Organic and Photochemistry", Catholicate College, Pattanamthitta, Feb 21-23, 2005.
15. Paper accepted at National Conference on Optics and Related Phenomena on Polymers: Efficient media for Optical Recording at Sree Narayana College, Kollam on 25-30 august 2005.
16. Attended a one day workshop on formulation of project proposal for funding by external agencies organized by Sacred Heart College Thevara on 25th September 2006.
17. Attended a UGC sponsored state level seminar on "Women's drudgery and ill health" – a human perspective on 9-10th November 2006, organized by department of Home Science, St;. Teresa's College.
18. Department of Chemistry Organized a state level seminar on Environmental Chemistry on January 23rd 2007.
19. Participated in a 3 days work shop on Entrepreneurship Development Program on Soy conducted by Department of Home Science, St.Teresa's College on 24-26 at 2007.
20. Attended one day seminar on Environment management: Issues and Strategies, Organized by Department of Botany, St.Teresa's College Ernakulam
21. Attended a 10 days NSS Orientation Course at Rajagiri School of Social Sciences, Kalamassery from 17/7/07 to 26/7/07. And published a paper on Burning of plastics at home: Dangerous health hazard in the NSS booklet.
22. Paper presentation at S.H College Thevara, polymers in holography; UGC sponsored national seminar organized by Sacred Heart College Thevara on September 2007.
23. Attended a Seminar on Biodiversity organized by Centre for Environment and development at Hotel Mayura Park on 15/1/08.

24. Attended One day National Seminar on Analysis and Contributions of Women Mathematicians. Organized by the Dept.of Mathematics St.Teresa's College, Kochi on 31st October 2008.
25. Paper presentation at NSS Hindu College, Changanassery, "Polymers in holography- the future in data storage- an interdisciplinary research area"; UGC sponsored national seminar organized by NSS Hindu College, Changanassery on 2-4th March 2009.
26. Presentation of work which won Young Scientist Award in the Year 2003 by Dr.Ushamani M at Kerala Science Congress -Women Young Scientists meet (KSC-WYS Meet) organized by Kerala State Council for Science, Technology and Environment at Sasthra Bhavan Kerala, State Council for Science, Technology and Environment, Pattom Palace P.O., Thiruvananthapuram on 2010; April 21st.
27. Attended one day seminar on Environment management: Issues and Strategies organized by Department of Botany, St.Teresa's College, Ernakulam.
28. Attended a National Seminar on Kerala State Women Scientist meet on Biodiversity jointly organized by St. Teresa's College, Ernakulam and SAKTHI on 2010; August 10-12
29. 3 days training programme for college teachers in general informatics sponsored by Kerala Higher Education Council at St.Teresa's College on 20th -22nd December 2010.
30. Two day workshop for college teachers on review of curriculum organized by UG board of studies, M. G. University on 20 and 21st June 2011.
31. **Paper Presentation-** *Synthesis and Characterization of Calcium tungstate Nano particles-* In UGC Sponsored National Seminar on Challenges in Nanoscience and Technology CNT 2011. Organized by the Department of Chemistry, St.Teresa's College in Collaboration with the Inter University Centre for Nanomaterials and Devices, Cochin University of Science and Technology, Kerala; 28-29 July 2011.
32. **Paper Presentation-** *Effect of Particle size on Band gap energy of Calcium Tungstate Nanoparticles* - Renu Rajan, Deepa.K, Dr.Ushamani.M, Tessy Joseph, Priya Parvathi Ameena Jose- National Seminar on Trends in Physical Sciences TriPS-2011- Sponsored by UGC, CSIR and KSCSTE - Organized by Department of Physics, Sree Sankara College, Kalady.
33. Attended a UGC sponsored on National seminar on Best Practices in Research and Consultancy: Opportunities and Challenges on 20th Oct 2011 at St.Teresa's College
34. Attended a UGC sponsored National workshop on Fast food traps- Issues, Problems and Solutions- Train the trainer programme on 12th January 2012 at St.Teresa's College
35. Attended a UGC sponsored National seminar on Aging and Society: A multidisciplinary approach" on 4-5th October 2012 by Dept. of Home science, St.Teresa's College, Ernakulam.
36. Two days national conference for college principals on Emerging perspectives in Higher Education at Newmann College, Thodupuzha on 29th to 30th October 2012 by IQAC cell Newman College in association with the council of principals of college in Kerala.
37. Attended One day UGC sponsored National seminar on Modern trends in research on 5th December 2012organized by TRACC, St. Teresa's college.

38. Attended a state level seminar on Intellectual Property Rights- Concepts, Policies and guidelines on 11th July 2012 organized by St. Teresa's College and Patent Information Centre-Kerala/KSCSTE
39. Organized Workshop on Innovative practices in research on 17th December, 2012. Organized by IQAC, St. Teresa's College.
40. Dr Ushamani.M. attended the Two day National Seminar on Challenges Amidst Rapid Challenges in Institutions of Higher Education in India from 7-8 February, 2013 organized by Mar Ivanios College, Trivandrum
41. **Paper Presentation** on *Synthesis, Characterization and Conductivity Study of Polyaniline - Silver Nanocomposite Films*, 29th -30th August 2013. By Ashna, Riya, Kala M.S and Ushamani M. Two day UGC sponsored National Seminar on Recent Trends in Conducting Polymers and Polymer nano structures at Aquinas College Edakochi..
42. Attended National Seminar on Advances in Nanomaterials and Polymers on 11th and 12th March 2014 organized by the Department of Chemistry, Bharatmata College, Thrikkakara in collaboration with KSCSTE.
43. Organizing member of National workshop on functioning as an Autonomous College on Feb 11th 2014 organized by IQAC Cell, St.Teresa's College,
44. Organizing member of the NAAC Sponsored National workshop on Equipping new era Practitioners: Teaching, Learning and Evaluation.
45. **Paper Presentation** – Archana Elizabeth, Safna Subair, Kala M.S, Ushamani M *Preparation, Characterization and Antibacterial Study on Silver and Copper Oxide Nanoparticles and Conductivity Study on PVC-Silver Nanocomposite Thin Films*. UGC sponsored National Seminar on Current trends in Material Science, 13th and 14th August 2014.
46. **Paper Presentation** – Amruthum Linet, Kala M.S, **Ushamani M** on *“Electrochemical synthesis of Copper nanoparticles and Conductivity study on PVA-Cu Nanocomposite thin films”*. One day National Seminar on Nanochemistry Techniques, Advancement and Applications 16th October at SD College, Alapuzha.2015
47. **Paper Presentation** – Ranjitha R, Kala M.S, Ushamani M on *“Preparation and Characterisation of Silver Nanoparticles Obtained by Chemical, Physical and Biological methods”*. 14th Prof. K V Thomas Endowment National Seminar on “Molecular Approach To Current Advances In Chemistry” organized by Post Graduate & Research Department of Chemistry, SH College, Thevara on 07 - 08 December 2015.(WON I PRIZE BY RENJITHA FOR PAPER PRESENTATION)
48. **Project presentation in UG category** : Jesni Joy K, Majida Syed, Ushamani M– **won second prize** for the paper entitled “ Preparation, Characterization and Antibacterial study of silver nanoparticles prepared from different plant extracts through green synthesis method” in National science day celebrations organized by the department of Chemistry, S.H.College, Thevara in collaboration with KSCSTE on 26/2/2016- - 2016
49. **Best Poster award in UG/PG category**: Syno Paul, Athira S Kumar, Mitchell M, Aiswarya C.B, Ann Mary V.B, Lakshmi Priya, Reema Kuriakose, Kala M.S, Ushamani M; Green synthesis and study of Silver nanoparticles with special reference to antimicrobial activities and conductivity study of PANI-Ag

nanocomposites, page no 119-125, Published in the proceedings of UGC sponsored national seminar on ‘ Advancements n Polymer Science and Technology’ 24, 25 January 2017. ISBN No: 978-81-7255-079-0.

50. **Paper presentation:** Remya Suresh, Ameetha K.D, Sreekutty V.S, Ushamani M, Rani Joseph “ Dielectric, Thermal and Mechanical Properties of unsaturated polyester – carbon nanotube composites. Page no- 108-1112, Published in the proceedings of UGC sponsored national seminar on ‘ Advancements n Polymer Science and Technology’ 24, 25 January 2017. ISBN No: 978-81-7255-079-0.
51. **Paper presentation:** Nisha T.P, Rose Santhosh, Anett Antony, Ushamani M, Honey John; “ A comparative study on conductivity of ZnO/rGO and Zno/PANI nanohybrids. Published in the proceedings of UGC sponsored national seminar on “Advancements n Polymer Science and Technology” 24, 25 January 2017. ISBN No: 978-81-7255-079-0.
52. **Paper presentation:** Lia Rolland, Liya Johnson, Ushamani M, K.Kavitha, M.K.Jayaraj, Honey John. “Fabrication of reduced GO-TiO₂ Hybrid films by vaccum filtration for self cleaning Applications. Published in Teresian Book of Research in Chemistry, Volume 1, December 2018, ISBN No: 9788172551049. Published by Teresian publishing House Page no. 75-84.
53. **Paper presentation:** Akshaya A.S, Sneha Jose, B.Ushakumari, Josemin and Ushamani M. “Analysis of Physico-Chemical-Bacteriological parameters of well water samples from five districts in Kerala and total analysis of drinking water samples from Ernakulam Districts ”. Published in Teresian Book of Research in Chemistry, Volume 1, December 2018, ISBN No: 9788172551049. Published by Teresian publishing House Page no. 18-27.
54. **Paper presentation:** Catherine Glida D, Aruja, Jesni Joy K, Madhusudahanan Nair K, Ushamani M. “ Variation in the quality parameters of motor spirit and aviation turbine fuel on adulteration”. Published in Teresian Book of Research in Chemistry, Volume 1, December 2018, ISBN No: 9788172551049. Published by Teresian publishing House Page no. 52-57.

Orientation /Refresher Course /Short term course/FDP attended

- Attended a 10 days **Orientation Course** at Rajagiri School of Social Sciences, Kalamassery from 17/7/07 to 26/7/07 and published a paper on Burning of plastics at home: Dangerous health hazards in the NSS booklet.
- Attended an **Orientation Course** on IT at Academic Staff College, Thiruvananthapuram from 3/5/08 to 30/5/08.
- Attended **refresher course** in Nano Science at Academic staff college, Calicut 10th-30th November 2011.

- Attended **Refresher Course** in Environmental Science at Bharathiar University, Coimbatore, Tamil Nadu, from 19-11-2013 to 9-12-2013.
- Attended UGC sponsored **Short term course** for 1 week on information Communication Technology [ICT] from 7-03-2017 to 13-03-2017 at UGC-Human resource development center, University of Mysore.
- Participated in the 5-day **Faculty Development Programme (FDP)** on Online Education in Higher Education Institutions conducted by the Faculty Development Centre of the Kerala State Higher Education Council (KSHEC), Thiruvananthapuram on online mode from 13th to 17th July 2020 for the faculty members from science disciplines in the state universities and affiliated colleges.
- Completed the **Faculty Development Program** on ICT Tools in Teaching Chemistry conducted from 2nd September 2020 to 6th September 2020 through Online Mode and secured A grade with 92.8 percentage, Organized by teaching learning center (IQAC) and Department of Chemistry and Centre for Research, St.Teresa's College, Ernakulam.